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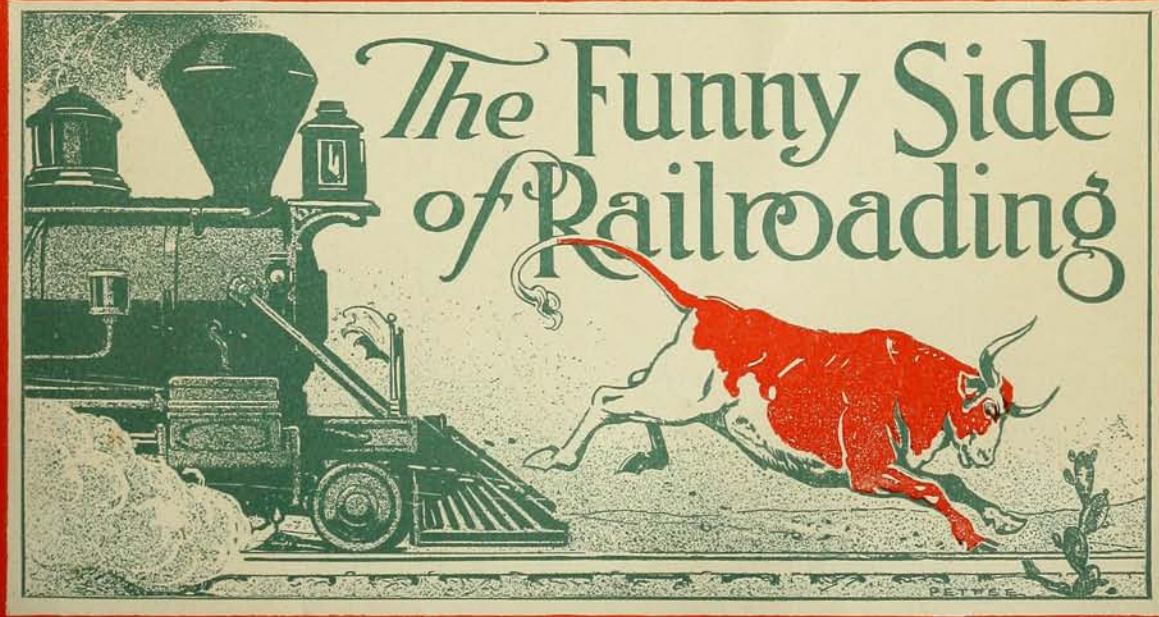
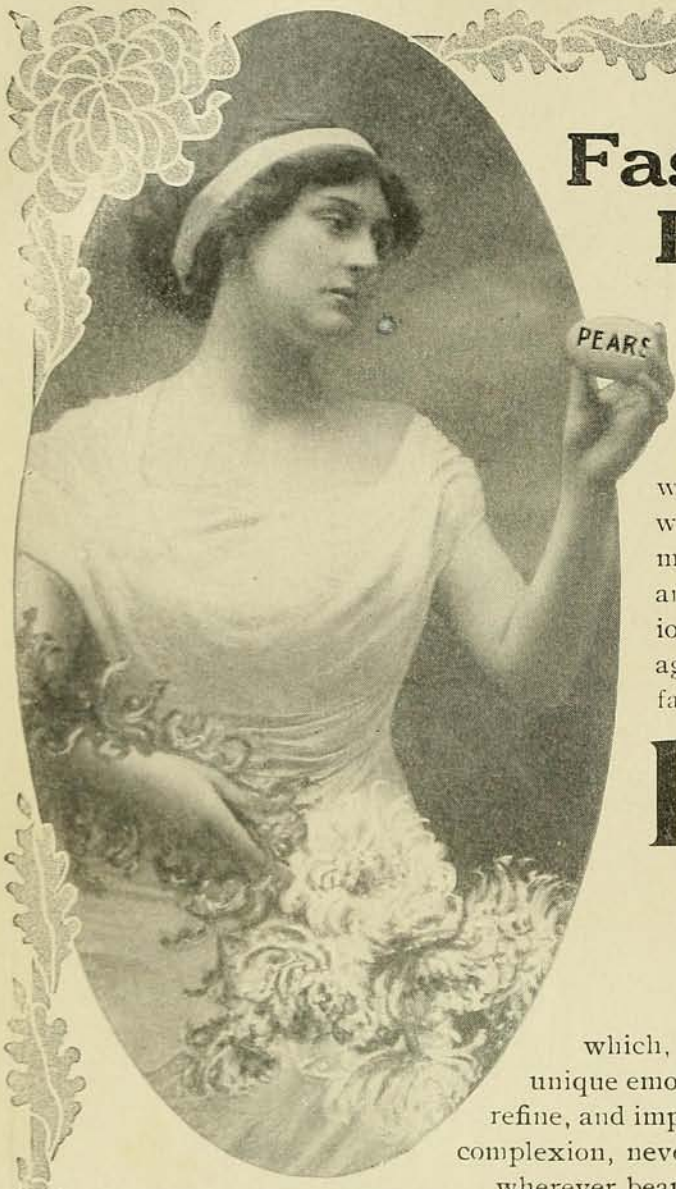
THE RAILROAD MAN'S MAGAZINE



JANUARY



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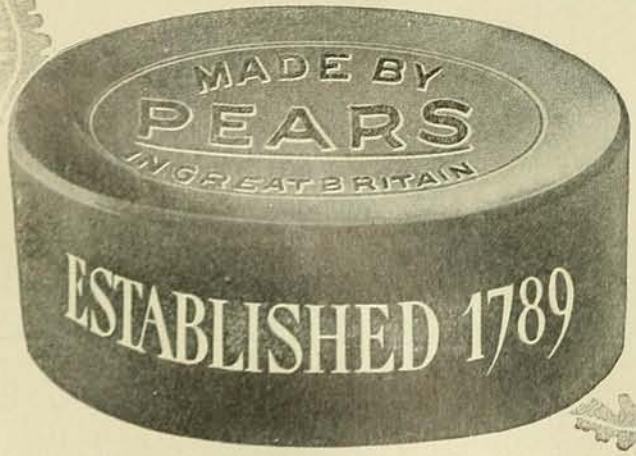

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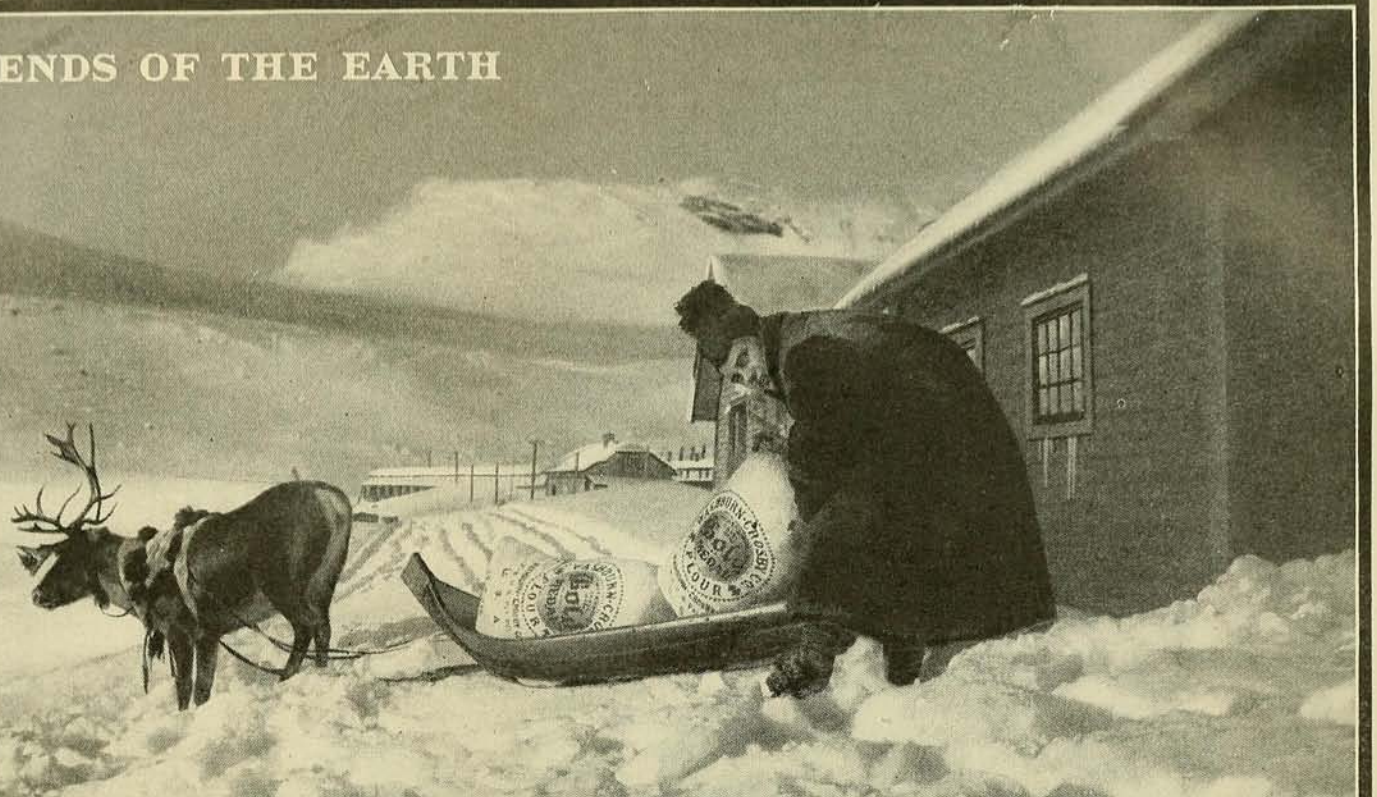

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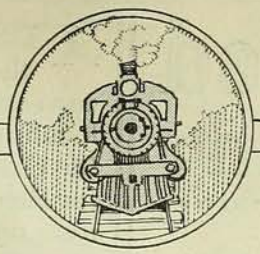

THE RAILROAD MAN'S MAGAZINE

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ISSUED MONTHLY BY THE FRANK A. MUNSEY COMPANY.
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FRANK A. MUNSEY, President. RICHARD H. TITHERINGTON, Secretary. CHRISTOPHER H. POPE, Treasurer.

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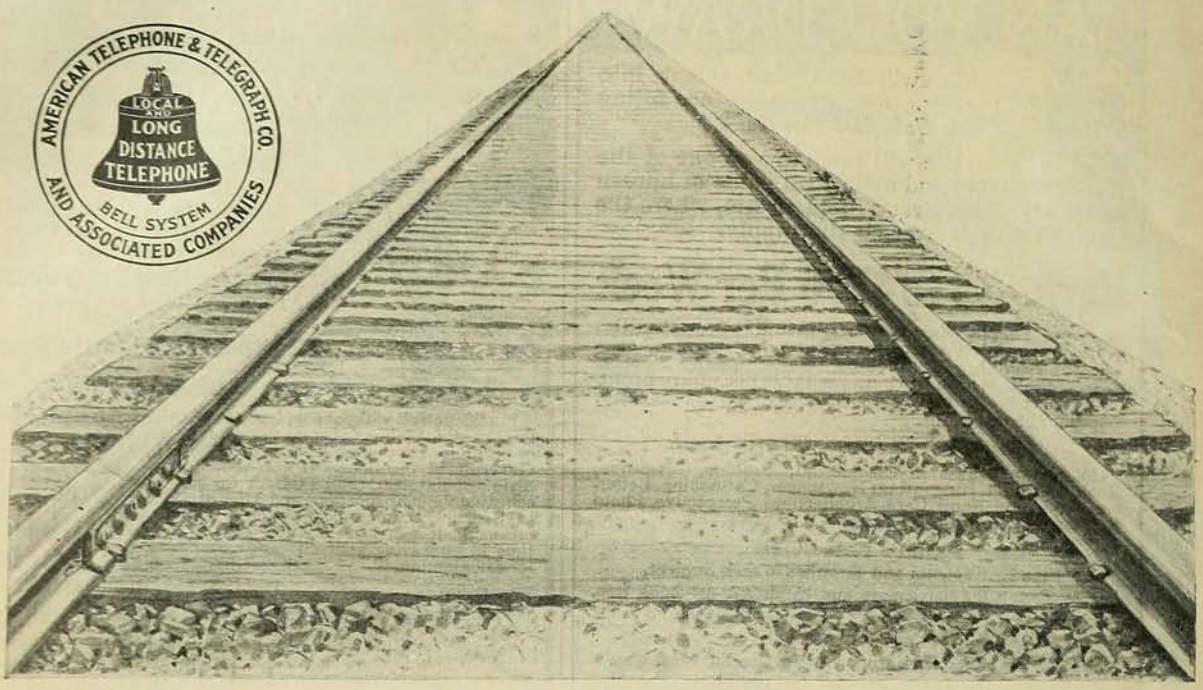

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THE RAILROAD MAN'S MAGAZINE

Vol. XIII. JANUARY, 1911. No. 4.

The Funny Side of Railroading.

BY WALTER GARDNER SEAVER.

A Brace of Boes That Were Watered Out—Why Bob Rogers Drifted Far Away from Texas — How John Kept Losing His Tail.

"WHOSE turn is it to speil to-day?"

"Dempsey's."

"You've got the highball, Dempsey. Hook her up and pull her wide open. You've got nothing against you."

"On the Burlington lines out of old St. Joe, some funny things happened," said Dempsey.

"Dave Winton was superintendent of the Kansas City, St. Joe, and Council Bluffs then, and Mike Hohl was chief despatcher. There was a gang of toughs in the town known as the Dillon gang. They used to run amuck whenever the notion took them. For a time there was hardly a pay-day that the Dillons didn't lay for some of the railroad boys, and Winton almost invariably had a crowd on the carpet in consequence.

"The Dillon crowd was feared by everybody. It used to be a saying that when the Dillons broke loose the police force went to investigating vacant lots where the weeds grew thick and tall so that the Dillons wouldn't come against them.

"For some reason Winton always came down hard on the railroaders that mixed it up with the Dillon crowd, and more than one poor devil was let out without a clearance for no other reason than that he had been in a scrap with the Dillon outfit.

"AS IF HE HAD BEEN SHOT FROM A CATAPULT."

"P. H. Houlahan was with the Hannibal and St. Joe, being trainmaster at Brookfield. Whenever any of the Hannibal boys got mixed up with the Dillons, they were up on the carpet, of course; but Houlahan always stood by the railroaders and, so far as I know, no Hannibal man was ever let out or even laid off for ten days because he mixed it up with that crowd.

"But what I want to tell about is a wreck that occurred in the Narrows between St. Joe and Atchison. Winton was a portly man, and was usually inclined to be rather dignified.

"He was seated in an armchair beside the open side door of the way car with his feet elevated and resting against the jamb of the door and sound asleep.

"Suddenly he was shot out of the door and went tumbling down the bank among the ragweed which had grown to a height of five or six feet. Before he was fairly awakened, he had managed to get his feet and legs so tangled up in the weeds that every time he attempted to rise he would get entangled worse and worse.

"When the boys saw that he was not hurt they could not refrain from giving vent to their hilarity, and it was some time before they could turn their attention to the condition of the wreck. When Winton finally got loose and came up the bank with his face and clothes all yellow from the bloom of the ragweed, they suddenly became very serious. When he finally got to the top of the bank, one and all were very earnestly inspecting the wreckage.

"Whether it was because of a broken or defective flange on one of the wheels or for some other reason, the trailing truck under a box car failed to follow the lead of the front one and climbed the frog. About half the train had followed the engine onto the siding, but the rest of the cars were distributed over the landscape with the exception of the way-car and two cars ahead of it, which did not leave the rails. The sudden jerk as the cars left the iron had shot Winton through the open door as if he had been hurled from a catapult.

"'What have we struck?' he yelled as he glided into the atmosphere.

"Every man in the crew got thirty days. Winton said it was because we laughed at him.

"Sam Wadsworth served through the Civil War. He was a captain in the Union army, and was wounded by a Minie-ball striking him in the head at the battle of White River, Arkansas. He was wounded on the morning of July 4, and for a time his

"THERE WAS HARDLY A PAY-DAY THAT THE—RAILROAD—

life was despaired of. However, he got well—and the Fourth of July was always a great day for him.

"It was Sam's day to howl. Not even the President of the United States could induce him to do a tap of work on that day. No matter where he was, he did not fail to have a liberal supply of fireworks. Oh, he made a noise, all right! Christmas and New Year's were nothing to him when compared to the Fourth of July.

"After the war, Sam went into the service of the Hannibal and St. Joe, and for a time ran a freight between Brookfield and Quincy. Afterward he was given a passenger run between Quincy and St. Joseph. This was before the line was opened from Cameron to Kansas City.

"One day, just as Sam was leaving the house to go to the yard to take out his train to Quincy, a couple of tramps asked if they could have something to eat. They claimed to have been in the war, and since that time had been drifting about the country seeking employment.

"As there were hundreds of men in the

—DILLONS DIDN'T LAY FOR SOME OF THE —BOYS."

same predicament at that time, nothing was thought about it. Any man who claimed to be an ex-soldier did not have to ask Sam Wadsworth the second time for assistance. But these two men did not know that, and the elder of the two began a hard-luck story that his comrade had lost his speech owing to a wound in the throat, and the scar of a gun-shot wound on the neck was corroboration.

"Sam did not care anything about this. The fact that they were ex-soldiers was sufficient. He took the men to the house and told his wife to give them food. Then he hustled off to the yard.

"Will Craig, his brother-in-law, though only a youth at the time, was braking ahead for him, while his brother, Dan Craig, was a little fellow and was at the house when the tramps were seated at the table.

"While they were eating, and when nearly through, the east-bound freight from St. Joseph pulled in. This was the train that Wad was to take out, and there was upward of an hour yet to be used in the yard before she pulled out.

"The tramps did not know this, however, and as the train whirled by the house the dumb man shouted:

"'Hully gee, Tom! We must make that train!'

"They rushed out and down into the yard. This was evidently a ruse to get away before they could be asked to cut some stove-wood in payment for the meal, a course that was customary among Missouri matrons at that time.

"Dan Craig thought that the sudden recovery of speech by the dumb man was nothing short of a miracle. Thinking that Sam would be pleased to hear of the good luck that had come to the tramp soldier, he hastened to the depot, where he found Wad, book in hand, slowly pacing along the train, entering the car initials and numbers.

"When Wad heard the story, he simply said, 'Humph!' The miraculous feature of the matter did not strike him as forcibly as it had Dan. He told the boy that it was all right, and that he was glad to hear it, and went on with his work.

"Soon after, he spotted his table-guests sneaking along through the yard, and called Will Craig's attention to them.

"'Let them stow away,' said Wad, 'and when we get out on the road I will have some fun with them.'

"They kept an eye on the two men and, just as the train was about to pull out, saw them climb in the end window of a car loaded with lumber. Will soon spotted the place where they had hid themselves.

"This train stopped only at Macon, Shelbina, and Palmyra Junction. At Macon, Craig saw a thin wisp of smoke curling out of the end window of the tramps' car. Standing astride the two cars, he called out:

"'Sam, there's a fire in this car of lumber. Pass up a few buckets of water.'

"As the water was passed up, he deluged the inside of the car—one bucket to the right, the next to the left, and the third to the center. The tramps caught every drop, for the space where they were stowed away was scarcely large enough to hold two men.

"The third bucketful was too much, and one of them called out:

"'Cheese it, cully. We'll come out!'

"They came out. A more wobegone, forlorn pair of hoboes had never been seen. Both were thoroughly soaked.

"'Holy smoke!' said Craig. 'Don't you fellows know better than to stow away in such a place? That lumber is liable to

shift at any jerk of the engine, and flatten you out as thin as a pancake. Where are you going?'

"They said that they were going to Chicago, and told their hard-luck story. Craig appeared to be much impressed and said:

"'I only go as far as Quincy, but so far as I am concerned, you are welcome to ride. Only you must come out and ride on top, but be careful that the con don't see you. When the engineer shuts her off and squeals for brakes you shin down the ladder on the side opposite to the station and hit the grit. Get into the weeds and lie low until the train starts again; then get back on top.'

"It did not occur to either of the tramps that the con, from his lookout-seat in the cupola, could see over the top of the train. Craig made them go forward to the car right back of the engine. In those days of balloon stacks, engines threw dense volumes of black smoke, while a steady shower of cinders was sure to rain over the forward cars.

"Wet and shivering, the two hoboes hung to the running-board, swallowed smoke, and chewed cinders without a murmur, while Craig, who was riding in the cab, and Wad, who was watching them from the cupola, had a matinée performance which they never forgot.

"At Shelbina, the depot was in the center of the town, with a small park on either side, and there were no weeds, so the hoboes had to get down in full view of the stores and business houses that lined the opposite side of the square.

"They were game, however. When the train started, they made a run for the side-ladders of the way-car. Somebody yelled at them, and they scrambled all the faster.

"The engineer pulled the throttle wide open, and by the time the men grabbed the hand-holds the train was going at a pretty good clip. They had all they wanted to do hanging on, but they managed to pull themselves up, and flopped on the roof, grabbing the running-board for dear life.

"At Palmyra Junction the train stopped a moment for orders. When it started, the tramps were kept moving pretty lively to avoid being ditched. Shortly after leaving Palmyra Junction, the road strikes the south bank of the South Fabius River, and runs along this to a point near its junction with the Mississippi River not far from the west end of the bridge. As the train swung around a curve, a link on the third car from the engine broke, and the engine and the three cars jumped ahead as though shot out of a gun.

"The tramps were shot off. They clutched frantically at the smooth tin roof, but, failing to secure any hold, were gracefully dumped into the mud at the edge of the creek. The Fabius had just recovered from one of its periodical attacks of high water, and a bed of mud about the consistency of mush and as black as tar bordered the stream. Into this soft bed the two plumped clear up to their shoulders. Craig looked back, and the fireman leaned from the gangway in an effort to see what had become of them. They could not stop. It was up to the front end now to keep away from the rest of the train.

"The middle and rear brakeman had hustled out on top as soon as they felt the jolt that told them the train had parted, and were busy setting brakes to hold her down the hill; but Wad had kept his eye on them, and, as the way-car passed, he saw them scrambling out of the mud.

"'They knew enough to wave us good-by,' said Wad.

"Will Craig, too, had a heart in him as big as an ox. When he was in the yards at Argentine, Kansas, there was more than one railroader out of a job who had reason to remember him. Twenty years ago, there was more or less drifting about of railroaders, especially switchmen and brakemen. Traffic would fall off, the number of trains would be reduced, and, as a consequence, a number of men would be let out or laid off until business picked up again.

"A number of unmarried men would take advantage of this to change their location. They had their clearances, which were sufficient to enable them to get over any road, and also to get in line for work whenever opportunity offered.

"Once a brakeman named Bob Rogers struck Argentine dead broke and pretty well all in. He had traveled around in search of employment until his funds were exhausted. He ran against Craig, who saw that he had a boarding-place and was made comfortable. About ten days afterward, he caught a run on the Missouri Pacific out of Armourdale.

"'I had drifted down into Texas,' he said to Craig, 'as I had always been anxious to see that country, and as there was considerable new mileage under way, I thought the outlook for getting set up there was much better than back here in the East. I

got a run on the Espee out of San Antonio, and had 'em coming nicely until a little more than a month ago. Then I began to get into it proper.

"'We pulled out, one morning, with a lot of empty stock-cars bound west. The day was fine—just after a rain—and I was sitting on a brake-wheel, two or three cars back of the engine, taking it easy. We were near Hondo, and, as we were not scheduled for any stop east of Uvalde, where we had a meeting-point, I was taking considerable enjoyment out of the ride.

"'Suddenly I heard the engineer squealing for live stock, but as we had that every two or three miles, I was not paying much attention. I knew that if that old hog mixed it up with any steers, the steers would get the worst of it.

"'Suddenly I shot from my seat, and sailed gracefully through the air, landing head first in some A1, soft, sticky mud at the bottom of a little arroyo. The cars were strung out all over the landscape, and the old hog, which I had thought immune from any cattle ailment, lay on her side in the ditch, groaning her life out.

"'Her crew had promptly gone overboard, and they, too, had landed in the soft mud in the arroyo, but, unlike me, they lit feet first and came up unhurt. The way-car and, perhaps, a third of the train had not left the rails. The con and the middle and rear brakeman came hustling ahead to see about the dead and wounded.

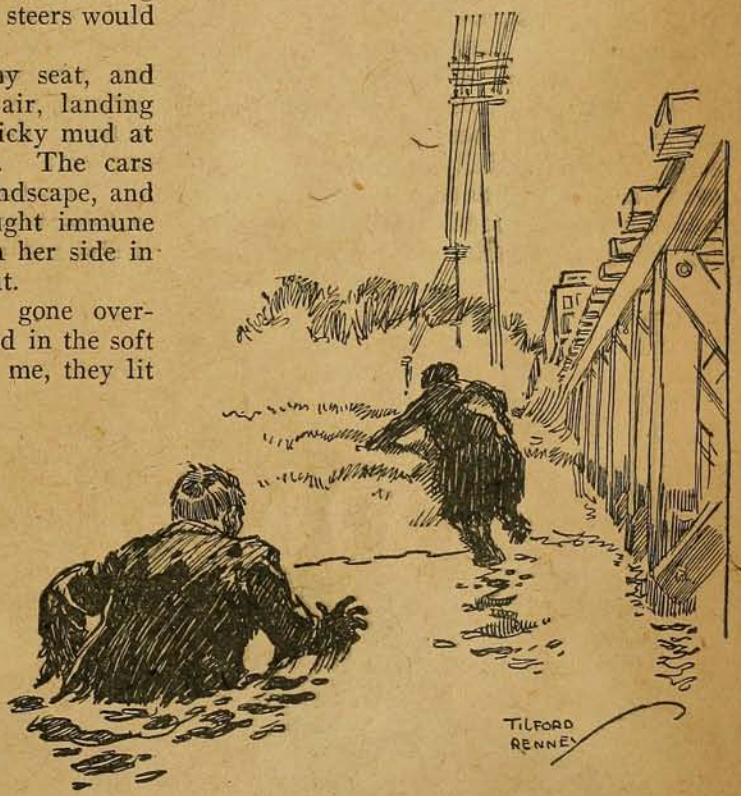
"'I had got straightened up and, with the engineer and fireman, they proceeded to indulge in an outburst of glee every time I moved or attempted to speak. I imagine that I must have been a sight, and I am dead certain that if I had been in their place, and some other poor devil in my shoes, I would have laughed, too.

"'Well, they got out flags, and the con proceeded to toddle off down the track to Hondo to report the wreck, while the rest of us proceeded to make an investigation as to the cause of our ground and lofty tumbling.

"'A bunch of steers had been on the right-of-way, and all had been scared off by the whistle. The engineer had just pulled her wide open, and was hitting 'em up again, when one stupid steer took a notion that he could outrun that hog, and so swung onto the track again.

"'The steer was galloping down the track, right between the rails, in that graceful way that a Texas steer moves, until he came to the trestle that spanned the little arroyo, when down goes his forelegs between two ties.

"'As soon as he saw the steer swing onto the track, Hank shut her off and slammed on the air, but not quick enough to avoid hitting the steer. The old hog carved that steer into hamburger steak, but in doing so lifted her trucks, climbed the rail, and turned over easily on her side.



"THE FABIUS HAD JUST RECOVERED FROM ONE OF ITS PERIODICAL ATTACKS OF HIGH WATER."

"'Well, we got out of that mess all right, and two days afterward we were going east with a heavy train of cattle. There was a little, short spur-track just outside of San Antonio, just about long enough to hold two box-cars. Hank had 'em coming right along in fine style, when we went plump into that spur-track.

"'Somebody had either left the switch open, or unlocked, and it had sprung. At any rate, we headed in there, going at a

thirty-mile-an-hour clip. The engine struck the bank used as a bumper. I was standing in the gangway, and when she stopped and turned over I just kept on going, plowing up the Texas soil with my right shoulder for something less than a half-mile.

"'Hank was caught when the deck-plate doubled up. His right was badly jammed. The fireman had attempted to get off, but was caught by the tank and injured. This should have been enough for me, but I only laid off one trip, and then went out on my run.

"'Everything went smoothly, we were clipping along near Hondo, and I was thinking of the funny picture I must have presented as I climbed out of the mud, when I suddenly got right off that brakewheel and took another trip through the air.

"'When I came to my senses and began to take stock, I found myself sitting astride a side of dressed beef down in that same arroyo, while carefully turned upside down over me, as if to preserve me from accident, was a forty-ton gondola, with the ends resting on either bank.

"SOMETHING ABOUT 'SALLY IN OUR ALLEY.'"

"'Luckily, the gondola was empty when she turned turtle over me, and I managed to crawl out unhurt.

"'Investigation showed that a truck had jumped from under a refrigerator-car loaded with dressed beef, and it proceeded to strew the rest of the train over the Texas prairie. When I got out, the middle shack was sitting on the side of an overturned box-car, singing in a thin, strained tenor something about "Sally in Our Alley." He wasn't nutty. It was just his optimistic way of looking at things.

"'It was the engineer this time who toddled on down to Hondo to report the accident, while the fireman and I flagged the wreck.

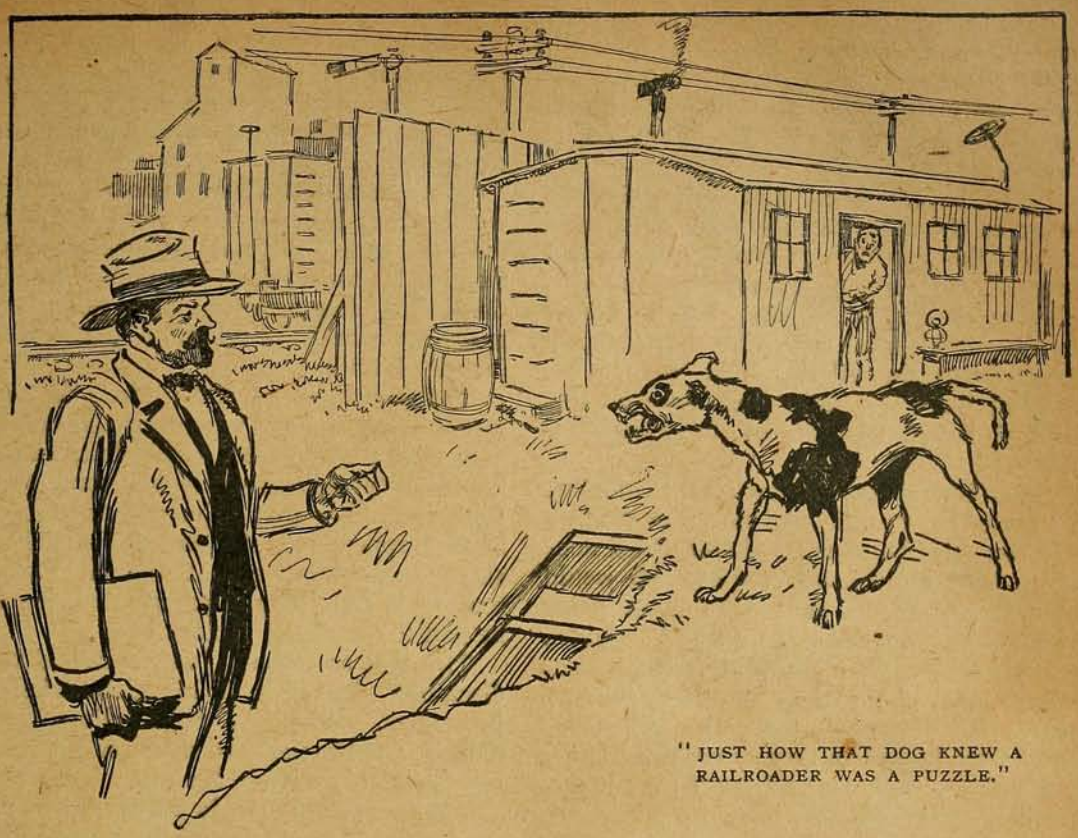
"'When the wreck-train came up, I left them to manipulate affairs and paddled on down to Hondo myself. I got back to Santone on the first train, and didn't lose any time in drawing my time and turning in my keys.

"'I thought that when I got pitched off a train three times inside of a week, it was a pretty clear hint to me that I wasn't wanted on the Espee, so I hooked her down in the corner, gave her a full throttle, and hit the track on my way north.'

"Sam Wadsworth once came into the Hannibal yard at St. Joe with a through train of fast freight from Quincy. No cars had been picked up or set out along the line. Among others was a car-load of dry-goods cases. Wad had received this car at Brookfield sealed with the Chicago seal.

"For some reason, there was a particular hurry on the part of the consignee for the contents of this particular car; so it had hardly been set out on the siding than a lot of teams were on hand to unload it.

"As luck would have it, the car was standing almost opposite the dog-house. The Hannibal and St. Joseph depot at that time was at the corner of Eighth and Olive Streets, and the roundhouse was about four blocks far-



"JUST HOW THAT DOG KNEW A RAILROADER WAS A PUZZLE."

ther south—just below what would be Mitchell Avenue, if that street had been opened across the yards.

"Consequently, the throat of the yard was just east of the roundhouse, lying between it and Eighth Street, and just below Mitchell Avenue. So the doghouse, which was an old box-car that had lost its trucks, stood almost on the south line of Mitchell Avenue and not far from the roundhouse.

"When the car was opened, the men were startled to hear the whine of a dog. A moment later the Mr. Dog came limping out from among those cases, and his left hind leg was pretty lame. He was very thin and, as Craig said, he had to lean up against the side of the doghouse when he wanted to stand up.

"When the dog was lifted out and set upon the ground, he at once singled out Craig as the most likely one of the crowd to yield to canine blandishments. Craig took him into the doghouse, shared his lunch with him, and then, having gained the animal's confidence, the gang crowded around to examine into his injuries.

"It was found that the dog's leg was broken, probably by reason of having been jammed between two of the cases.

"The broken limb was washed, the bone set, and splints made from an old cigar-box were applied, and the whole bandaged with an old, discarded red flag.

"He was certainly about the most disreputable-looking dog that ever came down the pike. He seemed to be, as far as blood was concerned, a mixture of Irish setter, mastiff, yellow hound, and coach dog. His left ear drooped sorrowfully and was about half gone, apparently having been chewed off in a fight.

"His right ear was worn cocked up as though he was determined to hear all that was going on. His face and nose were white with the exception of a black patch that surrounded his left eye, giving him the appearance, at a little distance, of having had that optic effectually blackened at some time.

"There was not much hair on his head, which was covered with scars. His tail at one time had been broken, and the latter half of it hung at an angle of about forty-five degrees from the upper half. His body, too, was covered with scars.

"He had originally been spotted with three colors—black, tan, and white.

"He was the living exemplification of hard luck.

"He at once attached himself to the doghouse. Craig was his particular protegé. Craig could drop his coat and lunch-kettle anywhere in the yard in sight of that dog, and then—let any one but Craig touch it if they dared!

"The boys dubbed him John, and he answered the name readily. He constituted himself the guardian of that doghouse, and any railroad man, no matter if a stranger, whether clad in greasy overalls and blouse or wearing his glad rags, who showed up at the doghouse was all right with John.

"Any one not a railroader, however, was kept at bay until some of the railroaders appeared.

"Just how that dog knew a railroader was a puzzle, but he did, and he never made a mistake. He had one bad habit which none of the boys could break him of. He would go to sleep under a car. One day a string of boxes were kicked in on a track on which some empties were standing. John was asleep under one of these empties. The tip of his tail lay upon the rail. When the boxes were kicked in they drove the empties a few feet ahead, and off went four inches of John's caudal adornment.

"John raised his voice in protest, and the boys came running from every direction. The dog was running in a circle, howling and snapping.

"When the boys did finally get him quieted down, they tenderly washed the bloody stump, placed a bunch of oily waste from the dope bucket over it by way of salve, and bound it with scraps torn from an old shirt. In due time the wound healed up, and the boys thought it would be a lesson that John would not forget.

"But John was perverse and obstinate. No place was so good for sleeping purposes as the center of the track under a car. It had not been more than two months since the first amputation until the operation was repeated. This time a bigger slice went. The tail was now cut off almost to the broken joint, leaving only about an inch, so that it gave him the appearance of having the tip end of his tail hooked down to catch something.

"One would naturally think that John would learn by experience, and keep away from the cars. But no. In less than three months, he had undergone another amputation in the same manner. This time the remorseless wheels left him only about two inches of tail.

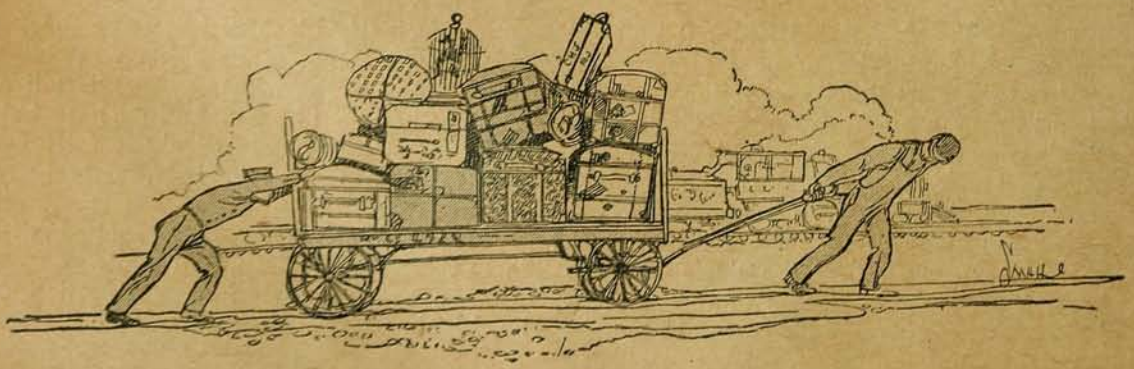
"After the wound had healed, he would wag that stump more vigorously than he had ever before wagged his whole tail, and the boys finally decided—and they came to believe it firmly—that John did not like his hooked appendage, and had deliberately set about its amputation. It was only by reason of his deficiency in gaging distance that he had to take three whacks at it.

"Be that as it may, John exercised more discretion, thereafter, in his choice of sleeping-places. When he felt inclined for a nap, he would select the shade of a box-car, but invariably outside the rails.

"John was a fixture in the Hannibal yard for a number of years, and finally met death gallantly. Craig had swung up into the gangway of a passing switch-engine. John attempted to follow him. John had jumped off and on moving switch-engines scores of times before. This time he miscalculated his jump, poor fellow, and landed across the rail.

"The tender-wheels passed over him.

"John was buried on the bank of Liniment Creek, close to the junction of Eighth Street and Mitchell Avenue. The boys thought he would be allowed to sleep there undisturbed, but when the Union Depot was built and the sewer took the place of the old bed of Liniment Creek, John's bones were disinterred by the graders and carted away."



THE DEATH TIDE.

BY ROBERT T. CREEL.

The Particular Revenge That Was Meted Out to Legs Brown, and How It Ended.

AGAIN there was quiet on the hillside. The construction-crew was gone, leaving the long gash where ran the rails of the newly completed road as the only memento of their presence. Venturesome chipmunks ran hither and thither along the ties, volubly chattering their impressions of the phenomena to whoever would listen.

The woodland creatures had resumed their normal lives; that is, most of them had. Around a sarvas-berry thicket fluttered a pair of wild canaries chirping distressfully, evidently fearing for the safety of their nest. Something unusual was concealed in the bushes.

Presently, following a violent agitation of the leaves on one side, a large foot appeared, upheld by a long, hairy shank, around which swarmed a cloud of mosquitoes. After waving uncertainly for a moment, the foot was drawn back and there issued forth an individual, red of visage, with blue eyes that laughed, and a figure that was scarcely more rotund than a walking-stick. The birds need not have feared.

It was Legs Brown—he of the Sandville incident and the Melrose wreck, wherein he had pursued the wreckers on ostrich-back, and l.. d caught them. Now he was engaged in secret service for the company. He hoped to stop the depredations of the Indians who resented the encroachment of the railroad on their lands.

Below him was the village of the red man. There were a few neat houses here and there, but the greater number of dwellings were dirty gray teepees, surrounded by a profusion of soiled children and yelping dogs. The primitive American is not noted for his industry. Given enough to eat and drink, he is never relentless in the pursuit of higher culture.

Out on the bay, a slight breeze rippled the waves and gently rocked the scattered canoes in which a few somnolent Indians were fishing.

The ex-brakeman, yawning and stretching himself, shouldered his rifle and moved stealthily into the underbrush. An ordinary person might have walked directly into the village, but Brown was a detective, and had his own conception of the methods followed by gentlemen in that profession.

"This seems to be a hos-tile country, all right," he remarked, stopping to chastise a predatory ant who had attacked his nether limb. "Even the bugs wanta chew off'n me. But, on, Stanley, on! The night approacheth."

A few steps farther, however, he halted again, his breath coming hurriedly, with a strange tightening of the scalp that caused his hair to bristle. From somewhere at his right came a plaintive voice:

"No, no, Johnny, don't make me go on. Don't. It hurts when I talk about it. Leave th' ol' man alone. I ain't never done nothin' to you all."

Then came another voice, low, yet threatening:

"Bill, who killed Pietro?"

"Yah, who did?" snarled the first speaker, a note of defiance in his tone. "Me! Choked him till his eyes stuck out. He had it comin', Johnny, he did. But he ain't satisfied with that. He ha'nts me! Him an' his crowd o' hell-hounds won't let th' ol' man sleep at night. Why, nobody cud sleep with a whole roomful of 'em gogglin' an' rattlin' their jaws. I cud stand everything else, if they'd stop rattlin' their jaws!"

Brown, moving softly through the thicket, found an old tumbledown shack from which came the voices. No longer caring to play the rôle of eavesdropper, he thrust open the door with his foot, and peered in.

Of the two occupants, one was an apparently half-witted old man, in a frenzy of terror at his own recital. The other was a young Indian, beady-eyed and brutal-featured, with long, coarse hair that served to lubricate his coat-collar. At the interruption he seized his shotgun and covered the intruder before Brown had accustomed his eyes to the half light.

"Git out!" he commanded laconically.

"How d'ye do?" replied Brown, grinning broadly.

"You no go, I shoot."

"You seem to be a man of infinite jest, Horatio, as the feller says. But, say, kid, put 'er up. I feel like I'm going to climb you if you don't, an' you'll git all mussed."

Gazing steadfastly at the other, he advanced until the point of the gun was almost touching him.

"For the last time—put up that gun!"

The Indian returned the look, his own eyes gleaming hate. Then his grip slowly relaxed, and the weapon slid to the floor, its owner cowed by a superior will.

"Havin' a little vaudeville all by yourself, I see. By gosh, it takes a low-down Siwash to get any fun out of torturin' a poor old lunatic. You drive out o' here, and don't come back, or you'll git cleaned."

The Indian sullenly obeyed.

Turning to the old man, Brown said: "If that animile comes pesticatin' around here any more, Uncle Noahy, let me know. I'll be down at the camp a few days."

"Yes, suh—yes, suh. Much obleeged," mumbled the patriarch.

"Don't know but what Johnny'll git singed, anyways, ef he keeps monkeyin' with that there giant powder. Blowed up! He, he! Yes, suh, blowed up!"

"What's that?" asked Brown sharply.

But the aged imbecile was already prattling vacuously. Repeated questioning failed to elicit more information on the subject. Giving up hope, Brown started down the rocky hillside, his mind busy with conjecture as to why the Indian should have use for explosives, and if the answer would not bring him very close to the object of his own mission.

Unexpectedly brought out of his musing by a slight sound in the rear, he turned, and threw up his arm barely in time to stop something that came writhing and hissing through the air.

Before he apprehended the nature of his peril a full-grown rattlesnake was coiling around his arm. Already the rattles were humming their song of death, when with his left hand he seized the still dazed reptile by the neck and tore it free.

Grasping the tail, he released the neck, and with a quick motion snapped off its head. Without a moment's hesitation, Brown charged up the hill in the direction from whence the strange missile had come, but all was quiet. Search as he would, he could find no trace of the enemy.

Swearing softly to himself, he returned to where he had thrown the dead snake.

"That's a fine large specimen to be slingin' at a man. Seven rattles and a button. Aha, what might this be?"

Secured to the body by a piece of cord was a scrap of soiled paper. Hastily unfolding it, he read these words, written in a scarcely legible scrawl: "You ar to smart. lok out for the deth tide."

"Seems to be a communication. Yea, bo, if I see one of them things, I'll throw m' hat at it."

Carefully placing the note inside his shirt, he hastened on his way to the village. One house, standing apart from the others, impressed him with its appearance of cleanliness and general respectability, seeming to hold aloof from its humbler neighbors. He decided to seek lodging there for the night. When the door opened in answer to his knock, Brown, in the act of taking off his hat, stopped and stared.

Instead of a dull-faced Indian woman, as he had expected, he saw a smiling, brown-eyed girl, neatly clad in a blue calico dress, her shapely arms bare to the elbow. She had the exquisite complexion that is peculiar to those in whom there is a tinge of Indian blood.

After a certain amount of stuttering, the wanderer contrived to make known his desire.

"Yes, I think you can stay. Father won't be home until late, but he never refuses to take in strangers."

His entrance into that house marked a change in Brown. Whether consciously or otherwise, there exists in the imagination of every man the image of his ideal mate. Only in such degree as she conforms to this ideal can a woman command his affection. Dimly, Brown felt that in Louise Allen he saw his dream-woman materialized, and he was glad.

He wondered if he had aroused similar emotions in her; but, taking a mental inventory of his own charms—huge hands and feet, bullet-head, and stubbly hair—he decided that he had not, and cursed the fate that had made him. However, there was one asset of which he was unaware. About him was the air of sturdy manhood, conscious strength, and self-reliance that the railroad breeds in its workers. Possessing this, a man needs little other recommendation to the favor of a truly feminine woman.

Frankly, he told her why he had come and asked for such information as she could give.

"Why, Mr. Brown," she laughed, "you're trying to make me betray my own people."

"No, sir-ee," he responded gallantly. "You ain't no more of a savage than I am."

"My mother was a quarter-breed, and my great-grandmother was a full-blooded Indian; so, you see, I'm very much a savage."

"Well, dang it—or—blame it, I mean, I like savages, anyway."

"Thank you. But, seriously, I have heard some rumors of a plot to blow up the track a short distance north of here, where it passes near the tide-flats. They say the powder is stored there in readiness."

There was little more that she could tell him; and, while she prepared and served the evening meal, the talk drifted to other subjects. Brown related several of his railroad adventures, in which she was keenly interested. As he finished the tale of Third-rail Hawkins and Frenchy, she interrupted him to ask:

"Do all railroad men have nicknames, Mr. Brown?"

"Yes. I guess most of 'em do."

"May I ask what is yours?"

He groaned inwardly. Here was one of those pitfalls of society of which he had heard. If he told the truth, he would certainly be committing a grave offense against the rules of propriety, and to lie was cowardly. He chose a middle course.

"Ah—Limbs Brown they call me; but, say, ain't this a fine evening?"

She smilingly admitted that it was as she led the way to the front stoop. Brown soon began to feel that her companionship was very agreeable to him. Her voice thrilled him strangely, and it seemed that there had grown between them a bond of sympathy—an influence that was not less real for its intangibility. As if it were the most natural thing in the world, he told her of his cherished hopes and ideals—thoughts that he had jealously guarded from the rough contact of his every-day life.

"Do you know, Miss Allen," he said, a touch of sadness in his voice, "in the last few years I've begun to think that a man oughta figure on bein' something more than a boomer brakeman all his life. Red Bill McCrea used to say, 'What shall it profit a man if he grabs the whole world and cannot dissect the mustard?' I guess that's about right, too."

"When one realizes his mistake he is taking a long step in the right direction," she replied gently.

"But it's pretty hard when a man has to live at these railroad boarding-houses. A saloon's about the only place that'll give him the glad smile."

After a pause, he continued:

"I—I was wonderin' if you'd be willing to help a struggling young man like me, if he was trying to do the right thing?"

"Why, how could I help you, Mr. Brown?"

"It'd help a lot if you'd marry me," he returned modestly.

She laughed softly. "You honor me greatly, having known me only a few hours. But perhaps some one else has asked before you."

"Has somebody beat me to it?" he demanded.

"Well, there is Tail Feathers, son of the chief. He has offered father a great many horses and blankets for me."

When he would have spoken again she warned him to silence, pointing to the shad-

owy roadway. Gazing intently into the darkness, he discerned a skulking form, apparently carrying a heavy burden.

"If you follow him, you may find something that will interest you," whispered the girl.

"Harrigan, that's me," he rejoined eagerly.

Hastily bidding her good night, he stole away in the wake of the crouching figure. For perhaps a quarter of a mile north, along the tracks, he followed silently, careful lest by the slightest sound he should make his presence known.

At a point where the road turned sharply away from the shore line, his quarry plunged into the underbrush at the lower side of the track. With some misgivings, Brown did likewise. Now began a period of aimless creeping and crawling, guided only by the noises of the night, some of which he thought were made by the man whom he pursued.

Once he heard a peculiar sound near him, and prepared for action; but, entering an open space, he saw a small cascade of dirt arising from a newly-made hole, and knew that it was only a badger seeking a ground-squirrel for his repast.

At length, in an unusually dense thicket, he scraped against something metallic. An investigation proved that he had stumbled on three large canisters of powder. Rising to his feet, he stood motionless for several minutes, his ears strained to catch any sound that might indicate the presence of an enemy.

Hearing nothing, he stooped and pried open the cans, laying a train of powder from each one. Then, applying a match, he scrambled off at top speed.

He had gone scarcely thirty feet, when there came a blinding flash, followed by a dull report. In the instant of light he was startled at seeing a man directly in front of him. Without slackening his pace, Brown shot out his fist and the man fell, surrendering the right-of-way without argument. But other figures sprang up, and in a few moments he was the center of a silently struggling mass of men.

Brown went down fighting. Be it said, however, that before he was bound there was hardly one of his assailants who could not show marks of the conflict.

Uttering no word, they marched him down the slope. He wondered vaguely if they intended to throw him into the bay to drown. It soon became obvious that he was not to die so easily. Coming to an old quay at the water's edge, one of the Indians forced his jaws open and thrust the barb of a small fish-hook into his tongue.

To the hook was fastened a fine wire, which they forced between his teeth to prevent its being held by them. He was then placed in a sitting posture on the edge of the platform, and the wire was made fast to a floating log that was moored to the pier. This done, his captors, one by one, glided away and disappeared in the shadows.

Only then did he begin to understand their reason for placing him there. The tide was now at its highest. When it began to ebb the log to which he was fastened would sink lower and lower until he was drawn over. With infinite pain he twisted and turned until he lay face down, his head hanging over the water.

Lying so, he composed himself to watch the wire tauten for the last time. He knew now what was meant by the "death-tide." Somewhere he had heard that among these Indians there was a superstition against shedding the blood of an enemy in time of peace. In this way they left the fate of a prisoner in the hands of their deity. If he chose to stop the outflow of the tide, the victim was released.

Brown sighed heavily. He could stand to drop out, he thought; but he had failed in his duty, outwitted by a handful of Indians. It was this that caused two bitter tears to mingle with the drip-drip of blood in the phosphorescent water about him.

Gradually the slack went out of the wire. Every slight movement of the log sent a thrill of agony through him. He writhed about in an effort to secure a moment's surcease from the torture; but the inexorable pull continued, down—down—down until it seemed that he would go mad.

Then, faintly, he heard a piteous cry. The strain ceased, and he was being dragged back to safety. Some one was wiping his face with a damp cloth.

"Louise," he whispered.

"Merciful Heaven," she sobbed, "they nearly killed you! You were just going over when I came."

Tenderly she withdrew the hook from his swollen tongue.

"Do you feel better now?" she asked.

"Sure. I'm all right," was the reply. "How'd you happen to find me?"

"Old Bill Jimson was wandering in the woods, and saw them bring you here. The poor fellow would have tried to help you himself, but the younger Indians have so terrorized him that he didn't dare. Father is the only man in the village in whom he has confidence, so he came to our house. When he found that father wasn't at home he broke down and cried—said you were kind to him this afternoon, and now if you were killed it would be his fault. You didn't tell me you had met Old Bill."

"Well, well, that must have been Uncle Noahy. Yes, I met him. Met a young Siwash at the same time—feller't looked like somebody'd hit him in the chin with a crab-apple. But, shucks," he added dejectedly, "after all, I had to go and make a fizzle of everything."

"How can you say that? Didn't you prevent them from blowing up the track?"

"Yes, and let 'em catch me. But, Louise," he went on wistfully, "won't you say that I got a chance against this Tail Feathers person?"

She averted her face a moment.

"I brought your gun," she said softly. "It might not be safe for you to return to the village."

He got to his feet and took the rifle; but, still feeling weak, he seated himself on a rock. The girl stood facing him.

"You didn't answer my question," he insisted doggedly.

"Is it a fair question, Mr. Brown? Remember, I am part Indian. Would you be content to become a squaw-man? And maybe I am already promised to Tail Feathers.

As she stopped speaking he saw that she was staring fixedly at something behind him. Suddenly she seized the rifle from his hand, and, throwing it over his shoulder, fired into the bushes. A man leaped in the air and came down in a heap, his hand still clutching a hunting-knife. Brown recognized the young Indian whom he had first met on the hillside.

"Saved again! I want my answer."

The girl pointed to the body at his feet.

"That," she said tremblingly, "is Tail Feathers."

She swayed, and would have fallen, but —Brown was there.

TO SAVE THE FLANGES.

A Lubricating Device Which Lessens the Wear and Tear on a Locomotive's Drivers.

A NEW flange lubricator, recently put on the market by the Collins Metallic Packing Company, Philadelphia, can be adjusted to meet any condition of design or construction of locomotives in service at the present time. The lubricating substance is in the form of a solid block which is very easily and quickly applied, making the maintenance cost of the appliance almost negligible.

It is claimed that when the lubricator is once set and properly adjusted it requires no attention during an ordinary trip of two hundred to three hundred miles. The only attention that it then needs is the pulling back of the latch, which is in communication with the adjusting mechanism, which provides for the pressure of the lubricating block against the wheel.

This operation is completed in an instant. The life of one lubricating block used on an engine in switching service is from three thousand five hundred to four thousand miles, and from two thousand five hundred to three thousand miles on a passenger-engine when running at a high rate of speed.

In a test made for the purpose of arriving at the economic value of the device, it is claimed that before the lubricator was applied to the locomotive it was necessary to take the engine out of service on account of sharp flanges at the end of four months after it had made twelve thousand to fourteen thousand miles. After the lubricator was applied, it is claimed that there was very little flange wear noted.

At the end of nine months, when the engine had a credit of twenty-four thousand miles, it was taken out of service because the tires were hollow worn to the extent of five-sixteenths of an inch—the flanges showed very little wear. The tires were turned down to remove the high places and the flanges were not touched. The engine was then placed in service with the hope of getting six months' more wear out of it before it would be necessary to turn the tires.—*Railway and Engineering Review.*

THE CALL-BOY.

BY J. EDWARD HUNGERFORD.

Written for "The Railroad Man's Magazine."

NCE upon a midnight dreary, as I slumbered weak and weary,
As I rent the air with many a lusty, loud, and raucous snore;
Suddenly there came a rapping to disturb my peaceful napping,
As of some one roughly rapping, rapping at my chamber door;
Said I, waking: "Who in thunder's rapping at my chamber door?"—
This I said—and something more!

Ah, distinctly I remember, 'twas a night in bleak December;
'Cause 'twas cold, and nary an ember wrought its ghost upon the floor;
Nary an ember threw its shadder—we had steam heat, which is sadder;
As that lobster in the hallway beat his knuckles on my door;
Loudly hammered on the panels till I thought they'd split for sure—
"Darn!" I said—and something more!

Presently my thoughts grew stronger; hesitating then no longer,
From my bed I hopped a-shiver, fairly frigid to the core;
"Hi!" I yelled, my patience snapping, "if you're bound, intent on scrapping—
Just continue tapping, rapping, beating, slapping on my door!"
This I said, my night-shirt flapping, as I ambled to the door—
This, ah, yes—and something more!

Deep into the darkness peering, toward the doorway I went steering;
Toward the doorway, never veering, feeling murderously sore;
And to still the angry beating of my heart, I kept repeating:
"Lobster! 'Tis a sorry greeting that I'll give you at my door—
What is more—dod-gast your crown-sheet!" Here I opened wide the door—
On the Call-boy—nothing more!

Europe's Old-Fashioned Railroads.

BY CHARLES FREDERICK CARTER.

FREQUENTLY we hear reports of the antiquated rolling-stock and obsolete methods of European railroads; but unless we have been abroad and observed personally the sad state of things prevailing there, we are unable to appreciate what the traveling public of the old world must undergo in order to be carted from one point to another.

Mr. Carter, as our readers know, is an old railroad man who is one of our most observing chroniclers of up-to-date railroad topics. He has just returned from an extended European journey, during which he studied foreign railroad conditions closely for THE RAILROAD MAN'S MAGAZINE.

With the customary disapproval of the practical American railroader for crude and undeveloped mechanical devices that should now be at the bottom of the scrap pile, he tells of the time-worn makeshifts that are still in vogue on some of the foreign roads. What Mr. Carter saw and suffered abroad can leave no doubt in the minds of our readers that American railroads have no equal in the world.

Why the Prospect of a Railroad Journey Makes the European Traveler Think Twice Before Trusting Himself to the Tender Mercies of a Train.

TO an American even moderately familiar with the railroads of his own land, those of Europe afford a contrast that is more than startling; it is almost incredible. No amount of reading in technical journals and books; no recollections, however vivid, of the foreign transportation exhibits at the Chicago and St. Louis world's fairs, can prepare him for the reality. But when he has taken his seat for his first railroad journey on the other side of the Atlantic, it begins to dawn upon him that he is in the mummified presence of the most remarkable case of arrested development in the world's history.

The railroad stopped short in the first period of its growth in Europe, and it has never taken a fresh start. Instead, it has been fossilizing ever since. Its railroads are one of the chief reasons why Europe lags behind in the march of progress, for adequate transportation facilities are the first and greatest requisites for prosperity, without which everything else counts for naught.

Perhaps it may be contended that European railroads serve the purpose for which they were built. So they do—after a fashion. So, also, can a man with two wooden legs contrive to walk; but no one will venture to maintain that he can walk as well as with the kind of legs usually provided by nature.

It may be something more than a coincidence that government ownership and inferior railroads are found together; but for

present purposes it is necessary to go no deeper into the subject than any tourist with a reasonably good pair of eyes can see.

The Trials of the Traveler.

When a man goes away from home in the United States he can look forward to a pleasant day or night, or both, resting at ease in a comfortable chair or sleeping peacefully in a good bed, with appetizing, well-served meals to be had at regular hours. But in Europe the very thoughts of a railroad journey sends cold shivers down his spine. Travel there is a nightmare; nothing less.

In the first place, the traveler must get down to the station at least half an hour before the train-time to register his luggage. There are no last-minute rushes to the station there, for things are not organized that way. Every pound of luggage, except hand-bags taken into the coach, must be paid for at stiff rates.

Two hundred pounds of baggage will amount to as much as a fare for one person. In addition to this, four men must be tipped to get your trunk on the train, and four more to get it off again and up to your hotel, for the railroad does nothing but haul the trunk after it has been placed aboard. These eight tips per stop are on a fixed tariff, usually amounting to eighty cents. If the hotel clerk knows his business some of them are included in the hotel bill and paid; then they are collected a second time by the tippee, making the total one dollar per town.

Adding the cartage between the station and the hotel, brings the total up to $1.50. Lucky, indeed, is the traveler who is too poor to have a trunk. When all the tips have been handed out and the railroad's charges paid, the traveler gets a slip of white paper about three inches square, which takes the place of the check used in the United States. On presentation of this slip and the payment of four more tips, the traveler gets his trunk to his hotel at his destination.

The "Comforts" of a Carriage.

The luggage attended to, the next step is to capture a seat—if you can, and then hang on to it—if you can. This is an operation requiring no small degree of skill. The steps on the cars are designed to make the compartments as nearly inaccessible as possible, and besides, there are always a lot of natives wanting the seat you are after, and they are more expert at scaling the steps.

There are three classes on all continental roads, and smoking and non-smoking compartments for each class. Thus there are five chances to one that you will find yourself in the wrong pew when you do get aboard. To add zest to the game, there are no separate cars for each class, but all the various classes are mixed up in each and every car.

When he is finally settled, completely winded, the American tenderfoot finds, to his measureless disgust, that the European passenger-car, or "carriage," as they will persist in calling it, has never developed beyond the stage-coach idea. In England and Belgium particularly, there are many cars built to represent three stage-coach bodies placed end to end, just like the earliest cars used on the Baltimore and Ohio away back in the thirties.

Boxes on Wheels.

They have four wheels like a stage-coach, though some of the larger ones have six wheels. Both the four-wheeled and the six-wheeled models were tried, found worthless, and discarded in the earliest years of railroad development in America. One short journey in them is enough to reveal the reason why such cars had so brief a career here. Of all the bone-racking instigators of uncharitable thoughts that ever ran on rails, they are the worst.

Passengers unfortunate enough to be incarcerated in them dare not open their mouths to voice their dissatisfaction with their plight for fear of having their teeth shaken out. The only easy riding cars found in a journey extending through six nations were on German express trains. They had four-wheeled trucks somewhat after the American fashion. A few of the best trains in England also have cars with four-wheeled trucks.

Whatever the size of the car or the arrangement of the running gear, the resemblance of the interior to the stage-coach of a century ago is more marked than that of the exterior. There is the same low roof and the same narrow, straight-backed seats placed face to face that are to be found in the old stage-coach or the more modern

brougham. Indeed, the European mind seems incapable of understanding that seats in a public conveyance can be arranged in any other way.

Even on the broad decks of steamboats all the seats are arranged in pairs to compel the passengers to sit face to face. Space in railway "carriages" is dealt out so sparingly that there is no place to put one's feet except in the lap of the passenger opposite. When he tries to reciprocate, this arrangement is found to be not altogether satisfactory.

Those straight-back, narrow seats, too, are comfort destroyers. To recline in a comfortable position is impossible. The luckless passenger must sit bolt upright, and if he wears a hat the brim strikes the back of the seat or the compartment wall, forcing his chin upon his breast.

In two minutes, he has the fidgets; in two minutes more he is in a violent temper, and a little later he has abandoned all hope of doing his situation justice in mere words, and has sunk into a state of coma from which he does not emerge until his destination is reached. There is no escape by going into a better-class car.

First-class compartments are in the same car with the second-class, and there is absolutely no difference between them except in the color of the upholstery. As the colors are not standardized, the passenger who pays first-class fare, which is pretty stiff, is always haunted by a dread that he may be riding in a second-class compartment at first-class rates.

Every Convenience Is Lacking.

No matter what the class or the country, the windows are invariably let down by a strap, precisely like those in a stage-coach or a hack—that is, unless you are so unfortunate as to share the compartment with native travelers. In that case the windows are *not* let down. If there is anything in Europe that seems to be more dreaded than water, it is fresh air.

Six or eight natives will get into one of the tiny compartments, carefully close the windows, or the window and the door opening into the "corridor," and breathe into each other's faces for hours at a stretch even during the hottest days of August. And, mind you, the windows are the sole means of ventilation. After having been made sick once by an experience of this sort, a prudent American will never enter a compartment unless he can get an end seat where there is a fighting chance to keep the window open.

On ordinary trains there is no communication between compartments. Once shut in at a station, a passenger cannot escape until the guard comes to his rescue at the next stop. On express trains, there may be "corridor" cars. These have the inevitable compartments, but there is a narrow aisle at one side.

This does not necessarily mean that a passenger may go from car to car throughout the train. Only on the best through trains are vestibuled cars to be found. Owing to the distance between cars due to the preposterous buffers in universal use, the vestibules are long, narrow, unclean passages in vivid contrast to the familiar vestibule at home. Only "corridor" cars have lavatories.

Starvation or Nausea.

Such conveniences are regarded as the last word in advanced travel and are proudly featured by the enterprising railroads owning them. On French roads, water-tanks are carried on the roof over the lavatories, and these leak so badly that on half the cars observed the rooms were flooded and could not be entered at all.

The dining-cars are immeasurably inferior to those in America. To tell the brutal truth, they are frowsy and in need of a general overhauling at the shops. Window-shades are sometimes missing, so the sun can shine straight into the eyes of the diners, and the linoleum on the floor is often dilapidated and soiled. Instead of flowers for table decorations, advertising cards are stuck up in every available space. The meals are the everlasting *table d'hôte* luncheons and dinners, from which there seems to be no escape in Europe, with the same monotonous round of unappetizing dishes, doled out with stingy hand and the invariable slow service.

There are "restaurant cars" on the boat-trains from London to Dover, but as there is no communication with the rest of the train and no stops, the diner must enter the car at one terminal and ride to the other. For this an "entrance fee," or "seat fare," of sixty-two cents is charged for the ride of seventy-five miles. This, added to the regular first-class fare, makes a rate of a

trifle over seven cents a mile, which, it must be admitted, is ample. Once on board, it is found that tea costs twenty-five cents a cup and other things in high-cost-of-living proportion.

The only alternative for hungry passengers is the station lunch-cart, or counter. Except in France, the sole eatable to be had at these places is ham sandwiches. Generally the hard, dry rolls are not buttered, and not infrequently the ham is obstreperously *passée*. Pie is unknown in Europe, and cake is not obtainable at railroad stations. There are neither cold beans, chicken, doughnuts, nor any of the familiar staples of the railroad lunch-counter at home —nothing but ham sandwiches.

In France, however, one can buy a pasteboard box for ninety cents containing a lunch for one person. Here is an inventory of the contents, which never vary:

One roll, dry and hard as charity, without butter.
One very small slice of ham.
One very small slice of beef.
One very small piece of chicken.
One very small slice of cheese.
One bottle containing three-fourths of a pint of vile wine.
Oh, yes! Salt! There is a really generous portion of salt.

No Water to Drink.

It is foolish to get angry about it, for there is no water to quench indignation, however righteous. A passenger could parch with thirst until his sufferings culminated in spontaneous combustion for all the relief he could find on the train. There isn't any water to be had even at the stations.

It isn't possible to buy a bottle of mineral water except at the more important stations, and if there happens to be a heavy run of Americans the scanty supply is likely to be sold out before late-comers get around. On German express-trains, a small *carafe* of dirty, stale, warm water, open to the dust and the bacteria, may be found in the lavatories.

No one, even in the direst extremity of thirst, would drink the stuff. The only recourse of the thirsty passenger is to buy some vile, sour wine at forty cents for three-fourths of a pint. In Germany, the beer that cannot be sold elsewhere is peddled at railroad stations. In Europe it is considered disgraceful to drink water under any circumstances. Only the most brazen tenderfoot from the "States" ever drinks water in public.

An American observer is filled with amazement to find that trains can be operated with the obsolete equipment in use in Europe. In England, vacuum brakes are still largely used on passenger-trains. Imagine a vacuum brake still surviving in 1910! Generally, however, the air-brake is used on passenger-trains, though it is likely to be of an antiquated type.

Steam Brakes on a 4 1-2 Per Cent Grade.

Whatever the type, the air-brake is not the safety device it is in America. Europeans seem to think it is time to find out whether the brakes are in order when they are needed. I saw many engines changed and cars set out and picked up, but just once did I see the brakes tested according to the invariable custom at home.

If a careless trainman were to neglect to open the angle-cock on the train-pipe at the tender, thus cutting out the brakes on the whole train, the joke would certainly be on the luckless passengers if anything happened. One curious antediluvian relic in Switzerland had steam-brakes to hold its passenger-trains while going down a four-and-a-half per cent grade.

Anything is good, though, when compared with freight-trains — excuse me, "goods-trains." A "goods-train" has to be stopped before the brakes can be applied. This is not an attempt to be funny, but a literal statement of an exact fact.

In England and northern Europe, many "goods-wagons," or "goods-vans," are innocent of any brake whatsoever. The others have brakes operated by a long lever placed horizontally at one side of the car in such a position that it can be operated only by a man standing on the ground. These brakes are not intended to control speed, but only to hold the "wagon" on the sidings.

When the engineer—that is, the driver—of a "goods-train" wants to stop, he simply shuts off and lets the train drift until it gets tired and stops of its own accord!

Some of the engines have steam-brakes on the drivers and all have a hand-brake on the tender.

Results of this method of handling trains are not always pleasant. For instance, on August 24, 1910, an engineer on a Paris, Lyons and Mediterranean "goods-train,"

approaching Telagh, France, saw a semaphore set against him and also saw a passenger-train standing on the main line ahead of him. The only thing he could do was to shut off, jump, and let his engine plow through the coaches, crowded to the limit with excursionists. There were no brakes and no means of controlling his train. Twenty-four persons were killed and forty were injured.

Right here is a good place to smite the popular delusion about the safety of railroad travel in Europe. We are perpetually having the vast superiority of European roads dinned into our ears, when, as a matter of fact, they are not safe at all. Here are a few samples from a sickeningly long list of horrors that is open to any one who will take the trouble to look it up:

Contich, Belgium, May 21, 1908. Collision; 40 killed, 324 injured.
Saujon, France, August 15, 1910. Collision; 53 killed, 65 injured.
Rottenmann, Austria, September 20, 1910. Collision; 11 killed, 25 injured.

Safety! How can there be such a thing in countries where brakes are almost unknown, where cars are built of the flimsiest possible materials, thrown together in the cheapest possible way, and where a large percentage of the signals are operated by women?

In the mountainous regions of Switzerland and northern Italy, some of the "goods-wagons" have hen-coops at one end, which in the case of box-cars are placed partly above and partly below the roof. In this hen-coop is a brake-staff with a short cross-piece with one end turned up like the letter "L" for a handle, instead of a wheel.

Hen-Coops for Brakemen.

The lower end of the brake-staff terminates in a screw on which a block travels up and down as the staff is turned. The brake-chain is attached to the block; thus the brakes are set as the block works up the staff and released when it is screwed down. The pitch of the thread is below the angle of repose, so the brake will stay put anywhere without the use of a dog.

The hen-coop is just large enough for a shack, or, rather, a "guard," to squeeze in, provided he isn't a very big man. There is no room for him to swing himself on the brake—but there is no occasion to swing himself. He can set the brake with one hand to the limit of the braking power of the tiny four-wheeled car.

In case of emergency, the "guard" doesn't hustle around setting the brakes on half a dozen cars, as an American brakeman would do under similar circumstances. He can't, for those long-range buffers hold the cars so far apart that it would be as much as a man's life was worth to try to leap from one to another. No, the "guard" just stands in his hen-coop and lets events take their course.

There are three men to a train. Consequently there are three brakes to hold it. Braking-power being dependent on the weight of the cars, those three little matchboxes together hold the train back with about as much power as if a stubborn calf were tied to the rear buffer of the last car.

Seven Tons on One Car.

It is not enough to describe a European "goods-wagon" as small or light, for such words fail to tell how little it is. As a matter of fact, to American eyes they resemble pill-boxes on casters. Some of them look as if they would not hold a dose of salts. To get down to figures, the average capacity of "goods-wagons" on the London and Northwestern, which may be taken as a fair sample of the rest, is seven tons. Coal-cars run a little larger, many having the stupendous capacity of ten tons, while there are very few cars with a capacity of twenty tons. All "goods-wagons" have four wheels, two feet nine inches in diameter. The wheel-base is not less than eight, nor more than nine feet.

The buffers hold the cars from three to three-and-a-half feet apart. The only coupling used anywhere is a chain of three links and a hook like the original couplings used on the first train on the Mohawk and Hudson Railroad back in August, 1831.

It is interesting to note that the Mohawk and Hudson couplings were improved before the first run of fifteen miles was completed, while the chain couplings are still in use in Europe. On passenger-cars, the middle link is replaced by a screw-bolt with right and left hand threads and a lever to work it, by means of which the slack is taken up.

Yard work is reduced to its simplest elements. The cars having no brakes there is no occasion to ride them when kicking a cut down a siding. The couplings are so awkwardly placed that it is necessary to

come to a stop to cut off a car or make a coupling. The switchman carries a hoe-handle with a hook on the end with which to manipulate the coupling-chains, and a bugle with which to signal the engineer.

A bugle is always used to start trains on the Continent. In England the guard blows a whistle until he attracts the engineer's attention or runs out of breath. In the former case, he waves a green flag until the engineer takes the hint to leave town. In the latter, he rests awhile and then tries again. Neither the bell-cord nor the air-whistle is known in Europe.

The bugle is relied on almost exclusively in switching. Only on a few occasions have I seen hand-signals given. When these are resorted to, any sort of wiggle means anything the wiggler thinks it does. Thus I saw two Swiss railroad men signaling an engineer for the same train movement.

One gave the American standard code back-up signal, the other gave the go-ahead signal. The engineer took it all in, then went ahead. Probably he guessed right, for neither of the trainmen had a spasm.

Speaking of signals, the European codes are marvels of simplicity. Here is the whistle code as nearly as it could be compiled solely from observation:

Approaching stations, one short squeak. Apply brakes, one short squeak. Release brakes, one short squeak. Back up, one short squeak. Starting a train, one short squeak.

I heard a great deal of whistling, but no matter what the message was it was always conveyed in one short squeak.

"Squeak" is used advisedly, for the noise made by European locomotive whistles is just that, and nothing else. Not once did I hear the deep-throated bellow of the American locomotive whistle. All the whistles over there appear to have been picked before they were half-grown. The note of all of them is the shrillest attainable. Fortunately the whistles are so small and the sound they make so weak that even the engineer cannot hear it unless the wind happens to be favorable.

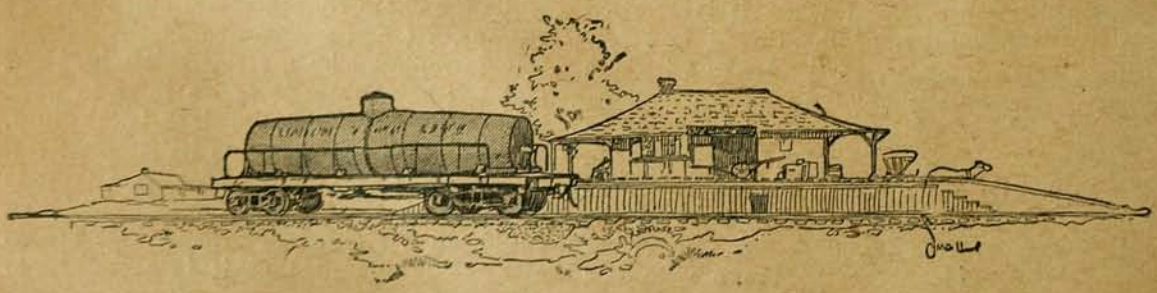
In designing locomotives, as in designing passenger-cars, the great end to be attained seems to be to produce the most uncouth, awkward, and inconvenient thing possible. No locomotives have the comfortable, roomy cabs to be found on American locomotives, though the Swiss engines of the latest models approximate them somewhat in external appearance.

In France and Belgium, few engines had even the pretext of a cab. The best that any of them possess is a wind-shield with a rudimentary roof, amounting to little more than a short deflector sprouting from the top. The best of them afford little protection from snow and wind, the rest none at all. There are never any seats. Even the newest locomotives exhibited at the Brussels Exposition had no place for the engine-crew to sit down.

In many cases the engineer stands on the left side, instead of the right. Wherever he stands all the levers for handling the machine are arranged to make his work as awkward as possible. Instead of a reversing lever, they all have a screw and a hand-wheel at which the engineer must grind for some time to "hoss 'er," as the English say.

The throttle is fearfully and wonderfully made. Frequently it is a long steel bar fastened by the middle to the throttle-stem, which rotates instead of having a longitudinal movement. To work it the engineer must face the thing and devote his undivided attention to pumping it up and down.

The prize-winner was a locomotive in service on the Northern of France. The throttle was placed in front of the wind-shield on the side of the boiler. The engineer had to lean up against the side of the boiler-head and reach outdoors to get hold of the throttle-lever!



MASON, THE GRIZZLY.

BY CHAUNCEY THOMAS.

What a Girl Like Mexie Can Do With the Heart of a Strong Man.

SYNOPSIS OF PREVIOUS CHAPTERS.

MASON, the Grizzly, and his partner, "Hungry Joe," prospectors in the Western wilds, entertain at their camp-fire a stranger who tells them of wonderful gold mines fifty miles up the mountains, to reach which, however, seems almost impossible owing to hostile Indians. Mason decides to make the journey alone. After riding all night, he comes suddenly on an Indian encampment and is compelled to alter his course. He encounters three Indians, kills them, disguises himself in their blankets and feathers, but is finally captured by a band of Utes, who proceed to put him to death in boiling water. Mason manages to escape during the excitement caused by his hurling the son of the chief into the boiling water, but is eventually captured by another band and brought back to be burned alive.

CHAPTER VI.

Applying the Torch.

ONE of Colorow's squaws, worth seven ponies, came with a blazing stick. Through the tangled wood, Mason watched her light the pile.

"Fire up in a dozen places, old girl, and let's get the job over with in a hurry. I don't blame you a bit. 'Twas a shame to kill that kid, I know; but I had to do it. Bet it's the first bath he ever had. Now it's not nice for you to look at me like that—who-o-o, that smoke gets in my eyes!

"And—whew! I always did hate the smell of burning hair—as I was going to say—I object particularly to you looking at me, for in a minute—U-g-g-g— Courage, Mason, courage! It'll soon be over—Hallo, Red Shirt, what's up!"

Red Shirt leaped onto the crackling brush and kindling fagots, swung his tomahawk and cut the raw-hide rope that bound Mason to the stake. White man and red man leaped from the fire together. Twenty of Red Shirt's sub-chiefs surrounded Mason, faced outwards and raised their rifles. Excitement prevailed. Red Shirt walked straight up to Colorow, and thundered in English that Mason might hear:

"He my prisoner! You lose him: I git him! He go on back trail! Head off soldiers! Utes have peace, or Red Shirt fight Colorow!"

The Indians divided themselves and gathered behind their respective chiefs. For a long, still minute, Colorow and Red Shirt fronted each other. Red Shirt's band was the larger; the soldiers were coming. Colorow turned on his heel and stalked away.

Mason was free. Once more he raised his eyes to the merry stars. Then he shook hands with Red Shirt.

"White brother go quick! Come!"

Handing Mason an old buffalo robe and moccasins, he led the way down the lonely cañon. Red Shirt feared to trust even his own followers; he would take his white prisoner to the mouth of the cañon himself and see him safely by the slinking outposts. Then, too, the white man would know more surely who had been his friend, who had saved his life, and when the white soldiers came he would befriend Red Shirt.

Though the wily old Indian gave Mason his life and liberty there his generosity ended. Red Shirt rode his split-ear war pinto, the swiftest long-distance runner of all the Ute horses. He was armed with a Sharpe's rifle. Mason trudged along on foot. Only the blanket and moccasins had been given to him.

At the end of the cañon, Red Shirt halted. In his Indian ferocity he already regretted having freed the captive. But it would be a fatal mistake for Red Shirt to relent and take his prisoner back to camp.

"Red Shirt never doubles on his trail," he said to Mason, as the white man and the red looked at each other in silence.

"Red Shirt, the Grizzly will not forget. He thanks you. *Adios.*"

"Red Shirt all one heap fool. He kill three white man—you, four," hissed the Indian as he jerked his rifle to his shoulder and fired.

Mason ducked. He half expected it. His fingers closed over a three-pound stone. An instant later it wedged fast in Red Shirt's skull. Hanging to his pinto's reins, the Indian rolled from his saddle. Mason gripped the snorting, plunging horse by the raw-hide bit. Remembering the service of his late disguise, Mason tore the war-bonnet from the smashed head—it felt wet in the darkness—grabbed the rifle and ammunition, and swung into the saddle barely in time.

The three Indian scouts, lurking near, made for him through the gloom, but too late. The frantic bronco, further inflamed by the smell of a white man on his back, squatted half-humped an instant, then flattened into a whirlwind run. Three arrows whistled hungrily into the empty night.

Mason was free.

Two Indians were carrying a third one, dead, up the dark, silent cañon to the Indian camp. A third ran ahead with the news. This left the cañon unguarded.

Two miles away, Mason made a wide detour to avoid a long, dark mass of advancing horsemen. Although they were moving with rapid caution, yet they made no noise. Their horses' hoofs may have been wrapped with strips of blanket. Mason kept too far back in the night to see that they were riding four abreast.

CHAPTER VII.

Still a Prisoner.

DAYLIGHT found Mason across Berthond Pass and near the hot vapor cavern now known as Idaho Springs. In 1858, this was Chicago Bar. Urging the tired pinto along through the gray mist, he was thrilled with pleasure to hear in iron Anglo Saxon:

"Halt—or I'll fire!"

Halt he did, right in his tracks. From the brush before him stepped three white men with poised rifles.

"Get off that horse and hold up your hands!"

"With pleasure, gentlemen," laughed Mason as he obeyed. Two kept him covered with their rifles while the third came forward, secured his own weapon, and took charge of the pinto.

"Come with us. Run and we shoot. Say nothing."

Not a little puzzled, Mason did so. They walked a quarter of a mile down Clear Creek cañon, one of the strangers in the lead, two behind, one of these carrying Mason's rifle as well as his own, while the other brought up the rear with the pinto.

In the growing light of the morning, the three looked hard at their prisoner but beyond exchanging glances now and then, said nothing.

In truth, Mason was a fantastic object. His hair was scorched, smoke and soot disfigured his face and skin. The Indian war-bonnet he had removed during the night and tied to the saddle where it hung begrimed with dust and Red Shirt's blood.

On his feet were fancy beaded moccasins too large for him; the old buffalo robe, with the hair worn off in great bare patches, was hung and belted about him like a caveman's mantle. He had no head covering beyond his long hair, now tangled and full of dead leaves, sand, and mud.

On his face there was as much dried blood as dirt and soot. His left arm was bleeding from its arrow-wound and hung painfully, badly swollen. Verily, Mason was not Apollo.

Behind a clump of quaker asp the three led their prisoner. Here were their horses. At a sign from one of his captors, Mason once more bestrode the pinto, while the other two tied his feet together beneath the horse's body and tied his hands behind his back.

"But see here—" began Mason.

"Shut up!" ordered his guard, and, to give weight to his order, he gave Mason a punch in the pit of his long, empty stomach with the barrel of his rifle that knocked the breath out of him.

"Lay low is the beginning of wisdom," muttered Mason to himself. "Anyway, this is not half bad compared to the frying on deck last night—but I wish I had some breakfast."

With no more ado, the four strung out into a trot down the cañon.

"Where you taking me?" asked Mason, in defiance of another poke from the rifle.

"St. Charles—maybe hell," was the laconic reply.

Revolving this in his head, and not having the slightest idea of what was up, Mason jolted along in hungry, begrimed, and wounded silence. Down the cañon they went at a six-mile-an-hour trot. The sun was just lighting the floor of the cañon when they reached the Forks of the Creek.

So far, their route had been lonely; but from here on they passed hundreds of eager-eyed gold-seekers coming up the cañon to the Forks, all bound for Bob-Tail Hill. Each was intent on his own ends, and, beyond an interested or indifferent glance, no one paid any attention to the three men and Mason.

It was noticed that the man riding in the lead carried two rifles, and over his left shoulder—one pouch before him, the other behind, the ends tied to his belt—hung a pair of saddle-bags.

The rifle and the saddle-bags he had taken from Mason. What the saddle-bags contained, Mason had no idea. They were tied to the saddle when he vaulted into it the night before, and he did not stop to examine them.

As Mason was led at a rapid jog past the Forks of the Creek, and away from the trail up the North Fork to the new diggings, he drew a deep breath, frowned, and set his teeth, as if disappointed. His guards noticed this, and wondered at the depth of the sigh.

At noon the four rode into St. Charles, thirty-five miles away. Stiff and sore, Mason was taken from the now exhausted pinto, led into the offices of the Ben Holliday Stage-Coach Lines, and handcuffed.

Two of his captors kept armed guard over him, while the third, leaving his own rifle in the corner, took Mason's gun and the saddle-bags into another room on the door of which was marked:

PRIVATE OFFICE
VAMOSE.

Various men came, rapped on that door, and were admitted. A crowd gathered outside. In an hour—a very long hour—the door opened, and out filed fifteen or twenty men.

Their leader, evidently Holliday himself—a bluff, hearty, jovial man, but one whose core was of iron—said to Mason:

"We've voted not to hang you just yet. We'll wait till the troops and the boys get back and we have the rest of 'em. Anything to say for yourself?"

"Yes. Give me something to eat; let me curry this dirt off me; give me some clothes; fix up this arm of mine; and let me smoke. If you have no objections, I would like to know what's up? I'm not on to your game," said Mason.

The bluff man looked keenly into Mason's sleepy, bloodshot, yet frank and fearless eyes.

"Pardner, you're either the whole Ute, Sioux, Cheyenne, and Arapahoe nation rolled into one and jammed into a white hide, or you're a square man. We don't know which yet—and you've got nothing to say about how we decide, either.

"But I'll tell you this, just on general principles: ten days ago our treasure-coach was wiped out by Red Shirt's band down the Platte between here and Fort Morgan. Nothing new in that, but we had twenty thousand in the chest. He got it. The red devils were led by renegade white men, and I suppose *they* got the money. Now the V. Cs.—that is, the vigilance committee, if you're a tenderfoot—pick you up dressed like an Arapahoe medicine-man gone crazy, and in your saddle-bags we find the whole twenty thousand—"

"I see," murmured Mason. In the last twenty-four hours he had grown hard to surprise. Then he added:

"Those are Red Shirt's brains on that war bonnet. I mixed 'em up with a rock last night."

"Very likely! So much like Red Shirt!" put in his original captor sarcastically.

"Well, gentlemen, you've got the drop. Don't hang me for a week, if you'll do me a favor. But, whether you do or not, trot out a bath, some clothes, some grub, and a smoke."

The V. Cs. went back into the private office. In five minutes his captor came out; and still keeping Mason under the three rifles which had guarded him from Chicago Bar to St. Charles, he was taken away to a stout log cabin in the bed of Cherry Creek, which, by politeness, and for the dignity of

the "city," was called "The Jail." Here, alone, in the obscurity of one small window in the plank door, after a wash and a dressing for his arm, a change of clothes, and a feast of two pounds of buffalo hump and a quart of coffee, Mason lay down to rest and think and sleep.

Outside, in the sunlight, the two guards lounged before the door. It was two o'clock in the afternoon. When at dark the guard brought in supper, Mason was asleep. The next morning, when breakfast came, he was still sleeping. Noon, still asleep. The guard gathered up the last night's supper, the breakfast, and the dinner he had just brought in and tossed them through the jail door into the creek. Then he went outside, padlocked the door, and began a game of "seven up" with his fellow warder. At four o'clock the game was interrupted by a husky voice from the little window in the door:

"Say, pardner, have you got a match?"

A boxful was handed up, and there was a grunted:

"Thanks, u-m-m-m."

Then through the bars wafted a cloud of blue content. Next came a cheery whistle, followed by:

"Got any more of that buffalo hump left?"

The player who had been winning all afternoon passed in a chunk of cold meat weighing a pound. There was silence for ten minutes, then:

"Got any more?"

This time the good-natured card-player handed in a piece of hump as large as his head, and added to it a pail of water.

Nothing more was heard from the prisoner for the rest of the day. When the guards, this time together, took in supper, Mason, a piece of buffalo meat in one hand, his pipe in the other, was stretched flat on his back, snoring like a well-developed dog-fight.

The two men looked down at the sleeping one, then at each other, and smiled with many wrinkles.

"He's no renegade," said one softly.

"Not much," muttered the other.

On noiseless toe they went out and locked the door.

Across the Platte, at that moment, there broke loose a great hubbub. There were shots, yells, whoops, beating of pans and boards—pandemonium on a boom. Down to the river through the night it came, splashed across, and entered St. Charles. Mason rolled over uneasily and in a weak voice muttered:

"Go it, Red Shirt."

It was a long, dark mass of advancing horsemen, riding four abreast, but making noise enough to give China an earache. The Utes had been surprised in the cañon, the backbone of the tribe had been broken, half were dead, the rest had scattered like quail by twos and threes. Twenty were prisoners. These prisoners belonged to Red Shirt's band.

With the cavalcade rode Hungry Joe. The stranger had left the party at the Forks of the Creek and gone up the North Fork to the new diggings, but Joe come into St. Charles.

No sleep that night for the embryotic Denver. A small body of cavalry had been the care of the avenging force, but nine men out of every ten were St. Charles frontiersmen. The tenth came out. The jail was raided.

Mason, ready to be hung, his pipe in one hand, tobacco-pouch in the other, the buffalo meat — what was left of it — in his pockets, was shot aloft to the platform shoulders of Hungry Joe and rushed to the great town square.

Standing on Hungry Joe's shoulders astride that massive head, Mason told his story for the first time. He told of the bringing by the stranger of the tidings about the new diggings to the camp by Hot Sulphur; the saddling of Rattler; the swift, determined night-ride to get to the new diggings; the discovery of the fire and the dancing figures in the box cañon ahead; the arrow from out the darkness; the whirl and rapid escape along the back trail and into the little branch cañon; the climb to the little park; the wiggling up the ridge to pick out the route; the camp in the rain under the dripping willows, and of his going to sleep.

Then he spoke of the surprise by the Ute; the arrow-wound through the arm and into the ground where an instant before had lain his body; the shooting of horse and rider, and knifing them to the death because he dare not shoot again; the necessity of throwing the carcasses of both horse and rider into the stream; the hurried climb to the edge of the timber; the discovery and killing from behind the tree of the galloping Indian; the taking and wearing of the disguise; the dash over the ridge; the shooting in midair of the

drunken and outlandishly dressed Indian waiting in ambush; the chase down the little cañon and through the deserted Indian camp; the shot backward from the revolver that dropped the Indian and his horse into a rolling heap; the rain of bullets, arrows, war-clubs, and stones from above; the death of Rattler, and the stunning of himself; the reviving in the icy torrent of the Frasier, where he had been thrown; his despair; and of his cool solution of Colorow.

He related briefly how he had been stripped and led to torture in the boiling kettle; how, to gain an opportunity, he had insulted the son of Colorow, then thrown him into the kettle; how, pursued, he had dashed down the cañon and right into Red Shirt's band; how he had been taken back and tied to the stake; how the fire had singed him; how Red Shirt, for selfish interests, had freed him and fronted Colorow; how Red Shirt had clothed him so meagerly; had taken him to the mouth of the cañon alone, and had devilishly tried to kill him; how he had brained Red Shirt with a stone, grabbed his pinto, head-dress, and gun, escaped the three scouts, and got away; how he had unknowingly avoided the dark, silent, avenging column of justice-dealing white men; and how, at length, he had been arrested.

The very rudeness of his speech graced his cause with these pleasant, gay, and radiant soldiers. They swore that he was a square man, and when he called on his living rostrum and the Indian prisoners to witness it, the jovial Holliday shouted:

"Why didn't you say so before?"

"Yes, *why?*" yelled the crowd.

"Would you have believed it?" asked Mason.

"No-o-o!" came doubtfully from somewhere.

The rest were uneasily silent.

Just what happened the rest of that night Mason never clearly remembered. This he does know: The town was full of men, too many for whom to find beds. When day was breaking he and Hungry Joe went back to the jail. The door was open, and inside, on the bare floor, lay his three recent captors, asleep. As the place smelled like a moonshine distillery, Mason had no fear of awakening them.

Hungry Joe, selecting the fat leg of one for a pillow, settled down to sleep. Mason took the place next the door. "To git the air," drowsily thought the huge gambler. From there, perhaps, Mason could see the morning star.

CHAPTER VIII.

Cherry Creek and the Lady.

MASON awoke with kicking temples and a skin that was hot and dry and tight. Hungry Joe looked him over, and announced solemnly, "Mountain fever."

That was the beginning of a five months' siege that left Mason weighing but ninety-five pounds, a parchment-covered skeleton barely alive. Then slowly he grew better, and for two months did little but sit in the sun and eat.

All thoughts of the new diggings had gone long ago. The country was staked for miles, and it would be months before he could again pound a drill or stand in the icy water of the gulches with a pan or rocker.

That ride had been too much for Mason. It was too much for any man. But the men who had cheered him that night in St. Charles did not let him die. A log cabin has plenty of chink-holes, hence it is a good hospital. Buffalo soup, and baked apples at twenty-five cents apiece, are ideal for a typhoid digestion. No other medicine than quinin, pure water, and fresh air worked wonders. Slowly he grew strong again.

Then did bluff Ben Holliday recall that Mason had saved his firm twenty thousand dollars. He offered Mason one thousand dollars as a reward, which Mason promptly refused. Then the stage-man offered him a loan—any amount. This Mason also refused.

Again did Holliday proffer help; this time a stock of books and stationery found but little injured among the burned wreckage of a raided wagon-train. Its owner lay scalped beside it with twenty-seven arrows in his body; his heirs and his name were unknown.

After an hour with his pipe Mason quietly accepted this offer. The next day St. Charles had its first book-store. Mason was clerk, janitor, and proprietor. Business was brisk. Soon, in a small way, he began to lend money. His standing as a "square man" drew to him sundry little buckskin-bags full of gold dust and nuggets for safe keeping.

Mason did what primitive banking St.

Charles required. The large accounts, such as Wells, Fargo & Co., and all Eastern business, was of course handled by Holliday. Mason loaned a little when he had it to spare. Thus business prospered with him. In the new diggings, forty miles away, many struck it rich, but more came back to St. Charles hungry and desperate.

The fever that Mason had cursed he now blessed; for, being a late arrival, he too would probably have been among the hungry ones. As it was, he had a good, though modest, business, steadily growing better. But it was not the profits that Mason valued most. He had found a gold-mine right on his own shelves—a bonanza of words, of thoughts, of feeling—his books. Mason was his own best customer. What ruins a saloon-man makes a book-dealer. He began to keep a diary, not of events alone, but also of his thoughts and impressions. This diary it has been my privilege to see and make extracts from.

But there is a fate that shapes our ends, rough-hew them as we may. In the spring of 1864 it rained for ten days on the Divide twenty miles to the southeast of the headquarters of Cherry Creek, yet that bed of sand remained almost dry. Suddenly, on the tenth day, a wall of water and liquid quicksand six to eight feet high rolled down Cherry Creek on the helpless settlement. It was the last blow of the wilderness. Under it civilization all but strangled: but the settlement revived, lived, and to-day is the Queen City of the Plains.

When darkness settled over gasping Denver, Cherry Creek was once more a gentle little stream, barely six feet wide, rippling along in innocence. Only its muddiness told that it was still malignant.

A man stood on the bank where, that morning, there had been a book-store. This man was Mason. Silently he watched the passing water.

"Give me back my books!" he muttered. Then he glanced up at the kindly stars. When his eyes again fell to the water at his feet he laughed quietly, and lit his pipe.

Between igniting puffs he mused aloud:

"Now—puff!—for the—puff!—puff!—mines of—puff!—Montezuma."

He seated himself on the sand-filled wreck of his store. As the smoke floated in slow curls from his lips he fell to dreaming.

The wilderness had robbed Mason of all he had.

Cherry Creek was a slimy stretch of muck and quicksand a mile wide. Here had stood the heart of Denver. It was gone.

But not a day nor a sigh did Denver waste. The wrecked part of the town was to be rebuilt at once, this time on high ground back from Cherry Creek and the Platte, safe from all floods.

Mason did not forget his banking business. He hunted up those he owed—they did not seek him out in his misfortune—and transferred to them the debts owed to him for money loaned. This done, he had left one thousand dollars, a good Indian pony and outfit, a clear name, and a clean conscience.

Ben Holliday again offered help, but this Mason declined with a shake of the head and a silent grip of the hand. As they were about to part, the Overland coach rolled up to the door. An Indian arrow stuck in the leathern baggage boot behind. From the coach stepped a young woman, evidently from her dress and manner a widow.

"Can you tell me where I can find Mr. Holliday?" she asked.

"I'm your man, madam. What can I do for you? It's yours to ask."

"I beg your pardon, Mr. Holliday, but I have come all the way from Iowa to find my husband. He left for Pike's Peak in the gold rush of fifty-nine, five years ago, and disappeared. I prayed that he was not dead; but, at Leavenworth, I was told by one of your drivers that a train similar to the one he had joined there was captured and burned on the Arkansas by the Sioux in the late fall of 1860.

"He said that you, Mr. Holliday, could tell me more; so I came to you. My husband was named Decatur—Robert A. Decatur. He was coming to Denver to open a book-store—"

Holliday and Mason exchanged such vivid glances that the woman stopped, and shuddered. Then big-hearted Holliday told the shrinking woman how the wagon-train had been found a charred wreck, how her husband lay sleeping beneath the grass roots by the Arkansas, and how the books had been found and saved.

Then he looked at Mason and stopped. The woman, brave as steel, was standing, tearless, waiting for the rest. Then Mason spoke.

"Mrs. Decatur," he said, "your husband's books came into my possession. There was no one to claim them; no one

knew of him; I took them. Last week they went down Cherry Creek. They are all gone. Their value was twelve hundred dollars. I have one thousand dollars. That is yours. Holliday, lend me two hundred."

Without a word, but with a light in his warm, blue eyes that was good to see, Ben Holliday weighed out ten ounces of gold-dust and handed it to Mason. From his hip-pocket Mason pulled his own buckskin sack, and handed both to the amazed woman. She protested. Holliday mildly insisted, and with gentle firmness forced her to accept. Mason looked longingly into his empty pipe.

The night-coach was about to leave. Mrs. Decatur turned to Holliday and asked for a pen. She rapidly wrote a page and handed it to him.

"Read it when I am gone," she said.

She gave her hand to Holliday and thanked him warmly. To Mason she gave both hands—and said nothing. But Mason knew.

As the coach, with three mules in the lead and two on the wheel, lumbered away into the dusk, the two men, a little apart from the rest, swung their broad, black hats in answer to a good-by flutter of white that a dainty hand held out of the window. Her other hand held every cent Mason had had on earth.

"If it hadn't been for Cherry Creek last week that little woman would never have gone back to the States," Mason said to Holliday.

"Why not?"

"'Cause I would have married her."

"Well—I'll—be—hanged!"

"Perhaps she has proposed herself," laughed the bluff stage-coach owner, "let's see what she says—" and he opened the paper Mrs. Decatur had given him.

"Well, Mason, allow me to congratulate you. The dear little thing thinks she has outwitted us, after all. Here is a deed, drawn in true feminine fashion, it is true, but still perfectly good, for a mile or two of Cherry Creek sand flats that some land-faker or blasted Pike's-Peaker in the back trail has sold her—more likely given her. She deeds it all to you, Mason; you! I'm jealous! It's worth, counting in the prairie dogs and cactus, about forty cents in counterfeit currency. You own Cherry Creek, Mason!" Holliday roared.

"Ugh! What a joke. She, God bless her, meant it as a million. But I've got all the Cherry Creek I want. Here, give it to me—" reaching for the paper—"I want it as a keepsake. I'm off for Mexico to-morrow morning."

"Not much, my boy. Keepsakes are all well enough. This goes on record first, and then you can have it for a keepsake—and the lady, too—wasn't she a darling! Cherry Creek might be worth a thousand dollars some day."

"Give me the lady and you can do as you want with Cherry Creek. Got a match?"

CHAPTER IX.

Mexico—the Forgotten.

MEXICO. The Egypt of America; old when the Anglo-Saxon was born. When the wolf suckled Romulus, Mexico had a forgotten history of a forgotten race and civilization. Did you ever read Prescott, the blind historian of ancient America? Do so. Then when you read of Grecian games played seven hundred years before Christ, of the expedition after the gold-filled sheepskins lining crude sluices in Asia Minor, of the sweating slaves who built the pyramids, of the glories of Babylon, now buried beneath half a hundred feet of dust, of the hoary tales of the yellow man—when you read of all these until they seem to have been but yesterday and long for something older, turn to Mexico.

Here fought and conquered the bravest, the most determined man of history—Cortez. Here, in royal green, ruled Montezuma. Here was the magic land where Spain found new life and for a time became the modern Rome, the ruler of the world and the waves. Here is where Lew Wallace wrote, where General Lee learned the art and science of war, where Maximilian died, where Diaz rules to-day.

Do you believe that between the shores of Mexico—or the outlying Antilles—and the coast of Africa, thousands of feet beneath the blue waves of the Atlantic rests the cradle of man, of civilization, and of the world—Atlantis? No? Then read.

Whence came this now dead, now forgotten civilization? Whispers echoed from the depths of time, legends told by dark lips, tell us that a White God, so it seemed to the copper-hued race, once came with the rising sun out of the distant waters of the Atlantic. He taught the dark people

the ways of civilization. Then he left them, going east, over the waves, but promising to return with others of his kind.

When the steel-clad, steel-souled Spaniard burned his ships and faced glory or certain death, this superstition won more for him than did his sword or his awe-inspiring cannon.

Montezuma himself, each morning, knelt to the rising sun, hoping that his eyes might see the promise of the White God fulfilled. To-day, the Zuni Indians and other tribes who live in the pueblos, at each sunrise, mount the mud walls of their hive-like dwellings and watch for Montezuma and the White God to come with the morning light.

Are the legends of the North or the East more beautiful than these? Legend, the all but silent historian of forgotten ages, also murmurs of a race of cultured warriors, sailing the unknown waters beyond the Pillars of Hercules, who safely plowed the waves of European seas while yet the timbers of the first Phœnician galleys were saplings.

Did you ever compare Egypt and Mexico? Do so. It is an education in itself. If you would study Rome, where would you go? To Italy? Yes. If you wished to soak your mind in the indescribable influence which hovers over the Pantheon like a winged goddess, would you sail for the shores of Greece? Then, if you would study the most ancient of countries, you must study Mexico. "It is not the most ancient," you say. Go to Mitla, in southeastern Mexico. On the ground read Prescott. Search the world for a man to read unto you the writings on the stones at Mitla. You will not find him. Yet to many the writings of oldest Egypt are as clear as motionless water. Here is something older than the Sanskrit tongue.

On a dripping mustang, Mason rode up from the south to a New Mexican sheep ranch. The years in Mexico had changed him greatly. It was August in the early seventies. The time was noon. Out over the glimmering desert, the atmosphere quivered like transparent jelly. On the horizon, the fresh, cool mirage came, lured, vanished; only to tempt again from a new point.

Squatted against the adobe in the full glare of the sun, wrapped in a serape, silence and mental mystery, shaded by all his wealth—his sombrero—was a dejected Aztec. He was not a Mexican, the hybrid offspring of a hated father, a despised Aztec slave; but a pure-blooded Indian.

His free, fierce forefathers, six hundred years ago, poured from the unknown in the Northwest down into what is now the Valley of Mexico, conquered, and for three centuries enslaved the milder Toltecs. Here these Moors of Mexico, in their turn, died nobly beneath Spanish steel. But the Aztec spirit was almost gone. Its embers smoldered in this morose shepherd, glowing only in his eyes.

He and Mason ate in silence. During the stifling afternoon they slept. With cool evening came the sheep and a delight—La Señorita Mexie. The girl was the half-breed daughter of Mason's surly host. Her white mother was long since dead.

Small, slender and trim as a deer; lithe as a puma; just bursting into throbbing womanhood; pulsating with life; now dreamy as the lotus; now trembling at a glance, this little Cleopatra had the mind and manners of her evidently gentle mother and the instincts of her half-savage father.

A Venus in living bronze; her nature was too wild to be civilized, too civilized to be wild. From high-arched moccasined foot, narrower than Mason's wrist; to her low, broad forehead shaded with six great curls, as dark and fine as skeins of black silk; Mexie was as dainty as a nymph, never bold, always demure, and ever fascinating.

What might suddenly become animal grossness, in Mexie, at this time, was white fire. The peons called her "The Breath of the Morning." To Mason, she was but a child and he reverenced her goodness.

This girl—unsullied by civilization—had not learned to lie. Nature never lies.

"What is a lie?" she asked Mason one day.

"To lie is to allow another mind to have a false impression," he answered.

She slowly repeated the definition. "To-lie-is-to-allow-another-mind-to-have-a-false impression."

After a wordless hour she said: "I like that." A day later he heard her murmur, "then one can lie by keeping silent."

Mexie had but three virtues and the greatest of these was charity.

Books they read. In his saddle-bags was the tale of Troy divine. Solomon, in all his wisdom, spoke to them. Under the

chaparral, *Lear* raved, the *Moor* pleaded, *Macbeth* cursed, *Antony* praised, *Hamlet* pondered. Of these men Mason read aloud, and they spoke of them as friends.

Mason stopped for a meal; he stayed a month and dreamed that he would return again—perhaps, once too often. Pounded corn, pepper, beans, mutton, coffee, books, and the guitar; the world forgotten, the desert, and Mexie; all a lazy dream, but enough—for a month, perhaps for life.

In the frosty morning, they drove forth the flock. Far from the corrals, during the blazing moon, they rested in the shade of the chaparral. At evening they followed the sheep home to the ranch, there to find the Aztec still sitting, still smoking, still silent.

Seated one evening in the moonlight, the Aztec, the girl, and the *Americano* were the sole inhabitants of three hundred square miles of desert. The guitar was silent. "La Golondrina," the lament of the Moor leaving his Granada, and "La Poloma," were the plaintive airs she played for him, often taking up the strains in a voice as sweet and clear as tinkling water. In the starry stillness, Mason read from the tablets of his memory. A lizard twinkled across his hand and the desert became the salted plains of Babylon fertilized with m—

Tired out, Mexie, wrapped in Mason's coat, was stretched with the abandon of a child on the ground at his feet—asleep. Watching, dreamily, her face half shaded in billows of hair, he was drawn from the Asiatic to something older, the Aztec.

"*Señor,* tell me of the lost mines of Montezuma?" he said.

Silence, a frown, a scowl; corn husk cigarette rolled; then, in liquid accents:

"Gringo all fools, *señor.* There are no lost mines of Montezuma."

The smoky words died away. The living silence came again. But the brown face was kindling. A soul was surging there. Then in words sometimes lingering, sometimes spit from the tongue, came the Aztec's story.

"Listen, I will tell you. My mother, *señor,* was from one of the wives of Montezuma. In my mother's veins was Montezuma's blood, and I am her son. My father, and after him, I, once owned this ranch and all the cattle. I studied in the military schools of Chapultepec. I was not always this. I was a soldier, an officer, before monte and mescal made me what I am. Sick at heart, my Lady of the Snows, my wife, Mexie's mother, withered and died. I became a sheep dog, almost a peon, my little girl—but now she is a woman, is free to do as she wishes. I could not influence her if I tried. You, *Señor Americano,* are the first man she would ever obey. If you wish her, she is yours. When her blood loves it worships, it idolizes, it becomes a slave, it adores—but beware the hate of the rebound."

"But I know your language, I once read your books; I know the history of Mexico."

"When the Spaniards came, our great and good Montezuma remembered what his fathers had taught him; that the White God had gone over the waves into the Morning Sun and some day would return on great white wings to rule again over the lands and lakes of Mexico.

"When runners came from the salt sea to the great city on the lake with fresh fish for Montezuma—ah! *señor,* that is two hundred miles and our people ran it in a day and night, so swift and sure of foot were they—they told the great king that angels in shining scales, having white faces and hair of gold, riding huge beasts from whose feet flew fire when they rode on the rocks, who killed with the thunder-fire and volcano smoke, had landed on our shores; then Montezuma knew that the Aztec's hour had come.

"He sent to them many kinds of gifts. One was a Spanish helmet full of placer gold. Another was a wheel of pure gold thirty palms around. In your money, *señor,* it would be worth three hundred and twenty thousand dollars; but much more in those days. Another wheel was of silver worth twenty-five thousand dollars. With these gifts came many others, fine cotton and feather cloth, and jewels. With them Montezuma sent this message: 'White Gods, go back into the sea!'

"But Cortez, the Cæsar of America and of medieval times, burned his ships and marched into the heart of our capital, *señor.* Brave? Yes, magnificent—but fatal to the Aztec.

"Then Montezuma gave to Cortez all our treasures. His father had hoarded gold, silver, emeralds, pearls, fine cotton and feather fabrics all his life. These were Montezuma's, yet he gave them all to the Spaniard. Three great heaps of gold there were; the value, in *Americano,* was six millions, three hundred thousand dollars.

"Then, *señor*"—Mason saw the snake-like eyes scintillating—"came the melancholy night. That night Montezuma died. It was June 30, 1520. He sleeps in the princely shades of Chapultepec, no one knows where. The deep-toned war-drum of Guatemozin, the last of the Aztecs he is called, *señor*, sounded over the city and we fought in the dark till the morning light the 'Battle of the Causeway.'

"Ah, *señor*, the blood of four hundred and thirty Spaniards and four thousand Aztecs stained the waters of the lake. Every Spaniard whose black soul crossed the Great White Range that night was chased by ten fantom Aztecs. There was laughter in the heavens. We won! There Alvarado, the Child of the Sun, the Spanish captain, made his leap. There, *señor*, were lost all the Spanish guns and cannons; all their powder and all their gold. Into the waters of the lake it went; it is there now. Santa Maria be praised! That fight, *señor*, was the greatest defeat ever suffered by Spain on *Americano* soil. Magnificent! Of a little over six hundred Spaniards, we killed two-thirds and made them drop their spoils.

"Ah, *señor!* They were gods. Wounded, starving on wild cherries; armed with only mail, sword and lance; with only twenty-one horses and no firearms; flying to the sea for life; those two hundred weary, wounded Spaniards, aided by only a few savage Tlascalans, in the Valley of Otumba, fought two hundred thousand Aztecs.

"The valley was white with our cotton armor, it was full of fighting men. It was one White God against a thousand of my people. A hundred of my fathers died on every Spanish sword. Twenty thousand were slain. The tired Spaniards, each with a new wound, were dying hard when Cortez, twice wounded, plowing on horseback through the battle, with his own hand killed Cihauca, our chief. Like sheep from the wolves flew the Aztecs. The valley was empty. The Spaniards had won.

"*Señor*, when troubles pile upon you remember Cortez at Otumba. Yes. Remember Cortez at Otumba.

"Then with more men from over the salt waters, and aided by our slaves, back they came. For seventy-five hungry, bloody days, *señor*, they once more soaked our streets and temples with Aztec blood. The largest, greatest city in the New World they leveled to the mud. My people were slaughtered; our emperor, Guatemozin, they captured, tortured and hung, after sweet, false words of sworn safety.

"*Señor Americano*, my people in our capital made the most desperate defense in history. Men died before Roman arms, *señor*, but not like my people. Then the men alone simply died fighting. Our warriors used their wives for food. Women ate their babies. The men and boys with bare breasts and empty hands, the women with their children in their arms, leaped from the housetops down onto the Spanish spears; to bury them, to smother the slaughtering fiends under heaps of dead, to drown them in our blood.

"For an hour after the fighting, the parched Spaniards could not drink, so clotted with our blood were the running waters.

"The Spartans in the pass died before the Persian that their wives and children, city and country, might live in peace. The sea moans beside their marble—but we are forgotten. We, the Aztecs, ate our wives and children, destroyed our city, perished with our country. We did this thing from choice.

"Honorable surrender, with freedom, was always open to us. But even our children died fighting. At length the time came when, weak and helpless, we could fight no more. The few left alive did not surrender; they were captured, then enslaved. Who weeps for the Aztecs?

"*H-s-s-s!*" The Indian's breath hissed between snarling teeth. "But they found no gold! We laughed at them; then died beneath their dripping steel; our lake had our gold—ha! ha! ha!"

The voice of the Aztec rang out over the desert in fierce exultation. From the distance, the snarling jangle of a coyote answered like an echo. The wild laugh awoke the sleeping girl. She stirred uneasily, slowly opened her eyes, then smiled drowsily at Mason.

She rolled closer into the coat, cuddled nearer, and caressingly patted his moccasined foot with her fingers, lightly touched it with her lips, pressed her cheek to it for a pillow, blinked at vacancy and with a sleepy sigh was dreaming again. The Aztec was silent; his gleaming eyes piercing the horizon.

It was all so strange, so wild, so—Looking down at the black, silky head on his foot; the fresh, fascinating face; the perfect form, the fairy foot, Mason knew why Mark Antony gave the Roman empire for such a woman.

Civilization or Mexie—which?

Mason wanted both; but both were impossible. Remove the jewel from its setting and its luster would be lost. Others had done it; turned to another race for the sake of a foreign woman. Why not he? He had no other ties.

"After many battles," broke in the Aztec, "the Spanish Cæsar sent less than one million dollars to his king."

The voice was low, the tone was bitter; the blood of Montezuma ran riot in the moody Aztec.

"A French privateer captured the Spanish galleon;—and Francis the First, the French king, had the gold, and laughed at the Spanish rage. Once Cortez sent a gold and silver cannon to Spain, *señor,* worth two hundred and fifty thousand dollars. That was for show.

"From such deceits grew the stories of my Aztec fathers' enormous wealth. In gold and silver, we were as poor then as now; only in manhood were we rich. Our mines we knew not, nor how to work them. What gold we had, *señor,* came from the streams and where the lodes were rich on the surface. The great stores of gold and silver that came from Mexico were mined by the Spaniards themselves. *Señor,* the demon is dead. An Aztec rules once more in Mexico. Where Montezuma sat now is Diaz.

"*Señor,* a light? My thanks to you, my friend; the fire—the fire on my cigarette is dead. I forget everything, *señor;* but my tale is done.

"When Cortez sailed for Spain he had only two million dollars in gold and silver treasure, and half of that was his king's. But he had five emeralds, *señor,* carved by my people into shapes of flowers, buds, and bells. They alone were worth one million dollars, and were coveted by the Spanish queen.

"We had no steel; we knew nothing of iron, although it was all about us. Tin and copper we used, hardened in a way now forgotten — a lost art they call it, *señor.* We cut the emerald with it, *señor.* Except to the value perhaps of ten million dollars, all the gold and silver in Mexico has been taken from the rocks by white hands. Of the ten million my Aztec fathers had, a little of it is the world's; some was lost in battle and shipwreck; the rest is in the lake. For the lost mines of Montezuma, *señor,* seek no more—it would be labor lost."

The Aztec arose, dropped his serape on the sleeping girl, and left them. Thinking, thinking, thinking—Mason's eyes and thoughts roamed the cold desert and the perforated heavens. His foot grew numb and cold. To move was to disturb the breathing bronze.

The moon set. The coyotes and the prairie-owls left them. Cold, dark silence came. Dazzling white the morning broke. Mason had not moved. Yet his thoughts had searched the universe.

Foolish? Perhaps; yet for him Mexie had once done the same, and would do it again. Had he not the hot moon to sleep, while she, fanning him, watched the sheep?

In the Indian, the desert, and the night Mason lived and loved that of which civilization does not dream. There was something that lured his nature.

When the sun burst over the sandy horizon like the throat of a raging cannon, when the sky grew brassy and the lizards crawled from the griddle rocks, the Anglo-Saxon shook himself. His conscience was growling. All that day he was more sullen than even his ugly host. Mexie coaxed like a kitten; Mason brooded like a bear.

Go! Go! Go! He must. When the shadows were stretching for the east Mason saddled his horse. The Aztec rolled a cigarette; Mexie drew a dagger from her garter and hid it in her sleeve.

Then Mason, holding his bronco by the bridle, stood before them.

"Where go you, *señor?*" asked the Aztec.

"To find the mines of Montezuma."

"But there are no mines of Montezuma, *señor.* What will you do?"

"Find better ones."

The Aztec shrugged his shoulders. Mexie leaped for Mason. Quick as she was, the spring-steeled Northerner was quicker. He caught the flash of her arm, held it for an instant as gently but as firmly as a plaster cast, and kissed his hand.

Then he swung into the saddle—and rode away.

Before a lone herder's dugout on the desert sat a man and a girl. The man's cigarette had been cold for an hour; the girl watched a speck ride into the setting sun.

(To be continued.)

Observations of a Country Station-Agent.

BY J. E. SMITH.

No. 32 — Sometimes Christmas Cheer Has the Right-of-Way Over All Things, and Sometimes It Gets Switched on a Blind Siding and Stays There.

"MERRY CHRISTMAS! Mr. Railroader, wherever you are, and a Happy New Year!"

These are the bell-ringing, home-coming days, and only the joyous shouts of the children break the brooding peace of the world.

Again—"Merry Christmas!" whether in station, tower, or on the road.

Some one must shout it.

Some one must bawl you out, Mr. Santa Claus, with all your sly tricks and showy doings and surprises. Some one must remind them of you, for they have almost forgotten you, Mr. Santa—the train-crew, the yard-crew, and the station-crew.

You are no cotton-whiskered fraud to them, Mr. Santa, because all they remember about you was your doings when they were boys. They have never seen you since, Mr. Santa Claus. They hear of you, and eager and exaggerated stories come to them from the children at home, but this holiday time, with its feasting and gift-giving and subtle suggestion of sacredness, is not for them.

For around this time the days are shortest, traffic is the heaviest, and all the regulars and reserves are called out to fight the snow and cold and keep the business moving.

The coaches and the stations are crowded. People are going home. The baggage-trucks are piled high with trunks and grips. The expressman labors under a mountain of unsorted and unchecked packages. The ticket-agent has an eager and impatient throng at his window. The trains become later at every station, and the passengers implore the conductors not to miss their connections.

But they do miss, and the passengers cry out in vexation. Trunks go wrong in the rush, packages are lost, and there are woes and worry and wrath for the dull ear of the overworked transportation man.

So—"Merry Christmas, Mr. Transportation Man!"

We are shouting it two weeks ahead of the timely hour, for if we waited until the seasonable moment you would return a cynic's sneer and heap some guttural imprecation on our heads, for there can be no "merry" anything when the multitude rushes upon us and overwhelms us with its demand for attention and service.

Nevertheless, these busy men have their Christmas experiences, and many of them are worth narrating. This brings us to the story of "Bud" Brown's Christmas dinner.

Bud has run an engine on our road for a number of years.

"Do you know, Bud," said his wife, one December day, "we have been married ten years Christmas Day, and we have never had a Christmas dinner together? Every Christmas Day you have been on the road, or have just come in, or are just going out. Next Thursday's Christmas again, Bud. Can't we arrange it to have a big Christmas dinner, and have our folks with us and you be here, Bud?"

"I can't lay off, Molly," said Bud. "They

are very short of engineers. There's always a lot of them sick this time of the year. Business is awful heavy, right now. The corn crop is moving. I think I'd have to be sick, but maybe I can arrange it some way to get in. We'll try it, Molly."

And so it was arranged.

Next day Bud explained it to the road foreman of engines, who promised to do what he could, and Bud went out to Chicago with a drag.

It was only a few days until Christmas. At home, Molly and the children had entered into the spirit of the Christmas-Day feast and the family reunion with great interest. There was much planning and buying and scheming and enthusiasm of detail, all with the central idea that Bud would be with them.

In Bud's home it was a great event. If Bud had been an exile of Timbuctoo for years, and this was his liberation and homecoming, the children would have been in no greater commotion or expectancy. It is the way of the human heart. The greatest pleasures that come to any of us are the little things that spring from our family affections.

Bud, as an honored guest, was determined to be there.

He returned from Chicago in the night, and was called for a trip east the next forenoon. After the usual rest at the end of this trip, Bud took out a Ridgeville turn, which brought him back to the east-end terminal the following day.

Bud could now figure his movements and probable whereabouts on Christmas Day with some degree of certainty.

If he got out on his regular turn, he would get home the evening before, and this would mean he would be called Christmas morning.

Bud used a little diplomacy.

All the trainmen lived at the other end and were always anxious to get out on the first opportunity for the return trip.

Bud swapped his turn with a later arrival. When he came up again he swapped once more.

His behavior was a mystery to the other trainmen. He was accused of plying for a better engine or for the merchandise run.

"THIS IS WEDNESDAY, THE 24TH! WELL, OF ALL THINGS!"

The general opinion, however, was that Bud had gone "batty," because no one in his right mind would lay over at that end of the line of his own choice.

Bud squandered three opportunities, but made no explanations. Then he figured it out that the fourth turn would put him out early in the evening and land him at home Christmas morning, before noon, at the very latest.

Thereupon, although besieged and importuned, all other trades were declared off, and Bud got under way at ten o'clock the night before, with "all she could pull."

Now, fate in the affairs of man has many inscrutable ways beyond the understanding of a railroader.

Bud crowded her, but the engine behaved badly, and the despatcher gave him two bad stabs.

At seven o'clock in the morning he was still fifty miles out and on a siding.

He walked down to the tower and sent this message to the roundhouse to be phoned to his wife:

> Am coming. Ought to be there about eleven. BUD.

He got away at length, but he had another bad meeting-point, and at ten o'clock he had covered only half the distance. Then he sent another telegram:

> Wait for me. Can't get in till twelve. BUD.

At twelve, Bud was ten miles out and had made his last stop.

He sent another telegram to Molly:

> Hold everything, Molly. I'll be there a little after one. BUD.

Then he sent this message to the roundhouse clerk:

> Telephone O'Connell's livery-stable to have a cab at roundhouse for me at one o'clock. BUD BROWN.

"Hey!" yelled the operator as Bud was climbing back on the engine. The roundhouse operator wants to know if it is the ambulance you want, and if any one is hurt?"

"No!" yelled Bud. "It's a cab! C-A-B!"

"And, he says, your wife wants to know what's the matter with you?"

"She knows!" yelled Bud.

Bud answered the rear signal, and once more got under way.

There were no further delays of consequence.

Bud got off his engine at the ash-pit, and made out his time-slip on the jump, tossing it in to the roundhouse clerk without stopping.

A cab awaited him, and Bud tossed the driver a dollar.

"Drive to 3010 High Street," he shouted. "If you can make it in eight minutes, keep the change."

The cabby made it in seven minutes and thirty seconds—faster time than Bud had made on the trip in, but with better padding for the jolts.

Bud sprang out eagerly and ran up the steps.

"I'm here, Molly!" he cried. "I made it! It's only a little after one!"

A strange quiet was over the house.

"Bud! What in the world is the matter?" exclaimed Molly. "They have been telephoning me all morning! I didn't know what it meant! I am so nervous!"

"Why, Molly! The Christmas dinner, you know!" gasped Bud. "I made it! I got here!" he went on, half appealingly. "You haven't forgotten it, have you, Molly?"

Molly waved her hand despairingly.

"Why, Bud Brown, you stupid thing. This isn't Christmas. This is the day before! This is Wednesday, the 24th! Well, of all things!"

Bud stared at her with open-mouthed stupidity.

"Ain't to-day—"

Then he stopped.

"Molly, I'll wash. If you'll fry me some eggs and some of the bacon, I'll go up-stairs and go to bed. I've been up all night. They'll be after me before morning."

Late in the day, he was asleep. Molly tiptoed to the stair door and heard the heavy, regular breathing that tells the forgetfulness of all things—Christmas, railroading, and all the little joys and petty disappointments of our lives—then she sat down and cried softly and silently.

Bud was called at four o'clock, Christmas morning, and went out with a train of coal for Chicago.

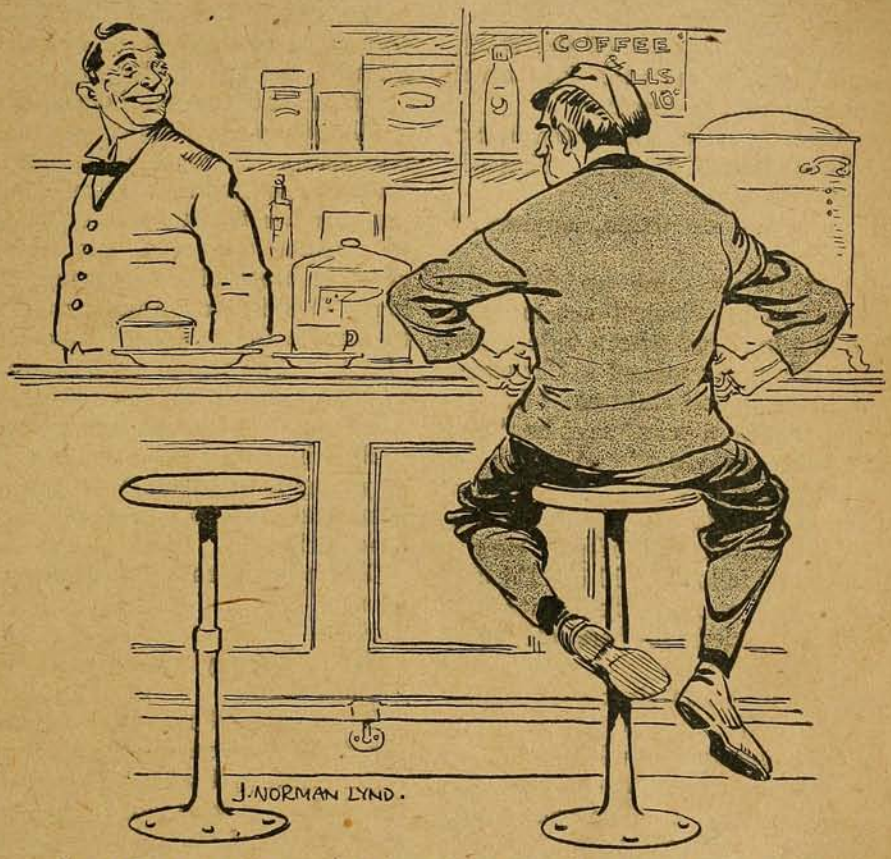
Early Christmas morning, the folks came in from the country. Finding that Bud could not be at home, Molly and the chil-

dren were persuaded to return with them and spread the feast and have the day's festivities at the old homestead in the country. Bud's house was deserted.

Thirty miles out, Bud's engine went wrong. It sulked and balked on Christmas-Day service. Bud did all an engineer could

"Let me use your phone!" cried Bud.

"Hallo, Central! Give me O'Connell's livery-barn. Hallo, O'Connell! This O'Connell? I want a rig—a good stepper. Want to go six miles in the country. Want to be there by noon. Engineer Brown—High Street. Come right—"



"THAT'S A FINE CHRISTMAS GROUCH YOU GOT," GRINNED THE WAITER.

do, but she would not steam. They got into clear and another engine was ordered out to take the train.

Bud took the cripple back home. He sent a message to Molly:

Coming back. Be there about ten. Bully.
BUD.

He returned. It was about ten when he rushed up to the house. The blinds were down and the door was locked. Bud raced to the rear of the house and shook the fastenings with an impotent fury.

"Molly! Molly!" he cried.

A neighbor appeared at her back door.

"She's gone, Mr. Brown," explained the woman. "Her folks came in early this morning, and took her and the children out to the country."

"Mr. Brown! Mr. Brown! The call-boy's after you. Says quick."

"O'Connell, wait a minute. Keep your ear there."

Bud went out and held a brief conference with the call-boy.

"Never mind, O'Connell; I won't use the rig. I've changed my mind. I'm not going."

In another half-hour Bud was in the cab of a passenger engine, and behind him was a single coach.

"You've got to turn her some, Bud," explained the conductor. "Everything's to be out of our way. We've got just two hours and ten minutes for one hundred and fifteen miles. Go to it, Bud. Twelve-thirty in the Union Depot at Chicago. That's the program, Bud."

Bud was in daredevil humor. Old Santa himself is supposed to have a reindeer fleetness that is some going; but, with all his years of training for this particular day, Bud left him far, far behind, until the midwinter haze swallowed him up.

Bud pulled into the Union Depot a shade under the two hours, and the next day the papers published his picture.

A lone passenger got out of the coach. As he hurried outside the gate, Bud heard the joyous commotion of meeting.

"Hey, Bud!" said the conductor. "Here's a five-dollar gold piece. That fellow said to give it to you."

"What's all this excursion, anyway?" asked Bud.

"Why, that fellow come up from the South and missed his connections, and got marooned a hundred and fifteen miles from home. Says he's never missed a Christmas dinner with his wife and children. 'Christmas only comes once a year,' says he, 'and there won't be many years'; so, when he saw he couldn't do it any other way, he just hired this special train. Cost him about a hundred or a hundred and fifty. He's a sentimental sort of fellow. 'Think I'd disappoint them and me, too, for that?' he asked. Well, we landed him here, all right; didn't we, old scout?"

A little later, Bud was sitting on a high stool in a restaurant.

"Give me a hamburg sandwich and a cup of coffee! How's that mince pie—this month's or last? Say, for Christmas dinner you ought to have real cream for this coffee! Funny how these doughnuts turn to stone after thirty days, ain't it? These Chicago cockroaches are greedier than those down in Indiana. Over there, they let the patron break bread first. Here, they beat him to it."

"That's a fine Christmas grouch you got," grinned the waiter.

"There's a reason," growled Bud.

Molly is saving the gold piece. Some Christmas day, when the cards run right, it is to buy a Christmas dinner. And Bud is to carve the turkey.

There is a thriving little town in the West, on a certain railroad. Tom Dixon was sent there in the dual capacity as railroad and express agent.

About the same time, a very charming and sensible little girl arrived in this same place to teach in the public school.

Tom met her a number of times, and at once laid in some tailored clothes, six neckties of variant hues, and a change of hats. She cast a witching eye at Tom, and, in time, Tom held her hand.

Then Tom confided to a friend that a young man could not save any money gallivanting and pirouetting around in the folly of the single state, and that he could never amount to anything or get anywhere until he married and had the help of a good woman.

The friend assured Tom that was true.

That is one of the nice qualities of a close friendship. It can be depended upon to encourage and justify anything on which you set your heart. It has the pleasing quality of agreeing with you, and of taking your view, of concurring, assenting, and approving. That is the reason it is so stimulating to confide in a friend in moments of perplexity. The friend tells us what we want to hear, because we put the case to him in a way that brings an amiable concurrence.

But, in Tom's case, the friend was right. A young man of good intent, steady purpose, and sufficient income should marry a good girl.

There are twenty-five good and sufficient reasons.

First.

Well, anyway, Tom married the little "schoolmarm."

They got along well together. They saved a little money—not much, but a little.

The little girl schemed and managed, and they began to see their way to the points of sending for a bungalow book, and to notice fancy gables, contorted dormers, and pergolas.

Then Christmas Day was coming along, and Tom began wondering what he could buy her. He went over every page of the department-store catalogue. He inspected the china sets, and the cut glass, and aluminum outfits, silver tableware, and furs.

Tom reasoned it all out. She is such a sensible girl. No ornamental gew-gaws for Maggie. No foolish flubdubbery. Something useful every day for her. This brought him, at length, to the patent sweeper and the galvanized bread-mixer.

One day early in December, a little sealed package from Chicago came to Tom's office and into Tom's hands.

He startled a little to see that it was addressed to his wife, "Mrs. Tom Dixon," in a masculine hand.

It bore a conspicuous red-letter poster,

"Not to be delivered or opened until Christmas Day."

"What the thunder's this?" said Tom, turning it over and over. "Who would be sending Maggie anything from Chicago? Wonder whose handwriting that is?"

Tom inspected the package with the keenest perplexity. "Value, fifty dollars! Huh, I can't understand it!"

Tom put the package in the safe, but he got it out again, examined the seals, and slyly tried to pry one of them loose, but it held faithful to its trust.

Then he adroitly questioned his wife about her relatives and friends to find a clue to one whose interest in Maggie would indicate a Christmas value of fifty dollars, with barren results, until one day — a-ha! — a woman cannot keep anything. One day she let out a little— not much, but enough. Tom, quick-eared and nimble-witted, put this and that together, and guessed the rest.

There was a young man, a dear friend, with whom Maggie had gone to school. He was now in Chicago. It was a childish romance— almost forgotten. He was prospering, and—

Tom walked back to the office very erect, looked hard ahead and clutched his fists.

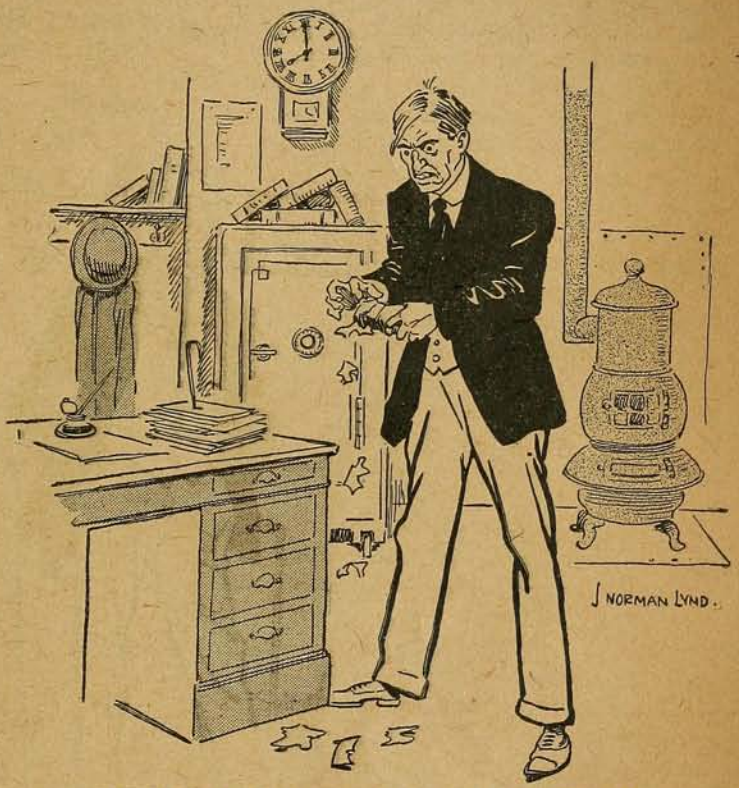
"That fellow knows Maggie's married, because he used my name in addressing that package," he muttered. "If that snipe goes to butting in on my preserves, there'll be some doings." He swelled with indignation. "That parasite never thought that anything expressed to my wife would pass through my hands. I don't blame Maggie, but she's a woman, and these little attentions would please her, and will revive friendships that can't do any one any good. But good fortune has placed the matter before me, and it's up to me to nip the affair in the bud."

Tom once more took the little package out of the safe. He had turned it over so many times that the edges were soiled.

This time, burning with a curiosity that could no longer be restrained, and impelled by a fierce conviction of duty, the sharp blade of Tom's office-knife lifted the seals and the outer wrapper was removed.

This revealed another package, similarly sealed and on which was written:

> The seals on this package cannot be restored. If from some unworthy curiosity any meddler should pry into it, his telltale marks will be left.



BEFORE HIM WERE VISIONS OF OPALS, AMETHYSTS, AND RUBIES.

Nevertheless, Tom removed this, and found a third, on which was written:

> The contents within this little box are only for the eyes of Mrs. Dixon, and are to be seen by no one else.

Tom clutched it almost savagely and tore it open.

He hardly knew what to expect, but before him were fierce visions of opals, amethysts, and rubies.

He found nothing but a carefully-folded little note that fell to the floor.

Tom picked it up, smoothed it out, and read with a half-aloud eagerness:

> This is the most foolish letter ever written. It is written by a foolish girl, but it will never be read by any one but the same foolish girl who wrote it, and will be read by her

Christmas Day to remind her how vain and foolish she is. From childhood she has wanted a diamond ring. They told her she had pretty fingers, and she thought, foolish, little girl, how pretty a diamond ring would look on one of them. But she could never buy it, and there was no one else that knew.

Men do not understand how some simple little fancy tugs at a woman's heart—some vagary—some little humor or conceit which she never outgrows and which is never gratified or satisfied. I could not tell this to Tom. Poor boy, he works so hard, and denies himself so many things, and we manage so closely to get along to have a little to put away.

"YOU HAVE SUCH COLD FEET, YOU KNOW, TOM."

This letter is written by the foolish little girl to remind her, that on the day when gifts are given and the fancy comes back the strongest, that she is to forget for all time that her fingers are pretty—that there are such things as diamond rings, and that empty show and vanity are not for the wife of as good a husband as Tom.

That was all.

Tom got up and stood with his back to the stove and his hands behind him.

"I reckon I'm a durned chump."

Then he paused.

"I wish I'd had sense enough to let that package alone. I'm a chump and a fool. I lost my head. Suspicious of — hang it! I can't get that package together again. She'll know I pried it open. Maybe I could burn the depot or blow up the safe, and save myself by making away with it in that way. Why didn't I have gumption enough to keep my fingers off?"

Tom thought a long while — but there was only one way out.

He deliberately gathered up the torn remains and stuck them into the fire.

The "not-to-be-opened-until-Christmas" package went up in one brief exultant roar.

Then he got out the jeweler's catalogue that had found its way in the express office, and turned to diamond rings.

Any railroad man with regular employment can purchase a diamond ring on the same terms as a typewriter—five down and so much per month until paid. Tom approached the proposition from that angle.

"By the way, Maggie," said Tom unconcernedly one day, "I got a small express package for you from Chicago."

"For me!" exclaimed Maggie, opening wide her innocent eyes.

"It's sealed and marked valuable and has a label on it, 'Do not open until Christmas.' I'd better keep it till then in the office safe. Women are mighty curious, and I don't believe you could keep it in the house without breaking the seal and taking a peep at the inside."

"I am so curious, Tom; I wonder who would send me anything. What does it look like?"

"Oh, it looks like it might contain a couple dozen sticks of chewing-gum, and maybe there's a tin stick-pin with a window-glass setting for me," said Tom with careless levity.

"Tom, have you opened it?"

"Opened a package addressed to you and plainly marked, 'Do not open until Christmas?' Maggie, do you think I am that mean?"

"Of course not," said Maggie; "but I am so curious, Tom. Maybe it had better be kept in the safe until Christmas. I will be guessing every minute. You must keep it at the office, Tom. You are strong, and I am weak. I don't believe I could resist the temptation, but you must understand one thing, Tom Dixon," smiled Maggie, "you are under suspicion all the time."

"It's not my doings," said Tom soberly.

"Tom, look me in the eye."

"That's straight, Maggie."

Every day Maggie plied him with eager questions; and Tom, with a sort of languid interest, assured her the gift was safe and undisturbed.

Christmas morning came, and Maggie with tense fingers tore the seals and found a diamond ring.

"Oh, Tom," she cried with hysterical joy, "you should not have done this for me! It's so kind and so nice of you, Tom; but we can't afford it. We can't, indeed.

"I've wanted a diamond ring ever since I was a little girl, but I never let you know how I yearned for one — did I, Tom? What a mind-reader you are, Tom! It has always been my one weakness—a diamond ring. I never told any one, Tom; only Mrs. Hatch, the language teacher. She knows. I talked to her about it many times. I roomed with her, you know. She is such a clever woman.

"Isn't it funny, Tom? Last month a bunch of us girls were at her home, and she told our fortunes. She held my hand and said: 'What pretty fingers! Christmas Day you will receive a diamond ring from your husband.'

"It has come true. She said it would. She held communion with the ginx, and they told her there was a way and to leave it to her. 'I never tell fortunes, little girl,' she said, 'that do not come true.' Mrs. Hatch is such a very, very clever woman, Tom, there isn't anything that would please me more. Tom Dixon, I'll bet Mrs. Hatch put you up to this."

"Mrs. Hatch!" gasped Tom. "Did she wri— Oh, hang Mrs. Hatch! I'm mighty glad you're pleased, Maggie—there's nothing too good for you."

The clever Mrs. Hatch! Clever, indeed, in thus putting one over on Tom!

Tom preserved a sheepish silence. Mrs. Hatch was immensely delighted that Maggie had a diamond ring — and Maggie doesn't know the rest of it.

"Now, see what I have for you, Tom!" exclaimed Maggie. "Two pairs of socks of soft saxony yarn. I knit them myself. They will be so much warmer than those you buy. You have such cold feet, you know, Tom."

Tom sat in his office. It was near the close of Christmas Day.

His feet were on his desk, and he smoked a cigar in a leisurely meditative way. Between his shoe-tops and his pants' bottoms there was a startling exposure of saxony yarn—and there was more circumference in one ankle than the other, for she "knit them herself."

"Talk about women voting," said Tom, thumping the ashes from his cigar. "They ought to be in politics. When it comes to turning tricks a woman can give a man every card in the deck and beat him out."

Most men use their energy for the day's work, but some careful souls save it all for the sprint to the pay-car. Do you?—

Growls of the Gang Boss.

Bill Nye's Appeal for a Pass.

BILL NYE, of the *Boomerang*, is publishing a Complete Letter Writer in serial form. In a recent issue he says:

Our first letter will be in the form that should be used in addressing a soulless corporation relative to a pass:

OFFICE OF FREEDOM'S BUGLE HORN,
WAHOO, NEB., February 22, 1882.

TO HON. J. Q. A. GALL, GENERAL PASSENGER AND TICKET AGENT, J. I. M. C. R. O. W. RY., CHICAGO, ILL.:

DEAR SIR—Unfortunately you have never experienced the glad thrill and holy joy of my acquaintance.

You have groped through the long and dreary heretofore without that solemn gladness that you might have enjoyed had Providence thrown you in the golden sunlight of my smile.

I have addressed you at this moment for the purpose of ascertaining your mental convictions relative to an annual pass over your voluptuous line. The *Bugle Horn* being only a semi-annual, you will probably have some little reservation about issuing an annual on the strength of it.

This, however, is a fatal error on your part.

It is true that this literary blood-searcher and kidney-polisher, if I may be allowed that chaste and eccentric expression, does not occur very often, but when it does shoot athwart the journalistic horizon, error and cock-eyed ignorance begin to yearn for tall grass.

You will readily see how it is in my power to throw your road into the hands of a receiver in a few days. It will occur to you instantly that, with the enormous power in my hands, something should be done at once to muzzle and subsidize me. The *Bugle Horn* stands upon the pinnacle of pure and untarnished independence. Her clarion notes are ever heard above the din of war and in favor of the poor, the down-trodden, and the oppressed. Still, it is my solemn duty to foster and encourage a few poor and deserving monopolies.

I have already taken your road and, so to speak, placed it on its feet. Time and again I have closed my eyes to unpleasant facts relative to your line, because I did not wish to crush a young and growing industry. I can point to many instances where hot-boxes and other outrages upon the traveling public have been ignored by me and allowed to pass by.

Last fall you had a washout at Jimtown which was criminally inexcusable in its character, but I passed silently over the occurrence in order that you might redeem yourself. One of your conductors, an over-grown, bald-headed pelican from Laramie, a man of no literary ability, and who could not write a poem to save his soul from perdition, once started the train out of Wahoo when I was within ¼ of a mile of the depot and left me gazing thoughtfully down the track with a one-hundred-and-fifty-pound trunk to carry back home with me.

What did I do? Did I go to the telegraph-office and wire you to stop the train and kill the conductor with a coal-pick? Did I cut short his unprofitable life and ruin the road with my cruel pen? No, sir.

I hushed the matter up. I kept it out of the papers as far as possible in order that your soulless corporation might have a new lease of life.

Another time, when my pass and purse had expired at about the same time and I undertook to travel on my voluptuous shape, a red-headed conductor whose soul had never walked upon the sunlit hills of potent genius, caught me by the bosom of my pants and forcibly ejected me from the train while it was in motion, and with such vigor and enthusiasm that I rolled down an embankment one hundred feet with frightful rapidity and loss of life.

A large bottle of tansy and sweet spirits hear my prayer, which I had concealed about my person to keep off malaria and rattlesnakes, was frightfully crushed and segregated. Besides this my feelings were hurt and outraged, and so was the portico of my pantaloons.

Others would have burned down a water-tank, or dusted off the crossing with the mangled corpse of the general passenger-agent, but I did not. I bound up my bleeding heart, and walked home beneath the cold stars and forgave the cruel wrong.

I now ask you whether in view of this you will or will not stand in the pathway of your company's success. Will you refuse me a pass and call down upon yourself the avalanche of my burning wrath, or will you grant me an annual, and open up such an era of prosperity for the J. I. M. C. R. O. W. Railway as it never before knew.

Do you want the aid and encouragement of the *Bugle Horn* and success, or do you want its opposition and a pauper's grave beneath the blue-eyed johnny-jump-ups in the valley?

Ostensibly I am independent and fearless, but if you are looking around for a journal to subsidize, do not forget the number of my post-office box. I have made and unmade several railroads already, and it makes me shudder to think of the horrible fate which awaits you if you hold your nose too high and stiffen your official neck.

Should you enclose the pass I would be very grateful to you for any little suggestions during the year as to what my fearless and outspoken opinion should be relative to your company.

Hoping to hear fron you favorably in the contiguous ultimately, I beg leave to wish you a very pleasant *bon vivant*. Very sincerely yours,

EPHRAIM BATES,
Molder of Public Sentiment.

—*From an Old Scrap Book.*

JETHRA RIKER'S NEW YEAR.

BY ROBERT FULKERSON HOFFMAN.

Another Year Comes Jubilantly Sounding to the Caboose and Wakens Memories of Another Day.

UNCLE JETHRA RIKER, ruddy of face, white of beard and hair, weary guardian of his own cattle rumbling on ahead, sat dozing peacefully, with his rickety armchair tipped back rakishly against the rear wall of the caboose. Conductor Spangler, under the sidelight at his desk, silently checked his brief list of red-ball freight, and high in the cupola sat the flagman, watching ahead the pulsing, endless struggle of a little light against a mighty, ever-closing darkness.

Above the vibrant silence of the caboose, engulfing it, making it actively alive, there came suddenly a low moaning from the front. Mingling with the distant, thunderous roll of the engine's exhaust, it mounted quickly into a bubbling, rollicking succession of giant shoutings that went hurtling away across the dim snow-fields. Chuckling and gurgling echoes came rolling back from the icy mountainheads to join in a jubilant shriek that chattered the frosted window-panes of the caboose in their fastenings. Uncle Jethra's chair squared itself with a thud upon the floor, and he stood bolt upright in the shocked strength of his rugged six-feet-two.

"What's that?" he demanded, reaching hastily for his discarded hat. "Do you suppose there's anything wrong with them cattle?"

As though for answer, two last, high blasts from the engine-whistle came rolling back, and the cannonade of exhausts from the stack boomed steadily out into the night.

"That," said Spangler, turning from his finished work and calmly consulting his watch, "is 'Coon' Connor's way of announcing that we have just crossed the line into the new year. Sit down and be happy, uncle. Happy day!"

Without answer, Riker turned to the rear door of the caboose and threw it wide to let in a brief sweep of the clean, frosty air. With the red light from the rear platform flooding his face with its soft glow from below, the crinkles deepened at the corners of his quizzical eyes. Until he had wholly recovered from the quick fear for his cattle he stood looking far out into the night, as one might fancy a sturdy old Norseman gazing across a darkened sea of ice. With a great, glad breath of the clear air, he closed the door, and sat again, saying:

"Yes, so it is. Happy day! I ought to remember. I was in jail once on New Year's. Did you ever start out with your whole bein' filled to overflow with good intentions, and fetch up in jail—on New Year's?"

"Not since I've been on this run, uncle, I swear it!" replied Spangler, with a smile that seemed to be reflected from the old man's face.

"Me nuther," said Riker, "but I used to run my cattle to Chicago 'stead of El Paso only, and that's some different. You see," he continued, filling his pipe and passing the pouch to Spangler, "I'd been living in Texas thirty years and been homesick, in a way, all that time—if you can rightly sense that. Went out a poor boy from the bitter early days of a Wabash River farm, took root down there, and got to be the father of men children and owner of a thousand acres, same as now, without ever going back to where I'd come from.

"So it come one more winter when I had cattle needing market, and I headed

them for Chicago, meaning to go on around by the Wabash coming back. There was seeming good reasons why I'd never gone before, but there's two things that was always calling to me to come back.

"One was the rustle of leaves on a big sycamore that stood on a knoll by the Wabash and shadowed the quiet spot where my mother had slept long as I could remember. I had dreamed my lonely boy-dreams there in rare idle minutes, and I wanted to stand there again and sort of sum up what of them had come true.

"The other was the side-porch of Homer Allen's store, where Mrs. Allen used to mother me some when I'd drove in with a load of farm-stuff, and her little tike of a boy, Lincoln, used to climb all over me and hug me and make me cry for the sheer loneliness of what I'd just come from. I wanted to see that boy—boy or man.

"So, I left home with the cattle soon after Christmas. All went fine, and day before New Year's I cashed them in at Chicago for forty-seven hundred dollars, and left the yards with a nice-seeming fellow who said he's from Kansas. We rid into the city together, and had a real enjoyable talk.

"He told me a lot about his folks, and I told him some about mine. Seems he's got more folks than me, so I tells him some about my neighbor Crockett, to fill in like, and how I'm to look up Hallie Crockett, who's been doing well in Chicago for a spell back, and get a first-hand word for her people.

"I left the fellow in the station, and I'm over in Jackson Street, aiming to get me a ticket, hunt up Hallie, and land me on the Wabash next day for New Year's. I'm set on that last, most of all, and not looking out as sharp as I might in such a crowded runway, when there's a shortish, smooth-looking fellow of mebbe thirty-eight years bumps me half off the sidewalk, going in the same direction.

"It riled me, and I turned, meaning to bat him across the ears, same as you'd bat an unruly yearling calf. But a square sight of him changed me a mite, and what he said done more.

"Never mind. You listen," Uncle Riker interrupted himself to say, with a wide sweep of the hand.

Spangler's meaningful laugh had nettled him.

"That young man was togged out in a long cape-overcoat, shiny black boots, and a plug hat. His face was round and putty-white, with close-lidded eyes, like a turtle that's watching you to see whether it'll best drop into the swamp or stay on the top side of the log.

"It wasn't a good face, you'll notice, and what's more, when he swept back the right wing of his cape and shoved out his hand to shake, I see a tuberose in his buttonhole, and got the smell of it.

"Now, there's only two kinds of men that'll wear a tuberose in their buttonhole, fur as I know—that's men that's already dead, and men that ought to be. Knowing that, I looked at him in sort of wondering disgust 'stead of batting him, as I should have done, and that give him a chance to talk.

"'Pardon me, sir,' he says, polite as Mexicans—'pardon me, sir. I—why, upon my soul! I believe it is—'

"'Yes,' I says, 'it is. You read my ear-marks O.K. first gallop through the herd, but it don't happen to be your brand, I reckon. Now, supposin' you git over to your side of the line and I git to mine.'

"I stunned the fellow a mite with that, and was turning on my way, when he broke out with a fresh brand of apologies and wound up with a pleading look and: 'You are Mr. Riker, aren't you? Much as you have changed for the better, I knew you in an instant.'

"Now, that sort of got me, and I was mushy enough to say: 'Yes, I be. Who are you to tell me about it?'

"'Do you remember a little boy that used to climb on your knee on Allen's side porch,' says he, 'and how you used to set there with your blue overalls on and your whiskers just beginning to grow long enough for the boy to pull one at a time? How you used to laugh and sometimes cry there?'

"'I do,' says I.

"'Well,' says the fellow, 'I'm that little boy. I'm Lincoln Allen.'

"I ain't going to tell you all else he told me, but that man told me things that I thought nobody but myself knew. He even told me about the big sycamore, and how the water sounds washing along by the grass-mound bank. He told me about the white stone that stands under the sycamore, and named, word for word, the verse of scripture that's writ on it.

"And all the time he's walking along with me till I've most forgive him his face and the tuberose, and come to believe that

he's little Linc' Allen grown up to be the kind of man he said he was. Oh, yes! He's a business man—very busy, indeed—and just when we're a block or two away from where he bumped into me, a young fellow came running up the sidewalk to meet him.

"This young fellow is wearing a black skull-cap of silk, or alpaca, or the like, and has his hands full of memorandum and pencil stuff—all business and excitement. He apologizes to me for the interruption, and then states his case quick about some rush calls on sight drafts just come into the office. Three hundred dollars he must have, and have it quick.

"'Lincoln Allen,' as we'll call him, didn't hesitate a minute. He reached under his cape coat and hauled out a buckskin sack of hard money, handed it to the clerk, and told him to take out what he needed. The clerk counted out what looked to be three hundred dollars in gold, and handed the sack back. Little Lincoln restored the sack to his inner pocket, and despatched the clerk upon his way.

"The young fellow had run as much as ten steps when Allen called him back.

"'That's bad business,' he says, 'come to think of it. There's a premium on gold just now. We ought to have the advantage of it, 'stead of letting it go to our correspondents. Mr. Riker, could you possibly accommodate me with bills or silver for the amount and take this gold until we can walk round to the bank and exchange it?'

"Now, I ain't making any argyment to jestify my doings," Uncle Riker again interrupted himself to say, as Spangler showed signs of another sardonic eruption. "I'm stating the bare facts of what I done.

"When the clerk chinks them fifteen twenty-dollar gold pieces back into Lincoln's right hand, and Lincoln turns offering them to me, right here, thinks I, is where Archie really kills the bear, if it ain't little Lincoln; and if it *is* Lincoln—

"I thought of how Mrs. Allen give me pie and things when I sot on her porch, and about Lincoln's dancing blue eyes that now looked a sort of dirty mouse-gray, somehow, as I searched his face for some brand I'd reco'nize.

"I thought about the forty-seven hundred in my inside pocket, and stepped a little one side into the angle of a building and set my satchel down.

"I dug down into my jeans and pulled out three one-hundred-dollar bills that I'd had left before I sold the cattle, and I handed them to Lincoln and took the gold. He handed them to the clerk, and stooped to pick up my satchel, while I still held the gold in my hand.

"But something told me on the second to beat him to it. I grabbed up the satchel with my other hand, and the minute I straightened up with my both hands full it seemed like I got my full sense of heft, and I see what had been done to me. The clerk was gone in the crowd of the walk.

"'Here,' I says without no frills, and letting the gold pieces skitter back into Lincoln's hand—all but one piece, which I palmed under my thumb and later slipped into my vest-pocket—'I don't want this stuff. It's light.'

"'You astonish me, Mr. Riker!' says Lincoln.

"'I reckon I do,' says I. 'And before it strikes in too deep I'll ask you to hand over three hundred dollars in good money, or take the consekences right here.'

"'Why, certainly, certainly—if you prefer it. Why, my dear Mr. Riker, that's the whole idee; I want the gold, you know, and if you'll just walk around to the bank with me we'll close up the whole deal in a jiffy! Why, certainly, certainly!'

"We went. When we got to the bank doors, a block or two away, he led in between the big stone columns of the entrance, stepped at a good road-gait through the swinging doors, and smashed that heavy, flapping door back in my face, with me on the outside. It jarred me a lot.

"Then, too, when I was leaving home, mother and the boys kept coaxing at me to wear Jed's derby hat, that jest fits me, and I'm that silly and vain that I done it. When the door hit me it bashed my face some and staggered me backward while that fool hat went bouncing around on the ground like a sand-flea tetched with sunstroke.

"By the time I'd corraled it and straightened up, there's two or three oily looking gents standing between me and the bank door, and they're crowding round and asking am I hurt, am I hurt?

"Oh, they was anxious all right—just that anxious that I breshed 'em all aside with one sweep and said: 'You mind your own business.'

"I knowed by then that if I was to win back I'd got to play my own game, and play

it straight in my own way. So I walks right in, and up the long, shady chute, to the desk. Lincoln, of course, is nowheres in sight. I set my satchel down, and I says to the clean-looking young fellow behind the brass grating: 'What bank is this, son?'

"'Bank?' says he, real civil. 'Not a bank, sir—this is the Grand Pacific Hotel. What can we do for you?'

"'Oh,' I says, 'that's it, eh? Well, I ain't to say rightly acquainted with this part of town. I work my cattle mostly straight between the Transit House and home.'

"'Yes?' he says. 'And what can we do for you, sir?'

"'Well,' I says, 'is the proprietor in?'

"'N-o-o,' says the young fellow, kind of doubtful, 'but you can talk to me till he comes, if you like.'

"'I've lost my money,' says I. And I set out to tell him the whole right of it fair and open.

"I'd only got a little piece when he spoke up soft and polite as he spoke all along.

"'Frank!' he says.

"'Frank?' I says, not rightly catching his meaning.

"'We don't breed any such plays as that in this house,' he answers, 'and we don't stand for it. Frank, this is Mr.—'

"'Riker,' I supplies, soon as I'd took a good square look into the eyes of a stocky fellow that's pressing just the least bit against my off-elbow.

"There's nobody there the second before, but he's got something of the same look about him that my oldest boy, Jed, carries, and I know in a second that he's all right.

"'Yes, Mr. Riker. Frank, Mr. Riker is our guest for the present, and you will entertain him. Just sit down over yonder and tell Frank all about it, won't you, Mr. Riker?' says the clerk.

"I reached right over to that young man and took the pen from his hand. I registered my name and brand, same as I'd do at the Transit House, sealed up my forty-seven hundred dollars in an envelope and took a receipt for it, passed in my satchel and the whole kit, and went over in a shady corner and sot down with Frank, without a cent in my pocket.

"We got along fine. I told him the whole works—about the fellow that was going back to Ohio to see his folks, and all. When it come to me describing Lincoln, it was jest like we was a pair of kids playing a game.

"'Silk hat,' says I.

"'Topper,' says Frank, jotting it down on a tally-pad.

"'Putty-face,' says I.

"'Poker-mug,' says Frank.

"And so it went:

"'Turtle eyes.'

"'Blinker.'

"'Cape coat.'

"'Curtain.'

"'Right-handed.'

"'One wing.'

"Frank's smiling broader and broader as the game goes on, till I says:

"'Mebbe ain't got no left hand. Never showed it.'

"'Five-finger Hannigan!' says Frank, laughing ready to bust, and jotting it down. 'That's the answer. Uncle, you're all right. If you ever want my kind of a job, come again, and we'll fix you up. Now, you jest set here till I come back, and don't you stir. I won't be gone long.'

"He went, and I sot there quite a long spell before it got so I had to either git up and hustle round a mite, or set up the long yell jest to know I was still alive. I moseyed toward the Clark Street door, and the clerk shook his head at me. But I waved my hand at him so he smiled, and I went on.

"I'd no more'n got my nose out the door than there's a nasty, spiteful little gun-crack snaps out up the street some'eres, and the coveys of moving people on both sides of the street fluttered for cover behind the line of cabs that's standing along the curb, over along the old Government Building.

"Ever hear a gun crack in a crowded street? It's a mighty sassy sound! That street was nigh about empty in two winks, and down my side come Lincoln Allen, tearing along, minus his plug hat and his cape coat, but wearing his tuberose plain as a tin star on a depety marshal, while he looks back'ard and makes motions with something glinting in his right hand. He ain't got no other hand. It's off at the wrist, and the stump's waving as he runs.

"Close as he dares comes Frank chasing behind him, dodging in and out among cabs in the gutter with a big gun in his hand, but trying to draw Lincoln's last slug before he closes in on him right.

"Lincoln's got one of them dirty little two-barrel affairs, you see, that shoots a soft-nose slug and can be hid in your palm, and he's got rid of one shot, as I reckon it. So, I see it's plain up to me.

"Jest as he come abreast of the big stone pillars I'm standing behind, I hops out and corrals him. He proves he's an outlaw, all right, for he twists that dinky little gun up alongside my face and blows the roof out of Jed's derby slick as anything you ever see, and hung onto the gun while I downed him.

"Then he turned a reg'lar branding-pen trick on me by gitting his hind feet fair under me while he laid and fought on his back, and he tossed me up surprising, once or twice.

"But, after I'd bashed him one or two about the same size that the swing-door give me, and twisted the gun out of his hand, he was that biting with his cussing that I jammed that little four-inch gun crossways into his mouth and squshed it shet heavy enough to stick. When I'd got done hog-tying him, feet and right hand, letting his short wing flutter for luck, I looked up and seen Frank standing over me in the rim of the crowd that had closed in, and he's laughing ready to drop.

"'Uncle,' he says, 'you're sure all right. I don't mind telling you now that I was born in Texas. Lay still, Hannigan! The wagon'll be here in a minute. What do you think of the Texas game, huh?'

"Ever been in that annex o' perdition that they call Harrison Street Station—down cellar? There's nothing like it nor approaching it down our way, barring the bear-pit in the abandoned zoological works that Texeden started in its boom days. Lem Baxter uses it now as headquarters for a skunk farm, and does his killing and pelt-drying inside the spike-iron fence at the pit-mouth. But that's clean and fresh.

"There's where we fetched up—Harrison Street jail. Me as a witness, and Lincoln because he'd never been hung. They wanted me to give bail for my appearance as complainant, but I wasn't seeing my way clear to let go of anything more in that bunch. I looked Frank fair in the eye, and told the desk marshal I hadn't a peso on me and didn't know when I would have. Frank stood pat.

"'Well,' says the fellow, 'there's nothing to do, then, but hold you until we can get a hearing.'

"'I'll play my hand,' says I

"'Take him down,' says the fellow, and I followed the lead till he opened a boiler-plate door at the foot of the stairs.

"Say, Spangler, the smell that come up out of there—well, let that go. There's a nigger down in there somewheres, drunk and yelling: 'She's ah loaded with bright angels, hallelu-*yah!* She's ah loaded—'

"The nigger broke off with a strangling yell, and every coyote in the den set up a ki-yi till it was like—well, like that. There ain't nothing else like it.

"I poked my head inside the door in time to see one of the depeties shut off an inch-and-a-quarter stream from a nozzle that he'd turned on him. And as soon as the nigger got done choking and swearing he changed his tune to 'Ah-roll, ol' Jurdun, ah-roll!'

"I backed out onto the lower step, and told the depety that was leading me if he aimed to corral me in such a den o' varmints as that, I'd do my best to rip the internals out of the whole works. With what I said and what Frank said between sort of snickering behind me, it comes that they let me stay up-stairs with the reserves.

"And there I am—spang and good in jail next morning, for New Year's, 'stead of down on the Wabash, as I'd aimed to be.

"First hearing, next day, yields up a continuance. Change of venue to a court seven miles over on the west side. Harrison Street calendar crowded.

"Second hearing, three days gone, assays a continuance of five days and change to North Halstead Street—round trip, fifteen miles.

"Third hearing pans out continuance—four days, and changed to a court in Cottage Grove Avenue, seven miles southeast; round trip, fourteen miles.

"'Course you see what fur, Spangler; but I was there every trip, and still going, when there's some kind o' rumpus breaks out one day a little piece down the street from the Harrison Street honkatonk, and I slipped out the door and took a look.

"Just around the next corner there's a young boy throwing a fit on the sidewalk. He's wallering in the slime on the stones and rising to his feet and falling his length as fast as he can rise and tumble. He's frothing at the mouth and going on that bad that it would make you plumb sad. The big marshal that's standing over him ain't doing a thing to help him, and I sort o' steps in.

"But there's a decent-looking old man grabs me by the arm and pulls me aside. 'Don't,' he says. 'The cop'd kill ye!'

"He hung on till he'd drawn me round the corner, and I'm a maverick if that old

rascal hadn't offered me a mangy hundred dollars inside of two minutes if I'd pull my freight and let up on Lincoln Allen. I never answered him, I'm that disgusted, and I went straight back to jail.

"Next day come the fourth hearing, an' it's in a place near by. There's a good-faced young fellow for judge. He's setting high and alone when we go in, and just below him, with her back to us, sets a young woman scratching down court notes. She turns and looks at us when they've all finished something. Then she lets out a little choky squawk, and comes bounding to the top of the low, flat-top railing, just like she used to hop into a box-stirrup onto her pony, and she landed fair with her arms around my neck.

"'Why, Uncle Jethra Riker!' she says right out loud. 'You frightened me nearly to death. Where did you come from?'

"'Jail,' I says, 'Hallie, jail. But gentle now. It's all right.'

"Yes, it's Hallie Crockett, all right. And while the court folks is getting things quieted down, the judge picks up the papers in our case and looks them over a whole lot, noting how we been swinging round the circle, I reckon, from what happens after.

"Spangler, I've seen some quick deals—San Antone and way stations—but nothing swifter than what follows. He calls the hull caboodle of us inside the rail—Lincoln, cappers, coppers, Frank, and me.

"'Mr. Riker,' he says, 'do you remember a little boy that—'

"Well, that made me hot. He didn't look like one o' the gang. and it was disgusting to have it pan out that way again.

"I broke right in.

"'Judge,' I says, 'if you'll excuse liberties, I been through all that and a heap more. All I got out of it so fur is three weeks in jail and this brass simoleon.' I walked up and slapped the bogus twenty down hard on his desk.

"'If your honor don't mind,' I says, 'I'd be plumb happy to know whether this here's jest another sign-camp or do we have the final round-up right here?'

"He hefted that nasty 'gold,' and clinked it on the oak while he looked all of us over, savage as wolves.

"'Final round-up,' he says. 'Officer, I will see all parties to this suit at once in my chambers.'

"Well, the things he said to that bunch in there shriveled 'em till you could see the wrinkles dropping off their horns. He finished up on Lincoln.

"'Hannigan,' he says, 'I've sent you down to Joliet until I'd be ashamed to make out another commitment. And you're always out soon. We understand the why. Too bad, but we understand. This time you played me in, to win against my old friend, Jethra Riker—but you overplayed your hand The Federal court—'

"I was setting straight up, clutching my hair by then, Spangler. See where the trail's leading to? Sure as ever you held up a hobo for a two-bit ride on a freight-truck, that judge is Lincoln Allen.

"'The Federal court,' he goes on, cool as spring-water, 'has jurisdiction in this little "gold" affair. It is now eleven o'clock. I shall not send this "coin" to Commissioner Flint before two this afternoon. If you are inside his district at that time—I think you know the rest. The other is a minor matter, between you and Mr. Riker, we'll say, for the present.

"'Jethy,' he says, wringing my hand on his way back to the bench, 'stop and talk a moment on your way out Glad to see you'

"'Lincoln,' I says to Hannigan, when the judge is gone, 'Lincoln—'

"'Aw, cut that!' says Hannigan, none polite now.

"'There's good authority,' I says, 'fer saying that if you slap a man on one cheek—with an oak door—it's liable to come back to you a hundredfold. But, fer old time's sake, if you and your gang will raise that Harrison Street soap-fit ante about to the tenth magnitude, we can deal right here.'

"With no more said, there's a crisp thousand-dollar bill comes fluttering down on the table from somewheres in the gang, gentle as the drop of a leaf from the old sycamore, and it's all over.

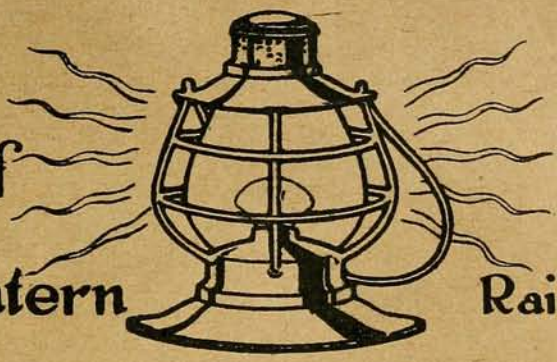
"Next day I'm standing under that bleak old tree on the Wabash, and, passing that, I never stop going till I'm back in Texas.

"When we found out from the Crocketts just how things stood we asked Judge Allen to come down, after the cer'mony, and bring Hallie to see next June grass on the Brazos. He done it!"

With a yawn of deep content, Uncle Jethra stretched his long arms high into the cupola before rolling into the lower bunk of the caboose to sleep the sleep of the just and unvanquished, until Coon Connor tore the winter dawn to tatters with his New Year's greeting for sleeping Del Sur.

WHAT'S THE ANSWER?

By the Light of the Lantern



Questions Answered for Railroad Men

ASK US!

WE like to be as useful to our readers as we can; but, because of the great popularity of this department, we are forced to impose certain restrictions. It is limited to the answering of questions of an informative, technical, or historical nature only. Letters concerning positions WILL NOT be answered in this department. All letters should be signed with the full name of the writer, as an indication of his good faith. We will print only his initials.

WHAT is the controlled manual block system, and how is it operated?—C. F. W., Boston.

It is a system through which the starting signal for a train to enter a block is released by the operator at the extreme end of that block—in fact, by the operator in the tower where the next block starts—and this release cannot be effected if the block is occupied by a train, if a switch is open, or if a rail is broken. For a complete description of this and other block systems, see the article, "The Working of Block Signals," in THE RAILROAD MAN'S MAGAZINE, for November, 1907. It would be impossible to do this interesting subject full justice within the limited confines of this department.

E. H. L., Pittsburgh.—We have delayed replying to your interesting train-order problem longer than we should, due to a vigorous attempt on our part to secure a decided expression of opinion from some authority. This, however, has not been forthcoming, but the general view of it is that the despatcher could run the special as second "304" from "GU" to the junction of the spur track on which regular "304" was at that time operating, and run him as first "304" thence to Margo. This may not seem in accordance with the provisions of your question, in which you state that the despatcher does not ordinarily hear from regular "304" until she reaches Margo, but is it likely that they would be allowed such latitude? You say that at the junction of all the coal branches on which "304" has to work, there is a telephone, and would it not be more consistent railroading for them to notify the despatcher before backing out of the branch and receive his permission?

If this rule was in vogue, it would be quite easy to run the special as we suggested, and annulled on the coal branches. If no means whatever existed to communicate with "304," it would appear that the special could not start until "304" reported from Margo.

We are not surprised when you say that this had some "good ones" up in the air. It had us there, too, for a time, and we can not say for a certainty whether we are down or not until we hear from you again. If you will let us know just how this matter was handled, we will be glad to publish your original letter in full, as it is very interesting.

CAN you tell us how a fireman came to be called a "tallow-pot," and an engineer a "hoghead"?—H. E. W., and E. J. G., Grand Island, Nebraska.

No, we cannot; that is, not in a way which

would give you or ourselves the assurance of correctness. The only explanation we ever heard for the two terms was that in the old days when locomotives were lubricated by an oil-cup on each steam-chest, it was the duty of the fireman to fill it from the tallow-pot when required, and some times he had this to do when the locomotive was in motion. The name has also been applied as frequently to engineers. In regard to the "hog-head," freight locomotives were usually termed "hogs" irrespective of design or weight, thus you may infer that an engineer might easily receive this nickname. Maybe there is a better explanation of the origin of the two names. If so, will some of our friends please write us?

F. M., Hoboken, New Jersey.—In regard to your question concerning the longest bridge in the world which we answered in a previous number, we have now unearthed another which is going to be hard to beat. This bridge is on the Norfolk and Southern Railroad across Albemarle Sound in North Carolina. It was started in March, 1909, and on January 10, 1910, trains were run across. It is 12 feet 6 inches from the surface of the water, and is five and seven-tenths miles long. It has two draws, one lift, and one turn bridge, the former being 147 feet in the clear. These figures were furnished by one who was employed on this work, and no doubt are correct.

R. G., Mount Vernon, New York.—The trolley system particularly appealed on the road you mention through the elimination of danger from the third rail, and there are also compelling arguments from the standpoint of maintenance and general operation in its favor, now that the troubles have been corrected which were so much in evidence when the line was first installed. There has never been any trouble to the wires arising from wind-storms, and breaks are quickly repaired. It makes no difference in the voltage whether the current goes through a trolley-wire or through the third rail. It is stepped down to what is required by transformers in the locomotive before reaching the motors.

W. C. H., High Point, Texas.—(1) The division superintendents of the Southern Pacific Company (Pacific System) are: Thomas Ahern, San Francisco, California; W. H. Averell, Los Angeles, California; J. H. Dyer, Dunsmuir, California; H. W. Sheridan, Sacramento, California; W. H. Whalen, Tucson, Arizona; W. A. Whitney, Oakland Pier, California; and F. M. Worthington, Bakersfield, California. We are without information regarding the total engine changes between El Paso and San Francisco.

(2) Practically all recent type locomotives may be found within that territory, the majority of which represent very heavy power.

(3) Oil is generally used for fuel west of El Paso.

(4) Business does not vary to any great extent throughout the entire year; that is, not to materially affect the train crews.

I HAVE frequently overheard engineers while talking to one another make some allusion to an engine "dropping her plug." Will you explain just what this expression means, and in particular just what the "plug" is and where it is located?—C. J. K., Port Jervis, New York.

It is a plug screwed into a brass thimble in the crown-sheet of the locomotive fire-box. The sheet is directly over the fire, and is normally covered with water to a depth of about seven inches. This plug is made of an alloy of lead, tin, and bismuth, in such proportion as to give the alloy a melting point somewhat higher than the temperature of the water corresponding to the steam-pressure carried. It is intended to prevent the destruction of the crown-sheet by overheating when the water drops to a dangerously low level, as the melting of the plug will allow the steam to escape. Of late they have been largely abandoned in railroad practise through their unreliability, because the melting point of the alloy often rises with long exposure to heat, and scale forming over the plug on the crown-sheet may resist a high-boiler pressure after the plug itself melts.

DOES the cross-head of a locomotive move backward in the guides, or does it remain stationary until it is in the back end of the guides? I know it moves forward. For instance: when an engine is on the forward center and the piston is all the way in, if the engine is in the forward motion and moves ahead, will the cross-head move back, or will it stand still and the engine move forward on the piston? If that is so, how can the wheels revolve without drawing the cross-head back when the cross-head is fastened to the main-rod, which is in turn attached to the driver?—E. T., Southampton, Long Island.

(1) You have hit on the idea exactly in the last sentence of your question, and practically returned your own answer. How would it be possible to effect a revolution of the driving-wheels without moving the cross-head a complete round trip in the guides? The idea about the cross-head standing still and the engine moving forward over it is simply an absurdity, and it is astonishing that it should be given so much credence by men certainly qualified to know better. However, to knock it in the head for your information, and many others who adhere to the fallacy, we will consider the action of a locomotive when mounted on a testing-plant, similar to the one at the St. Louis Exposition, and the one maintained by the Pennsylvania Railroad in its department of tests.

In this instance, the locomotive is stationary on the testing plant, but through friction-rollers im-

pinging on the driving-wheels it is possible to reproduce road conditions. The locomotive is run and fired exactly as though it was on the road, and the service is equally hard, but it does not move one inch. You will note, however, that the cross-heads are flying through their respective sets of guide-bars, and four exhausts issue from the stack at every revolution of the driving-wheels. Thus, any one may appreciate that the locomotive does not move ahead over the cross-head, and that the latter does move backward and forward.

The fact that four exhausts occur as above mentioned should be sufficient proof, without reference to the testing-plant illustration. It would be impossible for these to take place if the round trip of the cross-head did not occur at every revolution, because they mark the outlet of the steam from each end of the two cylinders after it has performed its work. This question comes to this department with wonderful regularity, and we have explained it somewhat similarly on various occasions. We trust now that our thought concerning the testing-plant will dismiss the matter.

(2) Under ordinary conditions the brakes with the long piston travel would release first.

(3) It appears that you are correct in your interpretation of the matter, that if train-line reductions are continued after the short-travel brakes were full set, in order to set the long-travel ones on full, the long-travel ones would release first, but if no further reductions were made after the short-travel ones were set they would release together.

(4) If we understand your question, this is provided for through the equalizing feature of the brake, with which you are of course familiar. It is always best, and will assist us greatly, if reference is always made in these air-brake problems to the particular style of equipment under consideration, pattern of brake-valve, etc., etc. The more complete the description, the more definite the answer. As it is, we frequently have to reply in generalities which do not fully inform.

W. M. R., Biscoe, North Carolina.—The instructions seem to be so very clear in the time-table, and in the special explanatory instructions, that the matter should be in little doubt. It would not appear that the inferior train had a right to the block without a "31" order. You will note that the special instructions particularize that the block card does not give an inferior train the right over a superior train unless the inferior train has time-table rights, or a "31" order. Therefore, it would appear to us that the block card in this arrangement is merely intended as an additional precaution.

A. W. A., Billings, Montana.—The proper person to advise you regarding the qualifications necessary to enter the Pullman service as a conductor would be the nearest of its district superintendents to you. In this case, the man is William Lucas, Omaha, Nebraska. Write him for an application blank, and for any other information which he may care to give. Our impression is that the pay to start is $75 per month, increasing to $90 with length of service.

G. M. Z., La Crosse, Wisconsin.—The "silk trains," so-called, are run as extras when such a movement is necessary, and, therefore, not appearing on the time-table they would have no schedule rights over mail or any other first-class trains, except through special orders, which certainly would not be given in the instance of exclusive mail-trains.

H. C., New Egypt, New Jersey.—Write Mr. A. W. Gibbs, general superintendent of motive power, Pennsylvania Railroad, Altoona, Pennsylvania, who will no doubt be pleased to send you full information regarding the system employed on that road for the instruction of apprentices.

I HAVE been told that copper ferrules, or rings, used on the ends of boiler tubes, were primarily resorted to on account of a mistake made by a boilermaker in boring his flue-sheet. It was bored larger than his flue and, to save the sheet, he inserted a short piece of copper flue, and found it made a better joint than iron. Is there any record of such being the case?—G. F. B., Shreveport, Louisiana.

No record whatever. While such a thing may have happened, and may have been corrected through the means employed, it would be an absurdity to assign this as the explanation for the use of copper ferrules on the fire-box end of boiler-tubes. The ferrule is a copper sleeve fitted over the end of the tube to secure a water-tight joint between the end of the tube and the hole in the flue-sheet. Their use is universal in this country, although abroad as many instances will be found of locomotives without as with them.

I WOULD appreciate a short explanation relative to the back set, or offset of the link saddle-pin, as I notice that different classes of engines have different offsets. Must it be a certain amount, and what is the advantage so gained?—D. J., South Tacoma, Washington.

It will be very difficult to give a short explanation of the necessity for this condition, as the motion of the link is quite complex, and can be much better illustrated through diagrams than description. In brief, the saddle stud is thrown out of center of the link arc to correct the error in the latter's motion arising from the angularity of the main, or connecting-rod, and is placed somewhat back of the link arc. The effect is obviously to cause the entire link to bodily rise and fall during its movement.

The location of the saddle-stud is determined

by trial upon the engine itself, an adjustable stud being provided which is bolted to the link, when, after repeated trials, it is found to be in the best approximate position. The link is then removed from the engine and with the adjustable stud is taken to the link shop where the permanent stud is made in accordance with it. In the case of a number of engines of identical dimensions, the adjustable stud is applied to the first one only, and the following engines of that lot have their permanent studs made in duplicate.

The subject of locomotive link motion in general is quite attractive, and if you feel an interest in it would suggest that you study it from the many standard works which are devoted to its exclusive consideration. These may be procured through any technical book publisher.

P. L., Homestead, Pennsylvania.—There are no available figures for the best time made in building a new engine at the Baldwin Works, although, if it will be of any value to you, we can recall an instance when, with the parts all delivered to the erecting-shop at 9 A.M., the completed locomotive left at 3 P.M. the next day.

WHAT types of engines are used on the Southern Pacific, and the Santa Fe, in California?

(2) How do the speed of those roads compare with that made on the Eastern trunk lines?

(3) At what points on the New York Central are engine changes made with the Twentieth Century Limited?—F. B. H., Haverhill, Massachusetts.

(1) Consolidation (2-8-0), and Mallet compound (2-8-8-2), for freight, and Pacific type (4-6-2) for passenger. The Santa Fe has also Mallet passenger-engines.

(2) Very favorably, although the passenger-trains are much heavier. The time on freight is about the same.

(3) At Albany, Syracuse, and Buffalo.

T. C., Quebec, Canada.—The brevity of your question regarding clearances puts us in some doubt regarding its purport. In submitting it again please say in what connection the two terms are used: that is, in connection with what particular branch of railroading. Track and terminal clearances is what we think you mean, and, if so, these should be self-explanatory, as they simply mean how far objects must stand from the track on the road and in stations.

H. R., South Bend, Indiana.—(1) The Lake Shore and Michigan Southern passenger-trains cross the river at Detroit by ferry. Freight-trains use the tunnel.

(2) It is four-tracked over a portion of the way. Have heard nothing definite in regard to completing this throughout.

(3) The Boston and Albany is a double-track road. It uses ten-wheel (4-6-0), and Pacific (4-6-2) engines in heavy passenger service, and American (4-4-0) type in lighter passenger work. In freight work the consolidation (2-8-0) is employed.

(4) The New York Central has a number of all-steel passenger-cars in experimental service, which are sometimes operated over its controlled or leased lines as well. All suburban coaches on this road running out of the Grand Central Station, New York City, are of all-steel construction.

THEORETICALLY, the exact center of a solid wheel does not move while the wheel is revolving. Is it, therefore, possible for any atom, or particle of matter which composes the wheel, to remain still under these conditions?—H. H. P., Spokane, Washington.

The exact center of a disc is of course stationary, but the atoms composing this stationary line may be said to be in constant motion, and continually changing places with those near by, which are in rotary motion. These atoms are subject to both centrifugal and centripedal forces. Molecular considerations in connection with the rotation of a disc forbid the assumption that any two parts of the disc, or the atoms composing it, can move in opposite directions.

EXPLAIN the operation of a two-cycle gas or gasoline-engine?

(2) Is it possible to obtain an explosion once in every revolution, and can it be obtained without using the jump spark?—W. A. O., Virogua, Wisconsin.

(1) The majority of these engines are of the crank-case compression type. The piston coming down compresses the charge in the crank case, and when at its lowest position it uncovers the inlet port, whereupon the charge, being under compression, rushes up into the compression chamber. The piston coming up again compresses the charge, and, at the right moment, the spark takes place and ignites it.

(2) A make-and-break spark will work equally as well as a jump-spark. We would advise you to go to some library and look up works on gas and gasoline engines. There you will find full descriptions and illustrations of the different types of two-cycle engines.

E. M. T., Franklin, Kentucky.—See reply to H. E. W., this issue. We don't know at this writing how the other terms originated, but will look them up and secure the information if possible.

WHAT is the name of the officer at division points who issues recommendations of firemen to the examining board of officers?

(2) If a hole is burned in a fire when a heavy

train is starting out, how should it be treated?—H. K. S., Marinette, Wisconsin.

(3) Why are some types of locomotives called "articulated compounds"?

(1) Firemen are generally employed by the road foreman of engines who, on many roads, not only gives them the necessary questioning to determine their fitness for the work, but conducts the sight and hearing tests also. Nothing can be made of your question in the form presented above, but no doubt this is what is wanted.

(2) Fill it up quick.

(3) From the fact that the construction embodies two independent engine units, although with the same boiler. These two sets of wheels have independent movement in relation to one another. See "Mallet and His Invention," in THE RAILROAD MAN'S MAGAZINE, June, 1910. Write W. L. Darling, chief engineer, Northern Pacific Railway, St. Paul, Minnesota, for the information requested.

WHAT is the length of the Pennsylvania Railroad System, as compared with the other systems?

(2) What is the largest mileage of any railroad in one State?

(3) How high are the drivers on the engines of the Baltimore and Ohio out of Pittsburgh?—F. B. S., Monessen, Pennsylvania.

(1) It has 11,234.36 miles of road, more mileage than any system under the same direct control. See reply to "F. B.," November issue.

(2) The Pennsylvania Railroad. In the State of Pennsylvania, it has 4,101.03 miles of road.

(3) If you refer to the B. and O. passenger-engines, numbered in the "1400" class, running out of Pittsburgh, these have 80-inch drivers.

H. J. N., Jersey City, New Jersey.—The South Terminal Station, Boston, occupied by the New York, New Haven, and Hartford, and by the Boston and Albany railroads, still retains supremacy as the busiest passenger terminal. The trains handled on summer schedule are nearly nine hundred daily in and out. We have no information as yet regarding what the total train movement will be in the New York terminal of the Pennsylvania Railroad when it is in full operation. Chicago is the greatest railroad-junction city.

L. D. C., Rosevillem, California.—We are under the impression that practically every railroad in the United States of any importance makes the minimum age limit for firemen entering the service twenty-one years.

HOW is the weight of a locomotive figured in tons. Suppose one weighs 243,000 pounds, engine and tender, would the weight be figured by long or short tons?—W. E. P., Thelton, Washington.

Divide your pound weights by 2000. The long ton is not used in this country, but it is well to bear in mind that English locomotives are quoted on the long-ton basis, 2240 pounds to the ton.

W. G., Worcester, Massachusetts.—We have no reliable figures regarding the capitalization of the two roads named, but you can get all information from the annual report of each to its stockholders.

WHAT is the weight in tons of the largest locomotive in common use? Were fire-boxes eleven feet long, used in 1890?

(2) What was the capacity of the largest freight-car in 1890?—R. H. S., Los Angeles, California.

(1) The heaviest locomotive in the world is the Mallet articulated 2-8-8-2 type, on the Atchison, Topeka, and Santa Fe Railway. The weight of engine, without tender, in working order is 462,450 pounds; the total weight of engine and tender, 700,000 pounds. The steam pressure used is 220 pounds, and the engine developes the very high tractive power of 108,300 pounds. Eleven-foot fire-boxes were not in general use in 1890. Nine or ten feet for what were called "long fire- oxes" was the average dimension.

(2) Sixty thousand pounds.

ORIGIN OF HORSE-POWER.

HORSE-POWER measures the rate at which work is done. One horse-power is reckoned as equivalent to raising 33,000 pounds one foot high per minute, or 550 pounds a second. In measuring the work of a horse the estimates of the most celebrated engineers differ widely.

Boulton and Watt, basing their calculations upon the work of London dray horses working eight hours a day, estimated it at 33,000 foot-pounds per minute. D'Aubisson, taking the work done by horses at Freiburg, estimated the work at 16,440 foot-pounds, working eight hours a day.

Under similar circumstances Desagulier's estimate was 44,000, Smeaton's 22,000, and Tredgold's 27,500 foot-pounds. Horse-power is called nominal, indicated or actual. Nominal is used by manufacturers of steam-engines to express the capacity of an engine or boilers.

Indicated shows the full capacity of the cylinder in operation without deduction for friction, and actual marks its power as developed in operation involving elements of mean pressure upon the piston, its velocity and a just deduction for the friction of the engine's operation. The original estimate of Watt is still counted a horse-power.—*Railway and Locomotive Engineering.*

FLAGGING A FLIRTATION.

BY LILLIAN BENNET-THOMPSON.

How Norah O'Day's Romance with Reginald Launcelot De Courcey, Engineer, Ran on an Open Switch.

THERE was a thin film of dust on the claw feet of the table, and Norah, on her knees, was industriously removing it. As she worked, she sang. There was no particular reason why she should not sing if she wanted to, as her mistress was below stairs and well out of hearing. Norah didn't much care anyway. She had probably heard worse voices.

So the girl caroled lustily, dwelling on the high notes in order to get their full artistic value. Right in the middle of an alluring A-flat she stopped abruptly, cocked her head on one side like a bird, listened, and then hastily scrambled to her feet.

She had become conscious of an opposition concert, that, however lacking in harmony, was, nevertheless, sweeter than the most divine music in her ears. It consisted of a series of short toots from a locomotive whistle. As Norah poked her curly head out of the window, the locomotive was just in sight around the curve below the house.

As the cab came opposite the window, a long arm protruded, a cap waved for a moment and Norah had a fleeting glimpse of a smiling, good-natured face upturned to hers.

THE LOCOMOTIVE WAS JUST IN SIGHT.

She fluttered her duster in response and, watching the long string of freight-cars swing by, strained her eyes after the yellow caboose until it whisked around the upper curve of the cut and out of sight.

With a happy, satisfied sigh, she returned to her dusting and her interrupted song,

All the summer, early and late,
And in the autumn drear,
A maiden stood at the garden gate
And waved at the engineer.

He liked to look at her face so fair,
And her homely cotton dress;
She liked to look at the man up there
At the front of the fast express,

she trilled ecstatically. Somewhere she had read the words and remembered them.

The tune was all her own and she was proud of it.

It required no great stretch of imagination to substitute a second-story window for a garden gate nor to exalt a mixed freight into a through express. Besides, it was a very pretty sentiment. Norah liked to fancy herself in the rôle of the girl at the garden gate, although she was morally certain that Norah O'Day, in the neat blue gown and ruffled apron that set off her trim figure to such advantage, and the coquettishly frilled cap set so jauntily on her abundant auburn hair, made a much more fascinating heroine than the individual in the cotton dress.

It was evident that the engineer of the mixed freight thought so, too, judging from the expression of his blue eyes when they rested on her. Norah hoped that there would be no such tragic ending to her romance as had come to that of the young lady in the poem.

A mixed freight piled in the ditch would not be nearly so picturesque as a string of Pullmans.

For a whole month, there had not been a week-day morning when the whistle of the freight had failed to shriek at the lower curve. The house stood just back from the edge of a rather steep embankment, at the foot of which ran the railroad tracks. The side window of the second story offered a coign of vantage; and every morning, rain or shine, Norah stood there to smile and wave her duster at the man who sat in the engine-cab.

There were only two flies in the delicious honey of her romance. One was that she did not know the name of the engineer; the other, that he had never stopped to speak with her.

The first did not matter so much. What's in a name? A hind-shack by any other name would work as hard. Norah had been reading a wonderful tale of an engineer, named Reginald Launcelot De-Courcey, who had fallen in love with a beauteous maiden of lowly estate. After a long-distance courtship, carried on by means of cleverly devised wigwagging, the gentleman had finally carried off the blushing damsel in the engine cab. He had turned out to be the president of the road, learning the business from the ground up, and he forthwith married the maiden and they had lived happily ever after.

Norah thought "Reginald" a very pretty name. After all, it was quite within the possibilities that her engineer might be possessed of such a euphonious cognomen. So "Reginald" he became to her, and she adorned his head with a glittering halo of romance, dreaming of the time when the Adonis of the cab should bring the panting monster to a standstill outside the house and call to her in accents of tender passion to fly with him and be his bride.

To be sure he would not know by what name to address her, but that was a matter soon remedied. In the meantime, "my love" or "my own darling" would do equally well, and Norah was certain that she should not fail to respond in either case.

But as the summer wore on and Reginald was still a little backward about coming forward, Norah began to feel piqued. Was it possible that her hero was faint-hearted, or, did he fear to test her love for him? Surely by this time he should have spoken.

But he only smiled and smiled and waved his cap—the same cap, by the way—and it was beginning to show unmistakable signs of the wear and tear of a strenuous life. In the story, the engineer-president had waited but two short weeks before declaring his love. Why, then, did Reginald delay until the time ran into months?

Norah grew weary of watching at the window for the train to come to a halt. Speculation as to whether this or that were the day when Reginald would summon her to his side began to pall. His smile was just as sweet, his gesture as debonair, but Norah longed for some more definite demonstration.

The instant that the wheezy whistle apprised her of the approach of the train, she was at the window, her eyes alight, an eager smile of anticipation on her lips—but the light died and the smile faded, as the train rolled on.

As the summer deepened into autumn, she shook the duster hopelessly, almost mechanically—much in the same way that an electric bell rings when one pushes the button. The whistle touched a nerve in Norah's brain, and her hand responded to the contact by shaking a white cloth in the direction from which the sound came, while her eyes, wistful with hope deferred, followed the waving cap until it disappeared from view.

She felt like *Marianna* in the "Moated Grange." Would he ever come? She told herself that her life was dreary, not worth the living without Reginald. And yet, she

had given him all necessary encouragement, and if he still hesitated and hung back, it ill became her to seem too anxious.

One morning she was going about her work with less than her usual animation. It was late in October, a dull, gray day with a suggestion of a chill in the air. Norah's state of mind harmonized with the weather. She had at last come to the distressing conclusion that Reginald had been but trifling with her. His delay admitted of no other explanation.

If he had really loved her, he would have found means to tell her so ere this. True affection would have scorned time-tables and the yard boss. She felt herself aggrieved, slighted, scorned.

It had been a sad day for Norah when she first looked out from the second-story side window and met the twinkling blue eyes of the engineer of the mixed. Why, oh, why had she ever listened to the allurements of a whistled courtship? And, oh, Norah DeCourcey was such a beautiful name!

A tear splashed on the polished surface of the table, and Norah sadly rubbed it away.

Just as she did so, the sound of the door-bell pealed through the house.

"I'll go, Norah," came her mistress's voice from down-stairs.

"THOUGHT HE'D STOP TO SPEAK TO YOU, EH? WELL, THAT'S JUST WHAT HE DID."

A moment later, the girl heard the voice again:

"Norah! Norah! Bring my golf jacket down. It's in the closet. Hurry!"

Norah dropped the duster and went to the closet. She took the jacket off the hook, started for the door—then stopped and stood listening.

Yes—there was no mistake. She could distinguish clearly the labored puff-puff of an engine coming up the grade. Reginald's train was approaching.

"Norah!" called her mistress again. "What are you doing?"

Norah hesitated, divided between duty and devotion. Should she hurry down-stairs with the jacket, or stop and wave to

Reginald? Her mistress was waiting impatiently; but what would *he* think if he did not see her at the window? Hark! There was the whistle!

Simultaneously, the voice below screamed "*Norah!*" in acid accents.

She must go! But first she rushed to the window and thrust out her head. The engine was well in sight. Pausing only long enough to frantically flap the jacket she held in her hand, she withdrew her head and sped from the room and down-stairs.

"What were you about?" demanded her irate mistress, as she reached the lower hall. "The cleaner has come for the jacket! He hasn't all day to wait! Take it to him—he's at the side door!"

Murmuring something about "not being able to find it right off, ma'am," Norah took the garment to the waiting cleaner and watched him stride down the path. And then—her heart almost stopped beating.

On the track, almost directly below her, stood a long string of motionless freight-cars, and a man was climbing swiftly up the bank toward the house.

Reginald! Her hero had arrived!

She must go to meet him! Quickly she ran down the steps to the edge of the cut.

"What's the matter?" demanded the man breathlessly, as he came within hailing distance.

"Matter? Nothin'. What do you mean?" asked Norah, wonderingly.

"What was the red flag for?"

In a flash Norah remembered the red jacket she had waved from the window. In her haste she had not thought of the color, and the engineer had taken it for a danger signal. Reginald had not stopped for her, then! He had not even come himself, but had sent the brakeman to find out what had happened!

"Nothin'," she said again, in a meek little voice. "I was just afther wavin' at Reg—I mean at the engineer. 'Tis every mornin' I do it. I didn't notice what color was the coat I shook."

A grin of illuminated understanding overspread the face of the brakeman.

"You'll be the girl that waves out the window every day, then?" he suggested.

"Every day," said Norah, proudly. "'Tis not one I've missed the whole summer. Shure, when I saw the cars there, I thought—I thought—" She blushed and stammered, and the brakeman took up the unfinished sentence.

"Thought he'd stopped to speak to you, eh? Well, that's just what he did. He'd like to meet you. Will you step down a minute? He can't leave the engine."

Norah beamed all over her face.

"Shure, I'd like to," she said promptly.

"Come on, then," said the brakeman. "But you'll have to hurry. We can only stop a minute. I'll help you down the bank."

Norah gave a little pat or two at her pompadour, shook out her stiffly starched skirts, and prepared to follow. Her cheeks glowed, her eyes sparkled, her lips were parted in a smile over her pretty teeth. She was going to meet Reginald Launcelot DeCourcey at last!

A moment later she found herself standing beside the engine.

"Jack," said the brakeman, "this is the young lady—"

"Shure, you're not him!" burst out Norah, ready to cry with disappointment and vexation. For the man who leaned from the cab-window, cap in hand, was not Reginald! He was a total stranger, on whom she had never set eyes before.

"I ain't who?" the engineer wanted to know.

"The engineer—the man — I — who — he—" Words failed her.

"Oh, you mean the regular man?"

Norah nodded.

"Ain't he on the train any more?" she asked faintly.

"Oh, yes. But I'm takin' his run today. My train's the one that goes up at noon. Dan—he'll be on again to-morrow."

"Dan?"

"Sure. Dan Mulligan. That's his name. Might I ask what yours is, miss?"

"Norah O'Day," faltered the girl.

Norah Mulligan! Shades of Reginald Launcelot DeCourcey!

"That's a pretty name, ain't it, Bob?" observed the engineer, leaning further out of the cab-window. "I say, Miss—"

"He ain't sick?" inquired Norah hesitatingly.

"Who—Dan? Oh, no. He's just got a day off. It's his crystal weddin' anniversary. He's takin' his wife an' the kids out for a little celebration."

"The kids?" gasped Norah, her knees almost giving way.

"Sure. Six of 'em. The baby's the cutest I ever see. Dan's that proud of him! But, say—my train goes up around noon.

Why don't you wave to me? I'd be pleased to have you."

Norah felt that she could hear no more.

"I—I'm afraid I'll have to go in," she stammered. "I—I—got work to do."

"All right," responded the engineer cheerfully. For the first time after that one terrible instant when she had realized he was not her own engineer, Norah lifted her eyes to his face. He was not a bad-looking chap, and his brown eyes were filled with honest admiration.

"I'm Jack McGrath," he continued. "Look out to-morrow, will you?" His hand moved toward the throttle.

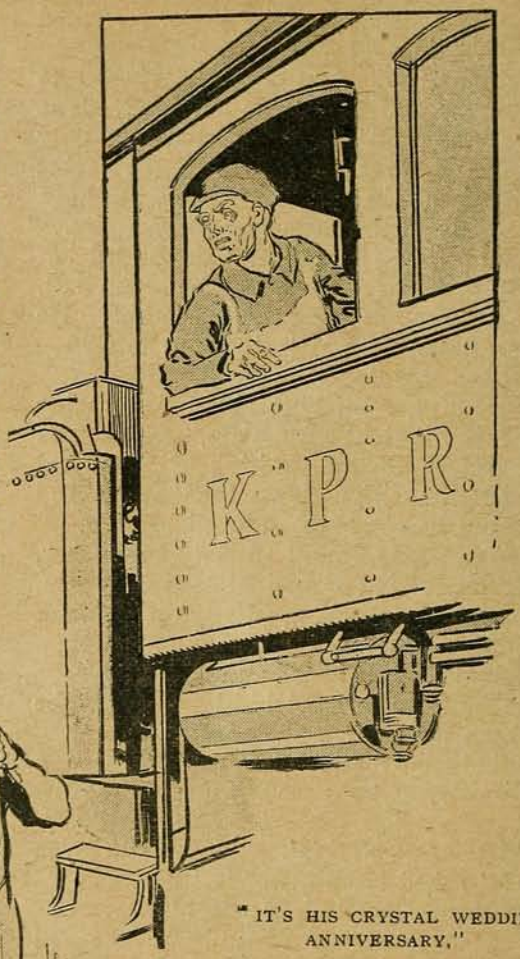
But Norah fled.

There was a thin film of dust on the claw-foot, and Norah knelt to remove it. Her eyes were just a trifle red and swollen, but a judicious use of powder had removed most of the traces of the tears that had bedewed her pillow the night before.

Dan Mulligan—a wife and six children!

Over the river and down the track
The train will dash to-day.
But what are the ribbons of white and black
The engine wears away?

In wailing accents, Norah wanted to know. There was a sad and mournful cadence in her voice as befitted the sentiment of the song. To-day the joyous lilt was missing from her tones, and she avoided the high notes. Her romance with Reginald



"IT'S HIS CRYSTAL WEDDIN' ANNIVERSARY."

Launcelot DeCourcey had indeed struck an open switch.

Suddenly her quick ear caught the rumble of wheels, the quick, sharp blasts of a whistle. She raised her right hand a few inches, then came to herself with a start and jerked it back, plying the duster energetically.

For the first time in months Dan Mulligan's watchful eye caught no gleam of white at the upper window. He hung out of the cab as long as the house remained in sight, but no one appeared.

A tear trickled down Norah's cheek. She wiped it away and rose slowly to her feet.

"Jack was afther sayin' I was to look out at noon," she murmured to herself as her eyes sought the clock.

Naming 1,248 Pullmans a Year.

BY FELIX G. PRENTICE.

DO you remember the delightful story that is recorded in the narratives of the famous philosopher of Chicago, Mr. Dooley, when Mr. and Mrs. Dooley wanted to name the baby boy? The father was intent on having him christened with a couple of good Hibernian appellations, and Mrs. Dooley was equally insistent for a cognomen that was sufficiently poetic to suggest Little Lord Fauntleroy at a pink tea. So they quarreled, and, in the heat of the argument, Mrs. Dooley hotly said to her husband:

"Do you think I want my child named for the pay-roll of the dock department?"

"An' do yez think I want him n-named fer th' Pullman Car Company?" said Mr. Dooley.

How Young Men in the Office of the General Manager of the Pullman Company at Chicago Tease the Alphabet to Manufacture New Monikers.

ANY one having cast-off names to dispose of may like to know that they will be thankfully received by the Pullman Company, a worthy corporation which is having a hard struggle to provide its large and growing collection of sleeping-cars with respectable cognomens.

To be perfectly frank, it may be said, though at the risk of wounding a proud corporation's sensibilities, that the Pullman Company is so hard up in the matter of nomenclature that the name "Pioneer," with which the first Pullman car ever built was christened, has been dry-cleaned and made over and fixed up for four generations of cars.

After forty-five years of continuous service in the dust and grime and storm and general stress of railroading, it is in such a state that it cannot be sent to the cleaners again.

Spinsters and other volunteers, always ready to name a new baby at a moment's notice, may think it is no trick to name a mere sleeping-car. Perhaps it would not be if there were only a dozen or a hundred, or even two hundred, of them. As a matter of fact, the Pullman Company got along famously while the list of proper names in the back of the dictionary held out.

But there were 4,749 Pullman standard sleeping, parlor, observation, and private cars in service on October 1, 1910, and new ones are being turned out at the rate of four for each working day. That is 24 a week, 104 a month, and 1,248 a year. Each and every one of these cars is required to have a name for its exclusive use.

If there is anybody who considers it a simple task to think of twenty-four new names every week in the year, after 4,749 possible combinations of vowels and consonants have been eliminated from the eligible list, just let him try. Let him bear in mind that, according to the rules laid down by the Pullman Company, it is necessary "to select names that mean something, that are euphonious, and that do not have too many letters."

By way of illustrating the application

of the rules: Suppose we select at random a few names from among the 134 Pullman cars on the Northern Pacific.

In the name "Skagit" we have an excellent exemplification of euphony; "Tushepah" clearly means something, if we only knew what it was, while "Nisqually" is a model of brevity.

Some Northern Pacific Names.

If the point is not yet clear, it may be added that all the virtues to be desired in an ideal name are to be found in "Olequa," "Moclips," "Sokulk," "Palikee," "Nemadji," "Castah," "Atsina," "Chewah," "Sharha," "Skillute," "Stillasha," "Willewah," "Palouse," "Nehalem," "Wynoocha," "Youcone," "Yampah," "Umpyna," "Kittitas," "Kooskia," "Lezeka," "Opeechee," "Minta," and "Nushka."

Twelve hundred and forty-eight new names a year! Is it any wonder that, while all the rest of the world is more or less gay, the young men in the general manager's office at Chicago, which is saddled with a sort of blanket responsibility for the production of names when required, appear distrait, and jump convulsively when a care-free acquaintance from some other department gives them an unexpected slap between the shoulders?

Unfortunately, there is no hope for relief. Instead of being satisfied to let well enough alone, the Pullman Company employs a staff of designers to twist things around in sleeping-cars. In order to meet the designers' plans, the company has to build more cars accordingly. This not only makes a lot of extra work around the shops, but it adds to the burden of wo in the general manager's office. To express in iambic tetrameter the troubles of the unfortunates who have to provide names for the new cars:

> While workmen skilled so swiftly build
> The scrumptious cars that rouse our wonder,
> *They* sigh and swear and tear their hair,
> And darn the luck to thunder.

Fortunately, the names do not have to be forthcoming when the cars are ordered built. A lot number serves the purpose during construction, but in the general manager's office it is realized only too well that each day brings forth its quota of cars.

There are but twenty-six letters in the alphabet, and the possible combinations are so hampered by the requirements of euphony, brevity, and significance that uncharitable things should not be said of the sponsors if, in their agony, they should bring forth such names as "Coyeta," "Ilus," "Reita," "Currahee," "Juanaluska," "Berhera," "Olytes," "Ophytes," "Rahula," "Zeyla," "Viento," "Bisuka," "Lylete," "Napata," "Navarete," "Azusa," "Garita," "Atoyac," "Contento," "Espira," "Istlan," "Liorna," "Eylau," "Mocorito," "Parrao," "Tenescal," "Tavares," "Altata."

Unforeseen contingencies growing out of car names sometimes lead to tragedies. To mention a single example, a young wife on her way to St. Louis, a couple of years ago, gave birth to a child on a Big Four train. There was a physician on board, as there generally is, and the Pullman conductor and porter made her comfortable in a drawing-room. Altogether, the mother was so pleased that she decided to name her boy for the car in which he was born.

But, alas! Little did she realize what a Pullman car name can be when it really tries. Imagine her horror when she found that her beloved son would have to struggle through this vale of tears handicapped by the name "Skalkaho."

Think of it! "Skalkaho Finnegan!"

If he should turn out to be a Russian dancer, he may pull through—but suppose he should be a politician? What would the boys in the gas-house district not do to Skalkaho Finnegan?

Helping the Name-Finders.

Sometimes a neighborly railroad sends in a mess of names that keeps the Pullman Company going for a day or two. This is most likely to happen when the railroad is putting on a new train, or when it wants fresh equipment for an old one. Railroads in such cases frequently ask the Pullman Company to name the sleepers and parlor-cars after cities along the route; or, at least, to provide names suggestive of the locality through which the train runs.

Thus, some of the Pullmans on the New York Central's Twentieth Century Limited are named "Briarcliff," "Rhinecliff," "Kaaterskill," "Knickerbocker," etc. To the Empire State Express on the same road are assigned the "Empire State," "Buffalo," "Little Falls," "Fort Plain," "West Point," and so on.

A few years ago a general passenger agent, inspired by his marriage with sentiments of philanthropy, told the Pullman Company that it might use the names of his bride and sister-in-law. The Pullman Company thankfully christened the next two cars "Geraldine" and "Maybelle."

Following out the idea of providing cars with names suggestive of the country through which they run, the eight Pullmans assigned to the Mexican Interoceanic Railway are the "Jalapa," "Malintzi," "Xochitl," "Espanola," "La Heroica," "Mexicano," "Anahuac," and "Uruapan," while the four on the narrow-gage Mexican National are the "Acambaro," "Patzcuaro," "El Moro," and "Manitou."

On certain trains on the Pennsylvania the Pullman parlor-cars run to "H's," as "Hartley," "Herminie," "Highspire," "Holly Beach," "Honeybrook," "Hopewell," and "Howard."

Even the Saints!

For a short time the sad-eyed young men in the general manager's office were happy when one of them chanced to run across the calendar of saints. They had almost become reconciled to life by the time they had bestowed the names of sixty saints on sleeping-cars, including "St. Servan," "St. Carvan," "St. Arsene," and "St. Gretna."

Then an unmerciful official asked if the Pullman Company was an ecclesiastical enterprise or an early Spanish explorer? And, anyway, would they kindly give the saints a rest?

Then they turned to classical names, but demigods with a past were not deemed eligible to circulate in the exclusive society of limited trains, and the list was cut down almost to the vanishing point. They wandered through Lippincott's Gazetteer and the Biographical Dictionary, commandeered an "Ambassador," a "Diplomate," and a "Consul" from the diplomatic service, and, in their desperation, even descended to Congress long enough to christen the "Senator."

When all these resources failed there was nothing to do but to fall back on orthographic delirium tremens again. With heroic fortitude these nameless sponsors, for their identity is hidden behind a veil of mystery as impenetrable as a Pullman curtain, started in at "A" and waded resolutely through the alphabet.

Just to emphasize the assertion that they are not overlooking any bets, they have evolved no fewer than seventy-seven names beginning with "Ch," as "Chusca," "Charo," "Chowah," "Chickies," "Chico," and so on.

Some Prolific Letters.

Altogether, the letter "C" has proved the most prolific in the alphabet, having yielded no fewer than 479 names. "A" did pretty well with an output of 372 names. Even so unpromising a letter as "Z" produced 28 names, including "Zamba," "Zara," and "Zelda." "Y" did better with 32 names, like "Yolande," "Yolanda," "Yentoi." "U" did pretty well with "Ulseah," "Umpyna," and 35 others, but "Q" was hard sledding, for it only yielded 10 names.

It is really wonderful to see what the name-builders can do with unpromising material. Give them an ancient name that doesn't seem to have life enough to stand tacking on a single car, and they will nurse it along, amputating a vowel here and grafting a syllable there until they have fairly outdone the miracle of the loaves and fishes.

Take a simple little name like "Ruth." That does nicely for one car; but you wouldn't think they could irrigate and fertilize those four simple little letters until they produced "Ruthella," "Rutherford," and "Ruthven," would you? Well, they did, just the same.

In the same way, "York," after having some yeast stirred in and being set by the kitchen stove, swelled to "Yorklyn," "Yorkshire," "Yorktown," and "York Haven." "Rhoda" yielded "Rhodes," "Rhodesia," and "Rhode Island," and "India" was worked up into "Indiana," "Indianola," and "Indianapolis."

One of the favorite railroad classics relates how George M. Pullman used to pay his daughter Florence $10,000 a year to name cars for him. As the idealization of the soft snap for which we spend our lives hunting, this story struck a universal heart chord. In short, it never failed to make a hit. Moreover, it would have been just like Pullman, if he had been that sort of man. But not being that kind of man, he never did anything of the sort.

The story grew out of a Chicago space-writer's need of three dollars.

The question of names seems to have

haunted Pullman throughout his life. Even the town of Pullman was not named without difficulty. It seems that the architect employed to lay out this model town, which has been written about more than any other town of the same size in America, was W. W. Beman. He became so enthusiastic as the beautiful plans grew under his hand that he was filled with a desire to immortalize his name by bestowing it on the model town.

Naming a Model Town.

When a favorable opportunity presented itself he mentioned his modest ambition to Pullman. That famous car-builder turned the request over in his mind a moment, then said:

"Well, the fact is, Mr. Beman, I had rather thought of naming the town for myself."

Noticing a cloud of disappointment spread over the architect's face, he hastened to add: "But I'll tell you what we can do; we can compromise the matter. Suppose we make up a name by taking the first syllable of my name and the last syllable of yours. Then we will both be happy."

Apparently there is no way to avoid the necessity of providing palace cars with names. In the first place, the railroad companies cannot furnish the service provided by the Pullman Company. One strong appeal that the Pullman car makes is that it goes where the passenger wants to go, regardless of the number of roads it has to pass over to get there.

It might, perhaps, be feasible for the railroads constituting a through line to agree on some plan for providing equipment for ordinary service, but no railroad is willing to tie up money needed to furnish the extra equipment to meet emergencies that altogether amount to half a dozen days a year.

Just to show the extent of these emergencies, take the case of the New York Central, which required 900 extra Pullmans to bring home returning New Yorkers the day after Labor Day. The cars were on the spot when wanted. When it is remembered that but 1,100 Pullmans are assigned to all the busy roads in the district of which New York is the headquarters, it will be seen that emergency demands are pretty heavy.

It is a safe guess that no railroad would be willing to tie up $22,500,000 in 900 extra sleeping-cars to be used but once a year. Neither would they be willing to provide the extra equipment to make up the five bankers' specials that crossed the continent early last fall.

But the Pullman Company can do all these things, because there are emergency calls from somewhere in this big land pretty nearly all the time, though it is seldom that more than one hurry call comes in at a time.

This enables one central organization to keep its reserve equipment in pretty steady service. This makes for economy. By a wise manipulation of the reserve equipment, all the fluctuating demands of traffic are met with a minimum deadhead mileage, but it takes a lot of work.

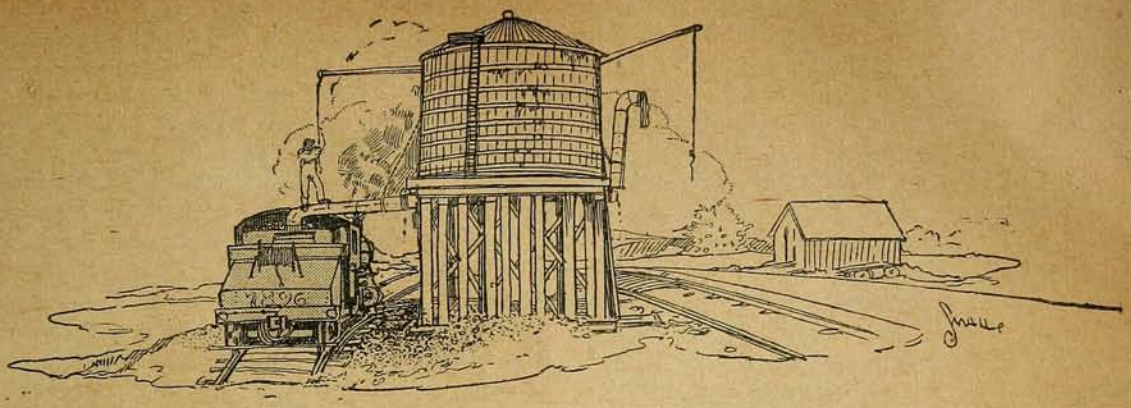
One man at the New York headquarters spends his working hours before a board full of holes that fills one side of a room and overflows on to another, sticking wooden pegs into the holes and taking them out again.

Each peg represents a Pullman car, and the board shows the manager at a glance just where each car is, and where he can look for reserves to meet a demand from any point in his large territory. Another man is fully occupied in keeping tab on joy-riders in private cars scattered all over the North American continent.

Pullmans must continue to bear names, because the railroad companies number their coaches, hauled on the same trains with them. If the Pullmans used numbers, too, the inevitable result would be confusion in handling trains; so there is nothing to do but grind out names. Yet there is a mathematical limit to what can be done with twenty-six letters. Every day that passes brings the crisis nearer.

If Congress could spare a few moments from its full-crew bills, locomotive-inspection bills, and unlimited-baggage bills, perhaps it might be induced to place imported car names on the free list.

You can't drive a quarrelsome man or a balky engine,—leave 'em both to the wrecking crew.—The Old Eagle Eye.



Heard Around the Water-Tank.

BY TOM JACKSON.

NOT all the interesting stories under this heading deal with railroad men themselves, but Tom Jackson, who is an old-time tallow-pot, has gathered yarns from many sources, and, as they are all interesting, we are glad to give them space. And if you will ask Tom Jackson, he will tell you that his railroad days were the happiest of his life. Each story that follows contains something that will interest. If, when you have read them all, you do not see the railroad man from several new viewpoints, then we have missed our guess.

The Washout Sign—Asleep in the Cabin—For a Mail Contract—Cool Heads in Danger—The Wonderful Watch—Our Mother Tongue—Spotting the Married Ones.

McCASLAND'S WASHOUT SIGNS.

ANDY McCASLAND will verify the truth of the statement that a man on the right side of an engine will stop when any object is violently waved across the track. That is an old rule in railroading which has always been strictly adhered to by every employee, and one that has doubtless saved many lives.

Andy was an engineer on the old Cane Belt road, a property long since absorbed by the Gulf, Colorado and Santa Fe, which runs from Sealy to Matagorda, Texas, a distance of ninety miles, through what was then the wildest country in south central Texas.

One stretch of eight miles ran through the famous Wharton Bottom, a forest of oak and elm, with an undergrowth of haw and wild brier.

The bottoms were said to be the abounding place of escaped convicts, bear and deer. Andy will bear me witness that in those early days of the Cane Belt, the bottom certainly was the ranging grounds of a certain mule, the mule having caused Andy to put her over and give her all there was, one foggy morning in 1901.

We were south-bound local freight No. 5, with engine 108 pulling us. Andy McCasland, a young tallow-pot just from the Katy,

was at the throttle, and Herman Freze was handling the scoop. I was braking ahead, and, as a matter of course, while the train was in motion I was in the head man's accustomed place on the seat box behind Herman, getting my brief bit of "spot."

We had been on the road all day and all night and were all but dead from loss of sleep, and we were overworked from unloading bacon and corn-meal at the stations between the two terminals.

Being thus "batty-eyed," no doubt accounted for Andy's optical illusion, and when he saw an object coming down the track right in the edge of the woods, waving a stop sign, he concluded that something had gone wrong with the track.

He reached up and got the whistle-cord, tooted twice in answer to the "washout," and then gave his air about ten pounds reduction.

The fireman looked ahead and saw what he imagined to be a high-ball coming from the same source, but Andy was too busy stopping to notice a high-ball and finally brought the train to a full stop.

Then he looked up. Sure enough, something or somebody was giving him an old-fashioned high-ball.

Andy started his train again, and by this time the "tallow" had awakened me. I looked ahead at his request and saw the object. It was giving another "washout" stop-sign, following up with a high-ball.

Andy was tooting like mad, and mad as a hornet he was, for by all that is uncanny, the signal-maker proved to be a lop-eared mule which had come out of the bottoms to avoid the mosquitoes and had stepped on the track.

He was busy switching the pests off with his tail and at every motion he would give either a stop-signal or a high-ball. It was so nearly like the real thing that Andy McCasland put the old 108 in the big hole and stopped dead, fully believing that some track-walker had signaled.

ASLEEP IN THE CABIN.

SPEAKING of Wharton Bottom reminds me of another incident which occurred on the same line. It happened in September, 1901, during the heavy rush of business on the Cane Belt, when the cotton season was on and the rice rush—then in its infancy in Texas—was just looking up.

That fall was a wet one, even for south Texas, and as the track was new and poorly ballasted, it was almost impossible to move faster than six miles an hour through Wharton Bottom, which before the coming of the railway was a dismal swamp.

That part of it through which the road runs, is somewhat higher than the rest, and the dump, built of mud from the barrow pits, acts as a dam for the lake on either side.

We were going north on No. 6 one rainy night, and, as the engineer had loved ones at home awaiting him, he was doing his best to make as fast time as possible.

When about the middle of the woods, the old three got it into her head to act nutty. She put her two fore-feet on the ties, and ran in that manner for several hundred yards before the hogger could stop her.

Four blasts of the whistle had the conductor, Luke Dial, and two brakemen come to the front, and the work of replacing the mill was begun.

We worked for two solid hours, back and forth and round about, carrying heavy frogs and ties until we were almost exhausted. Finally we got the engine back on the rails and started on our way happy in the thought that we would soon be out of the bottom and on good track again.

We were soon to be sadly disappointed, however. We had not gone half a mile before we were all huddled in a corner of the caboose with the stove and the water-cooler on top of us, and with smoke and brimstone rising from the floor of the caboose where the captain had gone down.

We extricated ourselves from the links, pins, air-horse, and other objects, and went ahead to ascertain the cause of the sudden stop.

What we saw made us sick. Three furniture cars crosswise of the track and on each side a lake of water three-feet deep, and no dry sand in sight.

To add to the pleasures of the afternoon, a cold, misty rain was falling. There was nothing to do but make an effort to get the cars back, and we worked like demons for five hours, finally succeeding in getting every car on the rails.

We were standing beside the cars congratulating ourselves on being tip-top wreckers, when something else happened that made us all declare that as soon as we arrived at the division we would tender our resignations.

As soon as we got the cars on the track we had the engine back down to the scene of the derailment in order that we might more conveniently load the frogs onto the tender.

While this was happening the rails, which had been loosened by the derailed cars, turned under the engine, letting her down into the mud, and making it impossible for us to budge a wheel.

There was nothing for the crew to do but return to the caboose and go to bed. This we did, although it began to look as if the rear man would have to go back a distance of twenty telegraph poles, and protect our train.

The hind man refused to do anything of the kind, putting up as an excuse that there was not an engine on the south end and it was impossible for a train to hit us.

We were working under standard rules, however, and something had to be done, so we compromised on the negro cook, Joe, who lived in our "dog-house." Joe agreed to go back to Bear Junction, a mile away, where there was a cabin erected by wood-choppers, and do the flagging.

Next morning we sent back for Joe and found him asleep in the cabin.

A RACE FOR MAIL CONTRACT.

BACK in the early eighties, considerable rivalry existed between two great trunk lines, the Louisville and Nashville and the Queen and Crescent; for the mail contract between Cincinnati and New Orleans. Word had been received from the Post Office Department in Washington that the mail contract was to be awarded to the road making the best time over these two lines. On a certain day word was sent down the line of the Queen and Crescent that the big race was to be pulled off the next day.

First No. 5, consisting of a mail-car, baggage-car, two day-coaches and a Pullman would leave Cincinnati at 9.30 in the morning, would have the right of way over all trains, and would be given a clear track—the white board by day and the white light by night.

As a precaution, track-walkers, acting under orders of the division road-masters, had personally inspected all switches and road-bed culverts, and looked for any bolts or taps that might be loose. Section-men with white flags by day and white lights by night were stationed along the line to give the proper signals that all was right. In fact, every precaution was taken to assist in the fast run being made without accident.

Promptly on the second, No. 5 rolled into the car shed in Chattanooga. There the Cincinnati Southern men surrendered the train to the Alabama Great Southern crew, who were to make the record-breaking run to Meridian, Mississippi, a distance of 295 miles.

The train was in charge of Captain Martin Ford, conductor. Jesse Haver, as cool-headed and fearless a man as ever pulled a throttle, was in the cab. His engine was one of two large McQueens that had been sent down from the shops in Ludow, Kentucky, for the occasion. These were considered the fastest passenger-engines in the service of those days.

Only a few moments were consumed in transferring train equipments in Chattanooga, and we were off. The Cincinnati Southern having made a record-breaking run from Cincinnati, we were eager to hold up the good start over the Alabama Great Southern division.

By the time the red lights on the rear end of the Pullman passed out of the lower end of the car-shed we were hitting a twenty-mile clip, with sand running from the dome-pipe and the big drivers catching good "toe hold" on the rails with every revolution.

Out in the darkness like a thing of life, the great curls of black smoke boiling from the McQueen's smoke-stack, rushed the train—the smooth rails under the glare of the headlight looking like ribbons of silver.

The white lights flashed as she sped through the yards, past Cravens, where the white light shining like a star was flashed, then around the bend of the blue Tennessee, hugging the great gray walls of "old Lookout," now and then the big, brass bell clanging with the swaying of the engine as she gathered momentum.

Down through the little hamlet of Wanhatchie, where the switch had been turned onto the Alabama Great Southern main line to save stopping, then down the long straight stretch through Wildwood.

Then it was she sprang forward like some frightened bird darting out into the black night. The engineer dropping her down a couple of notches and tapping the throttle-lever, the big engine responded nobly.

Rising Fawn, Sulphur Springs, Valley Head, Fort Payne, Poterville, Collinsville, Atalla—all flitted like shadows.

At Springville, a stop was made for water.

"Now, my boy, take that water, quick," was the order the fireman received.

"Hustle round and keep your eyes skinned for a hot box," was the order the brakeman received.

"She is as cold as charity," came from the brakeman as he made a hasty survey.

Then off again down through Trussville and into the "Magic City," panting and throbbing, the trip was made in four hours and five minutes.

The crew uncoupled and backed in the other big McQueen, the mate to Haver's pet. Dick Moore, every one knew Dick, the jolliest fellow on the road and a bundle of cold nerve, climbed up into the high cab. What he could not get out of an engine was in the scrap pile.

Clang! clang! went the big bell and we were again racing against time, great chunks of white-heated cinders flying from the stack and sparks from the drivers.

Down through old Jonesboro we flew, racing against the storm.

"Will he stop for the drawbridge over the Warrior and Tombigbee?" asks some one in breathless excitement.

"Call it stop," says the brakeman, "but if you had fired a cannon-ball at the engine you would have hit the sleeper. We are away past Epps and Eutaw and that whistle is for Livingston."

The target lights of the Mobile and Ohio flash as we dash across its tracks.

"Meridian! All out for Meridian!" yells the brakeman.

Here we turned her over to the New Orleans and Northeastern boys, having made the run from Chattanooga in eight hours and twenty minutes, a record breaker for the Alabama Great Southern.

The New Orleans and Northeastern beat the L. and N. by four hours, and secured the mail contract for four years.

COOL HEADS IN DANGER MOMENTS.

THIS incident happened eighteen months ago, on what is known as the D. and R. G. and C. and S. joint track between the junctions of Walsenburg and Cuchara, in Colorado.

I have witnessed many deeds of daring, many acts of charity, and many "dare-devil" stunts performed by railroad men, but I never before saw such a quick-witted, cool-headed stunt as the following. After it was all over I told the conductor, and all the satisfaction that I got from him was:

"Well, you have certainly got to have your head cut in all the time down on this joint-track, if you want to get over the road."

It was a Rio Grande passenger-train that left Denver about 8 P.M., heavily laden with passengers for the San Juan and its tributaries. This train had reached Cuchara Junction on time and pulled out at about 1.30 A.M.

The wind was blowing nearly a hurricane, and the mercury was down below the freezing point.

The blackness of the night did not help to make it very pleasant for Engineer Walter Henthorn. The snow beating against the window in his cab kept him with his head continually out searching the inky blackness for danger.

It is a busy piece of track between Walsenburg and Pueblo, and the two big railroads handle many trains there in twenty-four hours.

Henthorn had just whistled for Walsenburg Junction, when out ahead on the main line he caught sight of the three red lights of a freight-train bearing down upon him.

On the rear end stood a man giving him frantic signals with a red lantern to back up.

He started his train back toward Cuchara, thinking that a freight-train was backing down to head in and let him pass, but as the signals became more rapid and the train got nearer, he came to the conclusion that it was a runaway coal-train.

To back his train east without a flag to protect, was an awful risk, as No. 115 never left Cuchara without at least two or three west-bound freights following.

At this time the entire force of machinists on the system were striking, and many engines were compelled to run without headlights.

It was a trying position. It seemed to be one thing or the other: to stop and be crushed to death by the approaching train, or hurl the train with its hundred or more sleeping passengers to certain disaster.

A cool head appeared in the person of Conductor George Stout. He had taken in the situation at a glance. Suddenly the rear end of the passenger-train was a blaze

of red lights. As fast as one fuzee burned out, another took its place.

Their speed had to be increased in order to outdistance the fast-approaching outlaw, and their little engine was throwing sky-rockets into the air and streaks of fire from the slipping drivers.

A train length ahead of the oncoming caboose was the best they could do. The conductor, after getting the rear-end decorated and a flagman at his post, came through the train and turned out every gas-jet, but to every questioner who asked why, jokingly answered, "just saving a little gas," knowing full well what the consequences would be had he showed the least excitement.

The passengers might become panic-stricken and jump to their death in the darkness.

Stout believed that if they beat the runaway to Cuchara they could throw it into a siding. The possibilities were that all the tracks were full of trains, but they had to take a chance. It was now simply a case of the less killed the better.

The flagman was to jump from the rear end of the train and throw the siding-switch after his train was into clear.

If he fell and failed, the conductor, stationed at the head of the sleeper, would make the attempt.

Fortunately the flagman made the switch and shot the runaway down a clear siding. It was a caboose without a hand-brake. Conductor McCoy of the freight had ridden that flying demon down those steep six miles, absolutely helpless to control its speed but able to warn the passenger-train.

He is one of the heroes of which the railroad men are justly proud.

The caboose ran through the siding and stopped just in front of an extra pulling into Cuchara. Conductor Stout had rushed to the telegraph office and asked the operator at Apache, the first station east, to hold all trains west—but the extra had got out.

No one was killed or even injured, and thousands of dollars' worth of property was saved by a little nerve and some good judgment on the part of a little band of railroad men.

THE WONDERFUL WATCH.

"RAILROAD men are inclined to look on the locomotive as the greatest piece of machinery in the world," said a jeweler, as he adjusted an engineer's time-piece. "But they are mistaken. Every railroad man carries the greatest piece of machinery ever constructed right in his own pocket—his watch.

"The locomotive must run on a comparatively level track, a grade of one foot in ten is too much for the average engine to climb, although some few can do a bit better than this. But a watch runs upside down, or in any possible position. It is the most compact, the strongest and the most delicate piece of machinery ever put together by human hands.

"I know of nothing to compare it with, except possibly two things—the modern high-power automatic rifle and the human eye. Both of these are compact, strong, and delicate, but, of the three, I think the watch leads.

"The average watch has about 175 parts. Iron, gold, silver, copper, and nickel are used in its construction. Then there are the jewels, each of which must be cut more accurately than the average diamond for a ring.

"It takes about 2500 different operations to make a watch.

"But these numbers are almost nothing when we stop to think what a watch does. To begin with, it strikes 432,000 blows against the fork every twenty-four hours. There are about 1800 steps to the mile, as the average man walks, and if he took a step every time his watch touched the fork he would travel 240 miles in a day, or at the rate of ten miles an hour.

"This means 157,680,000 impacts a year, and this run is made without a single stop for rest. The watch does not go into the shops every now and then as even the best engines must, nor is it oiled and readjusted for its next run. Suppose we treated a locomotive as we do a watch. It would mean that an engine would run at least a year, and ofter four or five years, never stopping night or day.

"I doubt if the average engine could stand it for one week, to say nothing about one year. Usually we do oil our watches about once a year, sometimes only once in every two years. Think of a locomotive going two years without oil!

"Even when we figure it out on a mileage basis the watch has the best of it. The balance wheel moves 1 43-100 of an inch each time, a total of nearly 3,559 miles a year. As watches are usually taken care of, this means about 5500 miles on one oiling.

"Now the average watch uses about as much power as four fleas would develop. It is estimated that one horse-power will run 270,000,000 watches. In other words, the watch as an engine, on one oiling, will run over 3500 miles on 1-270,000,000 of one horse-power constantly applied. Where is there a locomotive that can even come in sight of such a record?

"A man often drops his watch, picks it up, puts it to his ear, and, if it is going all right, which is usually the case, he thinks no more about it and the watch keeps right on with its work. Drop a locomotive the same distance—say only five feet straight down—and it is the shops for that engine.

"There are many scientific instruments far more delicate than a watch, and many machines far stronger; but for strength and delicacy combined, nothing equals a watch."

OUR "MOTHER TONGUE."

THERE is something in the railroad business that gets into the fibers of a man. It becomes part of his life; tinctures his thoughts, sways his moods, gives a distinctive air to his looks, and shapes his speech.

Especially is this so in the case of the men of the Western roads, where there isn't much to interfere with the development of the individuality that arises from constant contact with the right-of-way.

An old eagle eye never referred to his cap, but always to his "dome casing." Had he occasion to hunt for his coat he wondered where the "jacket" was side-tracked. His legs, he called his "drivers." His hands were "pins," his arms, "side-rods," his stomach the "fire-box," and his mouth "the pop."

Another of his kind would speak of a missing suspender button as a "shy spring-hanger." If a man hurt his foot and walked with a limp, he had a "flat wheel." When eating he was "firing up," when drinking he "took water," and if he had indulged too much he had "oiled round."

John A. Hill, who knows railroad men to the core, tells of an engineer on the Pacific Coast who once expressed himself as follows in the course of a conversation:

"Say, guess who I met on the up-trip? Dick Taggart! Sure. I was sailin' along up the main line near Bob's and who should I see but Dick backed in on the siding looking dilapidated like he was running on one side. I just slammed on the wind and went over and shook. Dick looked pretty tough. He must have been out surfacing track. He was oiled a good deal; jacket rusted and streaked; tire double flanged; valves blowing; packing down; didn't seem to steam right. He must go to the back shop before the old man will ever let him in the roundhouse.

"I set his packing out and put him in a stall in Gray's corral. Dick's mighty good working scrap if you can only get him down to carrying water right. If he'd come down to three gages he'd be a dandy; but this trying to run first section with a flutter in his stack all the time, is no good—he must be flagged in."

A Chicago switchman, when asked if it were true that he intended to marry, said:

"I wouldn't care to double-crew my train. I've been raised to run my own engine and take care of it. When you double-pack, there is always a row as to who ought to go ahead and enjoy the scenery or stay behind and eat cinders."

An engineer was overheard lecturing his fireman thus:

"Well, Jim, I'm ashamed of you. You come into general headquarters with your tank afloat, so full that you can't whistle, with your air-pump a squealin' and the hull of you misbehavin' scandalous. You was smeared from stack to man-hole, headlight smoked and glimmery; don't know your rights, kind of runnin' wild-cat without proper signals; imagining you are first section with a regardless order. What you want to do is to blow out, trim up, get your packing set out and carry less juice.

"You're worse than the slipping, dancing, three-legged freight haulers that the new super has sprung on us. The next time I catch you at high gage I'll scrap.

"Oil around if you must, but put the air on steady, bring her down to a proper gait, throw her into full release so as to stop right, drop a little oil on the worst points, ring your bell, and go ahead."

This is how an old railroad man described the wedding of his adopted daughter:

"I've been up to see a new compound start out—prettiest sight I ever saw. Maybe I'm a bit dubious about repairs and general running, but I guess they'll make out all right.

"That little girl of mine was the trimmest, neatest, slickest little mill you ever

saw. She was painted red and white and gold-leaf, three brass bands on her stack, solid nickel trimmings, all the latest improvements—jest made on purpose for specials and pay-car. She got coupled to a long, fire-boxed, ten-wheeler with a big lap. Yes, sir, that babe of mine is a heart-breaker on dress parade and the ten-wheeler is a mogul for business."

ON THE HONEYMOON SPECIAL.

"WHEN the matrimonial market is buoyant," said an old con, "it is interesting to notice the newlyweds starting on their first journey.

"Of course, it is not on account of being ashamed of each other that they try to disguise the situation, but simply to avoid being criticized by inquisitive strangers. They lay the fond unction to their souls that they are traveling incog! But, how badly fooled they are.

"It is one of the easiest things in the world, to the careful eye, to tell precisely how many days, or even hours, they have been spliced. They can sometimes be detected by the great pains they take to appear like old married people or cousins, as they sit demurely in the cars. In many cases, their dress exposes them—it is so terribly in tune with the occasion, being neat, symmetrical, and new. In cases where the parties have good taste, there is no gaudiness or flub-dubbing about their attire.

"Sometimes the youthful culprits engage in playing at lovers, or affect a flirtation, but it is always a stupendous failure. Their eyes betray too much happiness for such a disguise. There is such a peculiar softness and tenderness in their confidential whispers, and such a pride in the possession of each other, that none around them are deceived.

"It is generally the case, that the bridegroom makes the discovery first, and throws his arm carelessly around the shoulders of his wife, as much as to say defiantly to the envious: 'Who's afraid? Who knows but we have been married many years?'

"The guilty slyness in the way that arm steals round, first on the seat-back, then gradually closer, while the bride evinces a silent blush as she acquiesces in an unperceiving way. Indeed, it is she who generally lets the cat out of the bag.

"The narrow-gage seats are preferable to the broad-gage, and if you sit on the seat back of a couple, you will observe at first the lady's shoulders are not even—they incline just a little to her partner. After traveling in this position a few hours, her neck gets as limber as a washed paper-collar, and her head gravitates to the broad shoulders of her husband, and there it nestles innocently and confidingly, in the repose of honest and truthful love! At times, in spite of all precaution, one or two of her golden locks will get loose and drop on his shoulder.

"So they go, fancying themselves lost in the crowd — unnoticed, unknown — with their secret locked up on their own palpitating bosoms. Poor newlyweds!"

NEW TUNNEL-BORING MACHINE.

A NEW form of tunnel-boring machine has lately been devised by Mr. Ebbley, formerly master mechanic of the Old Dominion Copper Mine, at Globe, Arizona. The inventor says his device will average twenty-five to fifty feet a day. No blasting is required, and this eliminates one of the dangers and a large part of the cost.

No gases collect to hinder progress of the work. Three men on a shift can operate the machine.

The machine drills a circular hole from eight to twenty-five feet in diameter. It is intended to go through any ground that a machine drill will work in. The track is laid and the timbers placed as the machine proceeds. From one hundred and fifty to two hundred horse-power is required to operate the borer, but the cost of this is offset by the saving in men, powder, and time.

A large hollow shaft is mounted on a carrying frame running on wheels on the track. At the head of the shaft are radial arms carrying different drilling machines of special design for cutting channels in the rock.

There are three complements of drills, the outer set cutting the channel that determines the size of the bore. Another set cuts a channel in the rock or earth, a foot or two inside the line of the outer channel. A third set cuts a still smaller ring in the rock, and other sets may be used. Hammers pound against the rock with smashing force as the channels are cut, thus breaking out the rock and earth and allowing it to fall to the floor of the tunnel. A shovel that has a reciprocating motion, with accelerated speed to the rear, gathers up the muck and throws it behind the machine. The shovel is handled by an air-cylinder equipped with a specially designed valve-gear.—*Exchange.*

SMITH'S LAST GAME.

BY SUMNER LUCAS.

It Doesn't Pay to Be a Practical Joker and a Poker Fiend All at Once.

"IF you please, sah, de lady in de next car says as how she wants to see you, sah, if you're her husband, sah. Am you Mistah Smith, sah?"

"Tell her in just a minute, porter—in just a minute," murmured Smith as he sorted out four spades, tossed a tray of clubs into the discard, and prayed silently but hard for another spade. This was the third message exchanged within an hour in almost exactly the same words between "de lady in de next car" and Smith; yet Smith still sat in the game—a quiet little game of poker in the drawing-room of the Denver Pullman on the east-bound flier running out of Green River, Wyoming.

Ziggitty, the big, fat colored porter of "de next car," scratched his wool with an anxious air, and for the third time departed to face a square-jawed woman, who abused him for the shortcomings of her poker-loving husband.

"The idea! He has played all day, and now it is getting supper-time; and I've been alone all day, and the man said 'second call for dinner in the dining-car' fully half an hour ago. Very well, I'll go eat alone," which the irate woman did. A sandwich was all Smith wanted.

SMITH SLID CAREFULLY OUT OF THE UPPER.

"Ugh!" was all he had to say to the information that he must seek the diner at once or get nothing to eat that night. What is a diner and a table-cloth lecture on the evils of gambling and wife desertion compared to four eights with a blue jackpot just about ready to be hauled in?

Smith stayed in the game.

The four players were old chums. Many a good time had they known together, and many was the joke they had played; sometimes on each other, but more often on some suffering outsider. The year before, when the four had been together for a trip across the country, Smith had left the train and bought a pair of clippers. When his chums were sound asleep he had nicely clipped great bald patches on their heads and then flung the clippers and the hair out the window, no one being the wiser.

Next morning, in the dressing-room, there was considerable swearing, much to Smith's innocent surprise. The rest of the car had roared, even the dining-car waiters had shown a suspicious amount of dental ivory that morning; but Smith could not account for the sudden change in the appearance of his friends. When they noticed that Smith had a full head of hair they were suspicious;

and when they accused him of fleecing them, he looked hurt and talked much about the weakness of personal friendship, even under the strain of a few hairs.

During the next year the three whose hair had been clipped received all manner of advertisements for falling hair. They bore it all in good part, and now the four were together again for the first time since that memorable occasion.

No money was in sight, that being against railroad rules; yet there was plenty of white, red, and blue chips on the table, and, gentlemen's agreement, the chips represented good hard money when the game was over.

"If you please, boss, de lady in de next car, she says, sah—"

"All right — all right! Tell her I'm coming in just a minute. Soon as we play out this hand," and Smith shuffled the deck for a new deal. He was considerably ahead of the game, and did not want to quit a heavy winner. It wouldn't look just right, especially as he had been behind for some time.

"Tell you what you do, Smith, old boy," suggested big, raw-boned Anderson. "We've been hitting it up pretty lively all evening. Suppose we just suspend operations for a couple of hours, take a rest, and begin again about midnight. It's too hot to sleep in those padded boxes to-night, and we might as well play all night as suffer in a berth.

"Suppose you go back, as Ziggitty says, and go to bed like a good little boy. Will give you a chance to get your clothes off, anyway. Then when the good wife is asleep you get up on the q. t., and sneak in here. Your pajamas won't be noticed that time of night, and we'll go on with the game. What you say?"

"Let's see," said Smith, looking at his watch, "ten - ten. Where do we change time? Green River, isn't it? All right, boys. I'll be back soon—trust me. Cards and matrimony don't mix well; but, as I have cards only once in a while and matrimony all the while, I'll be back soon as I can escape. Ziggitty!"

"Yes, sah?"

"What time do we get into Omaha?"

"Two-fifteen to-morrow afternoon, sah."

"Well, good-by, boys. See you later. Whew, it's hot! Pray for me, boys; I now go to my doom," and Smith, after cashing his chips, left for the rear Pullman.

To his surprise, Mrs. Smith hadn't a word to say. She was in the lower berth, and pretended to be very drowsy as Smith climbed into the upper. Then the train settled down for the night, and the air grew cooler as Sherman Hill was passed.

Smith dosed off a bit, then awoke with a sense of having slept for hours. He cautiously looked at his watch.

"Midnight, and half an hour over. The boys will think I'm not square with them, not to give them a chance to play even."

Smith slid carefully out of the upper, and, after a breathless second to see if the wakeful Mrs. Smith had discovered his flight—clad in his pajamas—he slipped along the swaying car and into the sleeper head.

"Quitter! Play your friends for the cash, and then run! Cold feet!" greeted Smith as he sat into the game.

"Boys, we have till two o'clock. You are in the Denver sleeper, and I'm bound for Chicago. We divide at Cheyenne at two o'clock. The game ends at one forty-five. Get busy and win it back if you can."

In half an hour Smith said:

"Wonder what we are stopping for? Backing up, too—"

"You're shy, Smith. Chip in. Your deal, Pete. Time enough to worry later. It's only one o'clock and we don't hit Cheyenne till two, an hour from now. Play up. Don't try to string the game out, Smith, old boy, so you can hold on to your winnings. Deal 'em out."

The game went on — so did the train. Everything was running smoothly till Smith looked at Anderson's watch.

"Holy smoke! Just time for one more round. Twenty minutes to two. Deal 'em out lively now."

Smith's luck had changed, and he was thirty - five dollars behind. Anderson glanced at his watch and dealt the cards. Smith bore a pained expression as he drew two more cards, after which his face became as expressive as a piece of putty. The other two dropped out, leaving Anderson and Smith to fight it out alone. Anderson had drawn two cards also.

"It's the last hand," said Smith, as he shoved all his chips into the middle of the table. "If I lose, I'm out—clean buncoed by you cutthroats; if I win, I'm out ten dollars. You get me going and coming. Wish we had longer, I'd skin you chaps

"NEVER SAW THE POOR FELLOW BEFORE."

alive and leave you without a thread to your backs. You're not game—"

"Well, now, Smithy, old boy. Seeing as how you are talking about being short either way the cat jumps, and being game and all that, and especially about betting the clothes on your back, I'll just shove all the chips in my pile into the pot against that suit of pajamas of yours."

"Done!" said Smith.

Only two hands out, each a two-card draw, and Smith held four aces. He could quit honorably under the circumstances, as the dividing of the train made that necessary, and be a heavy winner in the bargain, just by calling that idiotic bluff of Anderson's about betting the last rag on his back.

Then came the show-down. "Give 'em to me!" gloated Smith as he reached for the pile after throwing down his four single spots.

"Not so fast, Smithy; not so fast. Ever hear of a straight? A real nice queenly flush, you know. It takes the chips and the pajamas—but you can keep the pajamas, old man. Good night, Smithy."

The three made a break for the door, while Smith danced up and down in sudden rage.

"Say, you horse thieves! You send Ziggitty here right away. Say, porter, porter!"

But no Ziggitty came.

Instead, a scowling yellow face was thrust through the drawing-room door and a sleepsurly voice said:

"You got to quit dat racket, sah. No such noise am 'lowed in a Pullman at dis time of night, sah."

"Say, porter, here's a dollar"—Smith's hand slid down his pajamas, but he found neither pocket nor dollar.

"My clothes are in the next car, berth thirteen. Run get them for me and I'll give you a dollar!"

"Very sorry, sah," the porter replied suspiciously, after a wary look at Smith, "but there ain't no last car. We cut it off at Cheyenne."

"Cheyenne! Why, you fool, we haven't got to Cheyenne yet! We'll be there, though, in ten minutes, and I want to get into my own car!"

"Very sorry, sah, but we cut off nearly an hour ago, when we did all that switching. Guess you must have forgot to change your watch when we changed time at Green River, last evening. That would make you one hour slow."

"What! Me on the way to Denver? In the wrong car! No clothes! No money! Say, come here, boy. Now you get some of those gentlemen who were in here with me, that's a good boy, and I'll give you a dollar soon as I see one of them. Hurry, now."

"What berths, sah, am dey in?"

"What berths? How should I know? Look in all of them till you find them!"

"Very sorry, sah. Can't do that no ways. Everybody's asleep. Can't disturb 'em. How come you in here, anyway? Who is you? Am you the crazy man what got loose in Cheyenne dey am lookin' for?"

The porter backed out the door in a hurry, and locked it behind him.

Smith, mad as a hornet, pounded on the door. This brought both the Pullman and the train conductor. They unlocked the door and at a glance at Smith in his pink pajamas, edged away.

"See here, gentlemen. Just a friendly little game. I was in the other car, the one cut off at Cheyenne, and my clothes are in there. Also my wife and money and tick-

ets—everything. My three friends won all my money, and that's how I'm here in this fix. That's one of them now!" pointing down the aisle to Anderson.

"Do you know this man?" asked the conductor.

"Never saw the poor fellow before in my life," replied Anderson with a pained air.

"Andy, you—you villain! I'll break every bone in your body!"

"Look out, boss! He's gittin' vi'lent!" gasped the porter as he ducked around the corner of the drawing-room. The conductor locked the door again while word about the "crazy man in the drawing-room" went through the car.

Presently the door was opened a little and a package shoved in. Smith jumped for it with joy.

"What the deuce!" he groaned, as he found a safety razor, and a note saying: "We might be able to recognize you if your head was shaved. Sorry we haven't any clippers."

"Of all heartless pirates!" groaned Smith. Then, with a sickly grin, he recalled a certain Pullman car of a year ago, and reached for the soap on the wash-stand. It was something of a hard job, but in ten minutes he had shaved his head as clean as a billiard-ball. And a sight he looked! Then he rapped once more on the locked door.

The first glance the conductors and passengers had of him caused a riot.

"He's the one! That's him! Crazy as a loon! Get that razor away from him or he'll kill himself!"

How they did yell!

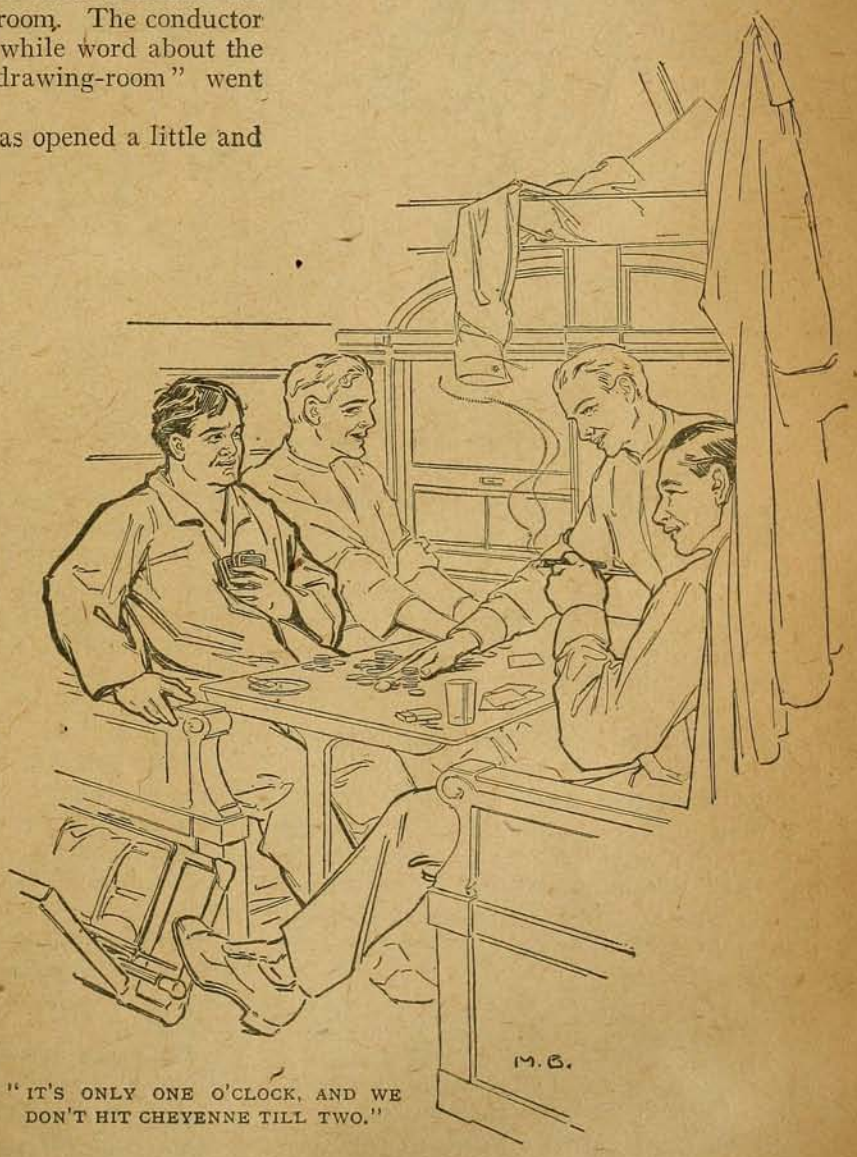
"Say, you idiots! Here's your razor if you want it. Now, Andy, make good. Identify me and let's end this nonsense," begged Smith.

"His own mother wouldn't know him," commented Anderson, as he surveyed the shining pate thrust through the door. This recalled to Smith the same remark, now one year old. He glared at the three friends back in the car, shook his fist, and subsided to a corner and fumed in silent fury.

Meanwhile, the conductor had wired ahead to Fort Morgan for an officer. The train was stopped and the country cop was told that there was a crazy man on board.

"I don't want him. Take him along to Denver; good night," was all the satisfaction the conductor got.

By this time it was nearly daylight. The



"IT'S ONLY ONE O'CLOCK, AND WE DON'T HIT CHEYENNE TILL TWO."

THEY HANDCUFFED SMITH AND BUNDLED HIM INTO THE WAGON.

conductors considered the matter of putting Smith off the train then and there because he had no ticket, and the Pullman conductor urged that it was against the rules of the company for passengers to travel in a drawing-room without tickets, and especially without anything on but a suit of pink pajamas.

For humanity's sake, the conductors allowed Smith to ride in the drawing-room, merely contenting themselves with wiring the facts to headquarters in Denver and passing the whole matter to those higher up. At the frantic request of their prisoner, however, on the mere strength that after all there might be a mistake somewhere, the conductor wired:

> MRS. J. J. SMITH, CAR "ALPINE," BERTH 13,
> U. P. FLIER, CARE CONDUCTOR JAMES:
> Man on Denver sleeper in pink pajamas, says he is your husband. If so, wire instructions to U. P. headquarters, Denver.

As the train pulled into the Denver station a telegram was handed the conductor that read:

> I have just as much husband with me right now as I have had on this whole trip.
> MRS. J. J. SMITH.

"Doesn't say much, yet it seems to say a good deal. Depends on how you look at it," remarked the conductor. Just then the patrol-wagon drew up to the train.

"You've got that escaped lunatic on board, and we can't take any chances," the sergeant said. So they handcuffed Smith and bundled him into the wagon. The three chums sympathetically stood near by and rubbed their hairy heads in unison as the wagon rolled away for headquarters.

Smith was led into the chief's office. His shaven head and night raiment did not make him look like a man with ordinary sanity.

"Do you know these things?" asked the chief with a grin. Smith struggled madly with his keepers, for there before him on the lounge was all his clothing.

"Turn him loose, boys," added the chief, "he's all right."

Smith dressed. His hat looked too large for him, and felt bigger yet, so he stuffed a handkerchief in the brim to make it fit. Then he opened a note which read:

> The gentlemens who is with you done give a dollar to put these in the express-car for you. ZIGGITTY.

Smith sent a telegram to Chicago, and one note to the hotel. The wire read:

> MRS. J. J. SMITH, MICHIGAN AVENUE, CHICAGO:
> Have played my last game. Forgive me. Home to-morrow night. JACK.

The note to the three friends read:

> You win. Have played my last practical joke. Will expect you at lunch at the Brown.
> SMITHY.

"Chief," said Smith, "I'll bet the shirt on my back that game was a put-up job to get me out of the car. That gang of pirates worked a cold deck on me to get even."

"You're dead right," said the chief.

IN THE HORNET'S NEST.

BY DAN DUANE.

The Remarkable Mind and Accomplishments of One Seth Waters, Desperado and Scholar.

SYNOPSIS OF PREVIOUS CHAPTERS.

AMONG the mountains of southern California, lived old Eugene Caillo, gold-miner and miser. To him had recently come his dead sister's child, beautiful, eighteen-year-old Carmita. In the course of events, Philip Garrick, master of the Rancho Buena Vista, visits the store kept by Caillo, and meets Carmita, who is much sought by all the men of the neighborhood, among them being Jim Gormley, superintendent of the Comet mine, a villainous sort of fellow, whose desire is to get at Caillo's riches through Carmita. She repulses him after Philip has declared his love. Shortly after, Caillo's body is discovered at the bottom of a sluice, and suspicion, instigated by Gormley, falls upon Carmita and Philip. Gormley leaves town but is quickly followed by Philip, who has evidence that the former has committed the murder. He finally traces Gormley to Carnullo City, where he has been stricken with smallpox and there, on his dying bed, signs a confession of his guilt. Upon returning to Rosalia, Philip finds that he is suspected not only of old Caillo's death, but also that of Gormley: He decides to marry Carmita at once and take her North. On his way to see the *padre* for that purpose, he is set upon by two men claiming to represent the citizens of Rosalia and delegated to escort Garrick out of town. Escaping from them he takes refuge in the old Mission, and next day, accompanied by the *padre*, he goes to the court-house to clear his name and also report the finding of the body of one of his assailants, and there is mysteriously shot.

CHAPTER XIII.

The Scene in Rosalia.

IN a moment pandemonium reigned in the city of Rosalia. The mob quickly divided itself into the sympathizers of Philip Garrick and the upholders of the man who had shot him. It was impossible, at first, to get to the wounded man, so dense and noisy was the surging humanity that gathered about the court-house steps.

Philip was gradually growing unconscious. Blood was gushing from the wound in his breast. Padre Gregorio was kneeling over him, supporting his head and appealing to the crowd to keep back and give him air.

Two deputy sheriffs rode into the mob. Flourishing their six-shooters, and threatening the life of any man who dared oppose their orders or block their path, they forced an opening to the wounded rancher. When they reached his side, he was absolutely beyond the conscious stage, and was breathing heavily.

With the aid of Padre Gregorio, Philip Garrick was placed astride the saddle of one of the deputies. His body, seemingly lifeless and limp as a rag, was held upright by one arm of the deputy, for the other was needed in case of interruption—and then the six-shooter would talk.

Padre Gregorio took the horse by the bridle and led the animal in the direction of the hospital. The upraised hand of the priest was the signal for order. The mob stepped aside, and the slow journey to the little white hospital that stood on the outskirts of the city was safely made.

They carried Philip to the operating-room, while the crowd surged outside. Padre Gregorio, his friend in the safe hands of the surgeons, went among the people and begged them not to judge too harshly.

"You have no finger to point against this man except the finger of suspicion," he said.

"That is not what *men* do! He is wounded —maybe—fatally. You must be charitable even as he was charitable to you—and I know that he is charitable, for he is a good man."

"Are you certain?" asked one.

"I know him. I will stake my life and my faith on his honesty."

Further argument drew a majority to Philip's side. Padre Gregorio was the leader of the moment. The leading business men of Rosalia and the ranchers who knew Philip, and were his close friends, asked the priest to do his utmost to keep the crowd in order.

"First, we must find the man who did this," said Padre Gregorio.

It didn't take long to put two and two together.

The body of Dick Bender—the dead man found in the road—the fact that Bender had been the companion of Seth Waters, and the sudden disappearance of Seth Waters himself, turned the tide of suspicion only in one direction.

Seth Waters had killed Dick Bender, and Seth Waters had attempted the life of Philip Garrick.

That was the verdict arrived at by every man in Rosalia, whether he believed in Garrick or not. If Garrick had not been shot by Waters, why didn't Waters come forth?

A posse was formed and began to scour the hills. But Waters, the knowledge of one murder resting lightly on his mind, was sleeping the sleep of a child dreaming of the great city in the North, whither he would ultimately wend his way and be safely drawn into its great vortex.

In a crowded city, he wisely conjectured, he would be safer from capture than on the farthest plains or in the deepest thicket.

CHAPTER XIV.

The Love of Carmita.

WHILE the surgeons were probing for the bullet in the breast of Philip Garrick, a carriage was hastily driven to the hospital door. As the foaming horses stopped, the door opened and out stepped the beautiful woman for whom Philip had exposed his life.

Carmita, the tears streaming down her olive cheeks, rushed with staggering steps up the stairs that led to the hospital entrance. There may have been men in the crowd then who hated and suspected her as they hated and suspected Philip Garrick; but if they were, they stepped aside to let her pass.

No man could have doubted the anguish that was filling her mind. None could deny that her face mirrored a love so deep and sincere that to have placed an obstacle in its way would have been a sacrilege.

So they stood aside to let her pass. Some of the men who hated her—and there are men who can hate even a beautiful woman —turned their heads away. It was a mark of respect.

"Take me—to—Philip Garrick!" she cried. "Oh, take me—take me to him!"

An attendant supported her and helped her to the operating-room. There, in the deadly quiet, the unconscious man lay on a table, his upper clothing cut from his body, the white-robed doctors and the gray-gowned nurses working swiftly in the minute mechanism of their calling, hunting for the lodging-place of the little cone of lead, watching with eager eyes for each faint burst of respiration.

This sad and solemn activity was suddenly rent by a piercing wail.

"Oh, Heavens!" shrieked Carmita. "He is not dead!"

Had not the hands of the doctors been unusually steady, a serious result might have followed.

Two of the nurses ran to Carmita. They caught her arms and held her back. They used brute force to keep her from the operating-table.

She wanted to throw herself on the body of the man she loved, and pour her hot breath onto his fluttering lips; she wanted to infuse her life into his life; she wanted to force her living breath into his almost breathless body. Her strength, augmented by the sight of him lying under the surgeon's knife, almost succeeded in overpowering that of the nurses, but they kept her back.

"Let me speak to him! Let me speak to him!" she shrieked.

One of the physicians turned to her and said sharply:

"You must leave the room, madam. This man is in a serious condition. We must have perfect quiet in order to save his life."

This was more than she could bear. With a cry that touched every heart in the room, she threw her hands above her head and fell in a faint.

It was merciful, because it was necessary

that she be absent from the room. The nurses carried her out tenderly and placed her on a couch in a neighboring apartment.

It took some moments to bring her back to reason. She insisted on going to the man she loved. The nurses forbade, and, to ease her suffering, they told her that the wound was not fatal.

But the doctors had locked the door of the operating-room. They could not brook further interruption. They clearly knew that, to save the life of the man on the table, they would require the greatest silence in order to ply their skill.

The trying nervous hours wore on. In the operating-room, the man who was once the most popular rancher in all the southland was hovering between life and death. In a room close by the woman he loved, and who loved him better than all else in the world, was slowly going into hysterics because she could not be at his side.

Outside, the populace was wondering if it had not judged the wounded man too harshly. Indeed, even among the lawless element of the ranges, the taking of an unarmed man's life was looked upon with horror. And as that spirit was whispered from man to man, and the facts were weighed to their finest point, even the strongest opponents of Philip Garrick declared that Seth Waters must be brought to justice.

CHAPTER XV.

Something about Seth Waters.

SETH WATERS was a type of the frontiersman that is fast fading into romance. Indeed, it is more than a possibility that one might wander the length and breadth of the West and not find his prototype or anything that approached him.

He was what might be called an educated criminal. The ethics of honor on which most men build their careers were a blank in his mind. Honor to him was only a means to an end. If it occurred to him that murder were necessary to gain a point, he looked upon the consummation of the deed as only another life sacrificed to a purpose.

Seth was close to fifty years of age at the time of this story. He stood nearly six feet in his stocking feet. His health was perfect. The body and brawn of the mountaineer served him well. He could not recall a day's sickness. He boasted that he could eat—and drink—anything, that he feared no man, that his way was law, and he obeyed that most flimsy of all beliefs—that the world owed him a living, and that all he had to do was to collect it in his own way.

Just where he came from, no one knew. Only Seth Waters could answer that. For some reason or other, he never said much about his origin.

One day he rode into Rosalia on the back of a dusty mule—and he attached himself to the town. In his kindly moments he was an agreeable companion with those who liked him, for he could tell innumerable stories of his escapades and adventures, and a good story-teller in his day was the most popular entertainer in such a quiet commonwealth as Rosalia.

It was noticed by the more cultured people of the town that he frequently spoke the English language in a most perfect manner, although when he was in his cups or playing cards with the cattlemen he would use the most ungainly *patois* of the time and become as ungrammatical as a street urchin.

But what was most puzzling, he had a practical, scientific mind — a mind stored with all manner of useful knowledge regarding chemistry and invention. This was known to such an extent by the people of the little town, that whenever any puzzling matter came to light, the expression, "Send for Seth Waters," was invariably used.

We left him in a valley close to the borders of the River Crood, his tired mare —his stolen but faithful steed—grazing her fill of the succulent grass, while he found a sheltered spot under the trunk of a giant sequoia and was soon asleep.

It was no trouble for him to sleep. Conscience is the last thing in the human compound to find surcease in repose; but when the human compound is devoid of all manner of conscience, sleep is merely a part of the daily routine.

When Seth Waters awoke, the sun was already high above the hilltops. The crisp, clear air, laden with the tonic of the pines, put life into his veins and touched the edge of his appetite. His first glance was for the mare. He saw her still grazing. Something invisible told her that her master was awake, and she turned her head in his direction and neighed.

"All right, old girl," said Waters, straightening himself up, "I'll be with you soon."

He scrambled down the bank to the river, tore off his clothes, and plunged into the

cool water. Back and forth he swam, the great, long strides of his powerful arms and legs making a mighty wake that reached to the opposite shore.

Out in the middle of the river he stopped, and, as he treaded the water, he lowered his lips to its level and drank his fill.

That would have to be his meat and drink for hours, maybe. He knew that man can live longer on water than on any other bodily sustenance, and with his customary philosophy he drank till he could drink no more, then smilingly said: "This will keep me for a while."

Swimming back to the river's bank, he stood on a dry rock in the hot sun until every drop of water had evaporated.

"These sun baths are fine," he said to himself; "so invigorating—and a good flesh rub," he continued, as he plied his hands over his body, "is the best way to create a perfect respiration, and perfect respiration is one of the secrets of good health."

Thus he mused as the sun sapped the last drop of moisture, and he slowly put on his clothes. Walking over to the mare, he patted her neck fondly. In a few moments he was on her back and riding away.

He headed for the north—at least in the direction that he surmised to be the north. He followed the river patiently and slowly until he came to a point where the bluffs on either side were so high that he could not master them.

It was impossible to follow the bank—for the bank and the bluff were one.

His intention was to go around the bluff and strike the river at a more favorable point. With this in mind, he turned the mare's head and started into the chaparral. For hours he rode, but there was no opening. Only a great forest enveloped him. There were naught but trees on all sides, with birds in innumerable quantities, unbroken ground that had never before known the tread of a horse's hoof or the foot of a man.

He kept on and on. Once he stopped at a spring to let the mare drink and eat. He drank and ate, also, his food being the wild blackberries that grew in profusion, and the eggs of a wild-fowl which he had come across in a ground-nest, and which he devoured raw.

His hunger appeased, he began to think. In short, he was getting serious—very serious.

He looked at the sun, he examined the trees, and hunted for animal trails and other signs by which the hunter is guided—but he was in a wilderness.

With perfect calm, with a mind attuned to the position into which he had thrust himself, he said, half aloud, to the mare:

"We are lost."

He mounted and rode on.

Night came—the deep, black night of the silent forest, when every rustling leaf sounds like the footfall of death. Just as the last spear of sunlight threw a shadow across the treetops, he reconnoitered for water.

He was thinking of the mare—not of himself. There was no water in sight. The grass seemed plentiful, but water was more important to his mount than grass just then. The absence of it troubled him, but there was nothing else to do but stop for the night.

He staked the mare to a tree. With his hat for a pillow, he stretched himself on the ground. He could have fallen asleep, but he wanted to think. Just where he was on the face of the earth was what troubled him most. He thought that he knew the surrounding country pretty well. There was no other answer to it—he was lost.

In the morning he awoke early and rode on and on—and still on. He emerged from the forest and found himself on a sandy plain stretching far to the hills before him.

CHAPTER XVI.

Death Valley.

DEATH VALLEY is a low desert in Southern California near the Nevada border-line. It was christened by the survivor of an emigrant party of thirty, who, late in the year 1849, lost its way while traveling through it.

After enduring indescribable sufferings, eighteen perished in the sands. There is no other spot on earth of a similar nature.

Like all the great valleys of California, it lies oblong, running from north to south. It is about fifty miles long and some thirty-five miles wide, and its surface is about two hundred and ten feet lower than the level of the ocean.

The Panamint Mountains on the west rob it of the moist winds of the Pacific Ocean. In the middle of the summer its atmosphere contains less than one-half of one per cent of moisture. Its surrounding country is a succession of volcanic ranges that form a border of color—black, red, green, yellow, and brown—giving the dried-up place a most

picturesque setting, and furnishing the valley with the beds of borax—the only thing that has made it of any value.

Death Valley, as seen from the summit of the Panamint range, is a long gray waste of desert, traced with narrow bands of white. These are the thin deposits of borax. To the south, one may see a narrow band of a steely color. It looks like a sword-blade. This is the Armagosa River as it dies away and sinks into the thirsty sands on entering Death Valley. It is a sluggish stream. It flows lingeringly along, as if conscious of the death that awaits it, until absorption and evaporation take it all.

The land was the center of a system of lakes when the Sierra Nevadas had not yet risen. Toward their summit, the Panamint Mountains are of carboniferous limestone formation, rifted and worn, with a slight growth of trees. Some are wonderful pines, others are mahogany and juniper. Near the crests and below, the vegetation becomes more scarce.

In the gorges and narrow cañons are numerous vines and creepers, on which grow wild gourds resembling oranges, similar to the bitter desert-apples that grow near the site of ancient Sodom. Here, also, are the most distorted forms of the cacti, and an inferior growth of greasewood or palaverde.

A sand-storm playing in Death Valley is a wonderful sight. Sand-augers rise like slender stems, reaching up into the burning atmosphere for thousands of feet, and terminating in a bushy cloud. They travel hither and yon, and gradually fade from sight.

Here mirage raises up spectral cities, and groves and fields and tree-margined rivers. A low ruin will seem to be hundreds of feet high; arrow-weeds are magnified into stately palms; and crows walking on the ground appear as men on horseback. Besides the crows, there are seen a few poor, lean jack-rabbits, a scattering of mangy coyotes, some hungry buzzards, horned toads, red-eyed rattlesnakes, and, in the Panamint range, there are still a few bighorns or Rocky Mountain sheep.

At the summit of the Panamint and Funeral Mountains, the thermometer falls to thirty degrees below zero. The mineral wealth of this region is great. In the Panamints are mines of antimonial silver-ore, and copper, gold, iron, travertin, onyx, and marble. In the Funeral range, gold, silver, lead, copper, and antimony have been found in paying quantities, while the thick strata of the east and southeast hills show almost inexhaustible quantities of colemanite, a borate of lime named for William T. Coleman, a San Francisco merchant, who was one of the first to discover this deposit and its richness in borax.

Very rich gold quartz has been taken from the mines along the route traveled by the ill-fated emigrant parties that dared its terrors.

CHAPTER XVII.

The Want of Water.

DARKNESS brooded over the face of Death Valley. Star-sprinkled black above; sand, salt, and dust below; silence without motion. This is night over the miles on miles of gasping ashes of the valley. A withering fiend, a world without water, Death Valley dries life to bones, bones to chalk, chalk to dust. Dust we are and to dust return is the alpha and omega of earth's most hideous ash-heap.

Night rose like a curtain of black velvet; dawn, a faint streak along the uncertain horizon, trembled upward and turned to pearl; morning blushed, glowed red, flamed scarlet, and suddenly paled; the sun rolled above the sky-line, a dazzling, blinding burst of incandescent white.

Under the gathering heat, Death Valley began to writhe and glitter like the sea. Those level miles of salt and sand rippled and sparkled like jeweled waves.

Death Valley is the sea—the sea without water—a gigantic, unreal sea, where the cloud and the fog and the mist are dust, where the spray is sand, and the spume is alkali, and where the billows are rock.

Alike to those who go down to the sea in ships and to those who go forth over the desert, life is spelled in the one word—water.

As the sun melted the eastern horizon and even the shadows fled to the west, Death Valley awoke from the soft, dim cruelty of the night and squirmed, just as it has each morning for untold ages, into laughing torture for every living thing, gleefully disdainful of everything but the hand of God—yet, sometimes at long, rare intervals, conquered by man.

When the sun arose on this particular morning, Death Valley smilingly gloated over a man stretched near to death, who for three days had been in its waterless grasp.

Three days before he had left Lone Rock,

seventy miles away, riding a roan mare, packing his own water. Risking all, even life itself, he hoped to find more water in Forty Skull water-hole; but no rain had fallen on Death Valley for many months, and Forty Skull was dry.

Forty Skull was not only dry, but baked and cracked. At the sight, the night before, the tottering mare had swayed for a moment and then stumbled, nose first, into the sand—and died.

The man, Seth Waters, had drawn his six-shooter against himself—for in Death Valley suicide is no crime—then, with one last, wild hope, he had taken to the trail on foot in the coming dark, hoping that he might meet another traveler in that dismal waste who had water.

But there was only one chance in a thousand!

The night had worn on and on, and out into burning day again—and Seth Waters lay, babbling idiotically, in the dry shadow of a rock.

Death Valley laughed in its radiant way. Another victim to the millions of living things whose bones it had bleached and dried to dust for ages.

Even birds in the air dropped to the frying sands, panted a moment, then died, dried, and were blown away.

Only the buzzards showed animation. At first but dim specks, they were beginning to slowly circle over the dying man below. Over all Death Valley the man and the buzzards were the only signs of life—except a creeping speck of white where the trail cut the hot sky-line.

Slowly crawling, drawn by two weary horses, came a prairie-schooner, canvas-covered, followed by a staggering cow tied to the tail-board. In the wagon were an old man, two boys, and a young woman.

An hour passed. The man in the sand, his lips crusted with dried froth, lay still, face down. The wagon slowly creaked along the trail until it came abreast of him. Then it stopped.

"Father," spoke the woman, "see!"

She pointed with a whip to Waters, stretched beside the wheel-ruts.

The old man looked down from the wagon, and said: "No."

The woman drove on. Suddenly she drew the rein, reached into the wagon, filled a tin cup with water.

Stepping from the wagon, she went back to Waters and held it to his lips. He hardly drank. The water seemed to soak into his cracked throat, instead of being swallowed.

"Wa-water!" he gasped. "Water!"

"I can spare no more," answered the woman. "Perhaps I do wrong to let you have even this, and by doing so may be robbing my own boys of life itself.

"Where can we find water?" she continued. "We have been short for two days; the team had their last water yesterday. Which is the way to Forty Skull? There is always water at Forty Skull, they told us. Where is Forty Skull?"

"Forty Skull is dry," whispered Waters. Then he reeled to his feet, looked at the woman with bloody eyes, and demanded hoarsely: "Have you no water?"

"Five gallons, with two boys, my father, the team, the cow, and myself to drink."

She paused a moment, and then continued:

"It is seventy miles to Lone Rock on the back trail, and I know there is no water between here and there, for I have just come that way—

"Sixty miles from High Heel Cañon, where we left four days ago, and every water-hole dry on the way," echoed the woman.

Then that man and that woman looked at each other, not as man is wont to look on woman, nor woman on man, for in each of them was the same thought!

Twenty quarts of water for five people—no more within fifty miles—and Death Valley.

CHAPTER XVIII.

The Mother of Invention.

BUT a man will fight for a woman when he will not fight for himself. Seth Waters silently put forth his hand, raised the woman from the dry dust of the trail, and led her back to the wagon.

"No water—Forty Skull dry," was all she said to her father, who took the death-sentence as the old do—calmly.

The boys, seized with the terror of the sands, began to whimper. By brute force Seth Waters grasped the water-can—but did not drink. Turning to the woman, he said thickly:

"With this I could get to Lone Rock or High Heel, but one thing prevents—I am a man. I'll stay here with you. Let me think—let me think."

His eyes roved over the contents of the wagon. Then they swept the horizon.

"Not a cloud — not a cloud. Not one for months. Yet right here sometimes the heavens spill — why not now? — water — water — water! In the middle of Death Valley—no rain for months. Let me think," he rambled on.

Waters doled out a cup of water to each, and washed out the mouths of the sweltering horses. Then he once more overhauled the wagon-load and, with his eyes riveted on the panting cow, sat down to think.

He had a problem to solve, the problem that men have faced ever since man has been on earth, a problem before which millions of men have failed and, because they failed, have died.

Seth Waters sat there that hot August morning amid the terrific beauty of the desert, looked at what were now his people, looked at the suffering cattle, looked out over the thirty miles of withering sands, up into the merciless sky, and groaned.

"Water!" he coughed. "Water!"

The woman was praying aloud, but for years prayer had been a forgotten tongue to Waters. In the light of his twenty years of frontier experience, he gazed dully at the kneeling woman and muttered: "Labor is the only prayer that is ever answered."

Then he fell to thinking once more, and his fevered eyes centered again on the cow.

"Milk?" he mused. "Without water for two days, you have no milk. Even a barrelful would not save the horses. And without them, water or no water, what is the use? Wring water from Death Valley!"

The thought threw him into a shiver of grim, silent laughter—merriment that is not good for man to know, for it borders close on that of the maniac.

"But you have blood," he continued, still speaking to the cow. "But of what use is that? I've seen it tried before, and it means only a harder death. This is better," and he tapped his six-shooter—patted the hip-weapon with that rare affection known only to the Westerner.

"But in that hide of yours is water, several barrels of it; nine-tenths of you is water. How—how? Ugh!"

Waters arose and once more looked into the wagon-box. Then he began to unload. He tossed out a copper wash-boiler and, with a derisive laugh, threw out a pump and parts of a windmill. Then he kicked the two empty water-barrels, one on each side of the wagon. They rang hollow to his boot-toe. Lastly, he threw onto the sand several lengths of iron pipe, also parts of the windmill.

"What have you got all this stuff for, here in the heart of Death Valley?" he asked of the woman.

"We lived in Kansas," she answered listlessly, as recalling a dream, "my husband and I, and he died. I took my two boys, here, and my father, and what of the old home I thought we might need in California, and started on again. That was part of it —I brought it along, for 'twas all we had."

Then Waters did something that to the others seemed the outcome of an insane mind. First he cut the wagon-box to pieces—reduced it with the ax to a wood-pile—and told the boys to collect withered sage-brush.

He rigged the iron pipe to the copper wash-boiler by punching a hole through the cover and pounding the metal tight about the iron pipe. The pipe he led into one of the empty water-barrels.

From the boiler, set two feet off the sand on four stones, to the barrel was slightly down-hill, for the barrel rested on the ground in a hole Waters had dug with the ax. Between them reached the iron pipe for twenty feet. Then he tried the pump, but the leather washers inside were dried and warped —useless.

Risking half a cup of the priceless water, he soaked it, so that it held air-tight when he tried the pump.

"So far, so good," he said to the woman, who answered with a wan smile, not understanding.

Then he slaughtered the cow. The hide he cut into long strips, and then sewed them into a long, six-inch bag, or pipe, of green rawhide surrounding the iron pipe. It was burning noon now, but Waters did not stop. He again dealt out a cup of water all around, even to the horses.

The second water-barrel, still air-tight though nearly dried out, Waters covered with air-tight rawhide and made two connections, one with the pump and the other with the rawhide bag.

With the wood from the wagon-box, he started a fire under the copper boiler, and put therein a huge chunk of meat from the carcass that lay on the sand.

The cover of the boiler he now loaded down with a heavy stone. As the fire gained, a smell of cooking, then burning meat, came faintly, then gushingly, from the end of the iron pipe that emptied into the water-barrel.

Meanwhile, Waters had the two boys

pumping with might and main, forcing air into the closed barrel, thus condensing it. When the air-pressure was nearly bursting the rawhide cover, he stopped pumping.

He put his bare hand to the wood, and jerked it away instantly. It was nearly burning-hot, but it cooled as the meat in the boiler turned to vapor.

It could not burn, for it had no air, and as the steam ran from the boiler through the iron pipe into the empty barrel, Waters let condensed air expand from his covered barrel into the rawhide bag surrounding the pipe, cooling it and condensing the vapor, which fell, drop by drop, from the pipe into the empty barrel.

What he had done was to rig out, from a wash-boiler, two pieces of iron pipe, two barrels, a green rawhide, and an iron pump, a rough but practical distillation plant, cooled with condensed air.

Hour after hour this went on, and trickle, trickle, trickle, slowly the empty barrel filled with an unpleasant but drinkable water as the meat of the cow and the wood of the wagon grew less. The cow weighed over a thousand pounds, and living flesh is four-fifths water.

The afternoon wore away, the sun set, night came down, but the still dripped on.

When morning broke again over Death Valley, not a living thing was there but a cloud of buzzards fighting over the bare bones of a cow. On the horizon to the west, along the trail toward Lone Rock, a white speck flashed back the morning sun, and disappeared. It was the prairie-schooner, drawn by two revived horses, and on each side of the wrecked wagon-box was a partly filled barrel of water.

As the wagon vanished and not a living thing was to be seen on the face of the desert, a cloud gathered in the north, loomed high and black, and for the first time in many months rain descended in a flood over Death Valley.

On the end of the wagon, his long legs trailing over the tail-board, sat Seth Waters. He was thinking of his feat, and, silently, he was congratulating himself.

And well he might. It takes a man of more than ordinary mind, his being racked by thirst, to accomplish such an undertaking. But Seth Waters, though a scoundrel, a horse-thief, and a blackmailer, was possessed of that rare gift—a mind.

(To be continued.)

BOYS FACE DEATH ON ENGINE PILOT.

THREE young boys whose homes are in Albany, New York, had a fast, furious, and dangerous ride recently on the pilot of a locomotive of the North Adams Express.

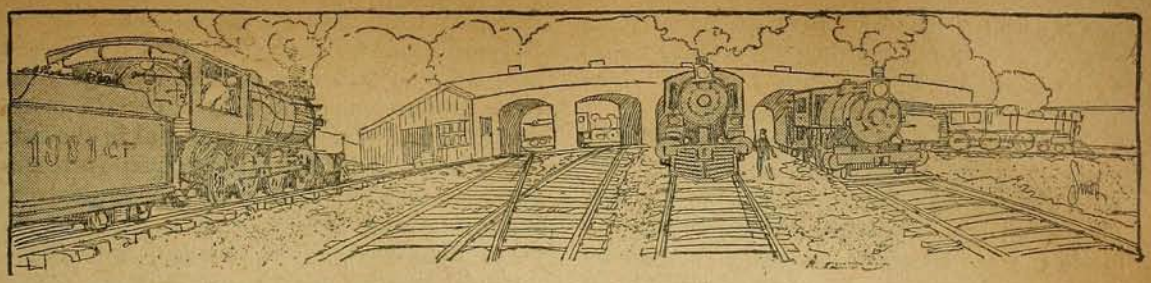
The boys who are Charles Child, twelve years old; Thomas Funk, fourteen years old, and Albert Marsh, sixteen years old, walked from Albany to Chatham over the Boston and Albany Railroad, a distance of twenty-one miles, where they expected to jump a freight-train for New York. They boarded several freight-trains, the crews of which put them off. They then concluded that they would walk down the Harlem tracks to some station where they might be able to board a train without being noticed.

They reached the Hillsdale station at about the same time as the North Adams Express, driven by Engineer Thomas Brissett and in charge of Conductor George Marley, arrived. The three boys were standing against the fence on the opposite side of the station, and as the train came to a standstill they ran alongside of it to the front of the locomotive, where they climbed onto the pilot and sat up close to the boiler-head.

It being dark, they were not noticed getting on the locomotive. The train ran at a sixty-five-mile-per-hour rate to North White Plains, a distance of ninety miles, without a stop. The North Adams Express changed locomotives at this point, where the electric zone begins. The engineer ran his locomotive into the roundhouse.

In going to the front of his locomotive he discovered the three boys huddled on the pilot, almost unconscious from the severe winds they had encountered in the ride of ninety miles. He took them off and helped them into the engine drivers' quarters, where they had food and were warmed up.—*New York Evening Sun.*

The worst workman and the best engine are alike in one thing,—neither will go without being fired.—The Roundhouse Foreman.



On the Middle-West Main Lines.

BY JOHN WALTERS.

IT is good to know that the railroads, the bulwark of the entire industrial world of the Western Continent, are showing an increase in earning power notwithstanding the economies and regulations to which they have been subjected during the past three years by, perhaps, a too severe legislation. We present here a budget of information concerning the lines of the productive Middle West, and some other topics of keen interest to all who want to keep abreast of the railroad situation.

Why There Is Such a Shortage in Cars — Activity in Freight — More and Larger Moguls and Mallets—The Growth in Illinois— Recent Earnings.

"ALL of the railroads, and especially the coal-carrying roads of Ohio, are being threatened just now with a car shortage such as has never been known before in this country," a prominent traffic official declared recently. "The railroads are threatened with a car shortage, and the country is facing a coal famine—both of which are certain to come this winter if present conditions cannot be changed and the future situation relieved."

Authorities in the coal trade who have been making a careful investigation say that the coal supply for the coming winter is now short by over twenty million tons in the United States, and that, so far as can now be seen, there is no hope of bringing up the supply to normal conditions at this season of the year.

The suspension of coal mining in the States of Illinois, Kansas, Missouri, and Arkansas, owing to the failure in setting the mining scale until September, will cause a heavy shortage in the territory supplied by the mines in those States and, also, in the other coal districts where mining was in operation.

Because of this, the latter districts will be unable to take care of the future demands because the supply will be drawn too heavily upon by the general market.

The fact that the coal mines in the States mentioned were closed down until recently is one of the many causes of the present situation of a threatened car shortage. During the summer months the coal mines which

were being worked in Pennsylvania, Kentucky, and the Virginias were operated to full capacity. The product of these mines was shipped to points far distant.

Many of the cars in which this coal was shipped have never been returned to the roads where the traffic originated and which own these cars. This condition has already made the car shortage evident. In the district tapped by the Hocking Valley, the condition is acute.

General Manager Connors of the Hocking Valley was obliged to send letters to the general managers of all the roads which connect with the Hocking Valley, explaining the situation. He requested that all Hocking Valley coal cars be returned to that road as fast as they are emptied.

Activity in Freight.

The almost unprecedented activity in the freight movement all over the country has pressed into service every available freight-car and the railroads are finding it hard to meet the demands made upon them. During each month of 1910, business showed an increase over the corresponding month in 1909.

A peculiar phase of the Western freight shipments, and they form the bulk of the increase, is the destination of the consignments. Until this year, the lower Pacific Coast points and the Middle Western States received a majority of the freight. During 1909, however, northern Pacific Coast points in Washington, Idaho, Utah, Montana, and Wyoming have been the heaviest receivers. The lower Pacific Coast points have not fallen off in their demand, but the newer settled country is demanding a greater amount of construction material and manufactured goods than its sister country needs.

The shipments from the West to the East have also increased. Little manufactured material is sent east, the bulk of the shipments, consisting of hides, leather, fruits, imported materials from the Orient, and, strange to say, dynamite and blasting caps. These explosives are shipped in large quantities, a California concern supplying most of the big manufacturing concerns in the East.

Of all objectionable freight from the shippers' point of view, high explosives probably stand at the head of the list. The national inspection bureau, which designates the manner of shipping this variety of freight, has decreed that it shall be sent only in cars of a certain tonnage with steel supporters, packed in a certain manner, with no inflammable material in the car. The car must be liberally tagged with the announcement that it contains explosives. Handling and transferring a car-load of percussion caps, giant powder, and dynamite is not the most pleasant task in the world.

Largest Engine Built.

Two of the largest type of locomotives ever built have been received by the Duluth, Missabe and Northern Railway. The monster machines are, in reality, two locomotives in one, and are designed to have a larger hauling power than any other two engines ever used on hill runs. These engines will pull up a steep grade seventy empty cars, where the best done by the ordinary locomotive now in use by the company is twenty-eight cars.

Each locomotive tips the scales at about six hundred and sixty thousand pounds. A double set of cylinders, a high-power near the center, and a low-power set in front, operate the sixteen monster driving wheels. Each set of cylinders operates four driving wheels on each side of the engine.

The boilers, which look like monster cylindrical tanks, furnish a pressure of two hundred pounds of steam.

It is not expected that the Moguls will eat up more coal than is now consumed by ordinary locomotives used on hill runs. All the latest designs of machinery have been installed on the engines to get the greatest amount of power from them for the least amount of fuel.

The engines are ninety-two feet long from the pilot to the rear of the water-tank. They have been numbered 200 and 201.

Still Larger Locomotives.

"It is probable that within a few years we shall see a five-hundred-ton locomotive." This statement was recently made by the superintendent of motive power of one of the largest railroad systems in the country. "I can say that it is more than possible."

"It would mean the expenditure of many millions of dollars to strengthen the bridges and road-beds of our road, but I would not be surprised to see such an engine soon," says the superintendent of motive

power of another great railroad. "The engines we now have are capable of hauling trains as heavy as we are allowed to take into Chicago, but in railroading, as in everything else, the man who tries to set a limit will find himself outgrown."

There is in service on the Santa Fe road, a freight locomotive which weighs 462,450 pounds, about 231 tons. It created great wonder when it was brought out a year ago. Yet designs are already being drawn up by a Western road for a locomotive that will exceed it in weight, and a few months ago there was delivered to the Delaware and Hudson Railroad one that exerts a pressure of 441,000 pounds on the driving-wheels alone.

Fifty More Mallets.

The great Santa Fe engine exerts a pressure of 412,000 pounds on the driving-wheels that counts. One of the features of the new Delaware and Hudson locomotive is the absence of the small trucks and the placing of the entire weight on the driving-wheels. The advisability of this innovation remains to be proven.

The Santa Fe has placed an order for fifty additional Mallet engines, for delivery at the earliest possible date. Several of these new monsters will be assigned to the Gulf lines. Increasing business from year to year and gradual growth in loading requirements demand these locomotives of more power.

In fact, these exactions are growing so stringent that the Santa Fe people have placed an experimental order with the Baldwin Locomotive Works. This calls for a duplex locomotive, designed by J. W. Kendrick, Vice-President of the Santa Fe. It will be an important experiment, which, if successful, will revolutionize present transportation problems of railroads, and reduce present rate schedules.

By Rail to Hudson Bay.

The construction of the Hudson Bay Railroad will be pushed again as soon as cold weather sets in, and it is hoped by next spring to have over half the trackage finished. For over a year, the road has extended as far as La Pas.

The Hudson Bay line will be one of the greatest stimulators the great north country will have. It will serve a double purpose. Firstly, it will shorten the distance between the producer in the far north of Canada and the consumer in England by making a great all-water route from Fort Albany on the bay to Liverpool. Secondly, it will take much of the Canadian traffic off the lakes and give over many great steamship lines to American traffic, which it needs just now.

Ten new oil-burning locomotives for the western division of the Hill roads will be delivered soon, and will go on the Spokane, Portland and Seattle, where they will be used with fifty others already there. The company will begin work meanwhile on changes that will convert many of the coal-burning locomotives into oil-burners. The Oregon trunk lines will also be supplied with oil burners. President John F. Stevens, who heads the Western Hill lines, is a believer in oil-burners from the standpoint of economy, in view of the California base of fuel supply.

The Claim of Illinois.

Illinois now claims to be the premier railway State. It claims nearly 13,500 miles. This includes the electric railways. The steam railroads, already in operation in 1908, according to the report of the Interstate Commerce Commission, totaled nearly 12,000 miles. In addition to these lines, various important new lines and extensions have been built, bringing the total up to the above figure.

The record is approached only by Texas and Pennsylvania. The Lone Star State, by reason of her vast prairies and interminable distances, has the largest mileage, possessing at the latest official reports 12,847 miles of railroads. Pennsylvania is the only other close competitor, with 11,891 miles of track.

A comparative statement of the railroad mileage in the various States of similar class shows as follows:

Illinois	13,500
Texas	12,847
Pennsylvania	11,241
Iowa	9,241
Michigan	9,011
Ohio	9,131
Kansas	8,948
New York	8,416
Minnesota	8,407
Missouri	8,022
Wisconsin	7,556

Illinois seems to be the point of radiation for all the greatest railway systems of the continent. Chicago, Peoria, Springfield, Quincy, East St. Louis, Decatur, and Rock Island, are all gateways of commerce opening to great fields of business on every hand. Western terminals of the Pennsylvania, the New York Central Lines, Baltimore and Ohio, Wabash, Grand Trunk, Nickel Plate—the arteries of travel between the Atlantic and the lake regions—are centered in Illinois. The eastern terminals of the great systems that link up the Middle West with the Far West,—the Burlington route, the Rock Island, the Milwaukee, the Northwestern, the Frisco, and the Santa Fe,—are all within the borders of the State. The northern terminals of the lines running between the North and the South—the Illinois Central, the Southern, and the Louisville and Nashville—are in Illinois cities.

Chicago is the greatest railroad center in the world. The commerce which passes through that city every year is stupendous.

Burlington Leads All.

The Burlington Route, with its 1,700 miles of track, leads the list in mileage. The Illinois Central comes second with 1,356 miles of busy road; the Big Four, third, with 950 miles; and the Chicago and Alton, fourth, with 750 miles. The mileage of the various lines in Illinois exclusive of terminal lines and those which merely enter the border of the State, is shown by the appended table:

Chicago and Alton	750
Santa Fe	237
Baltimore and Ohio	365
Chicago and Northwestern	450
Burlington	1,683
Great Western	168
Chicago, Indianapolis and Louisville	325
Milwaukee	415
Rock Island	322
Big Four	950
Frisco	491
Illinois Central	1,356
Iowa Central	191
Lake Erie and Western	122
Wisconsin Central	61
Mobile and Ohio	154
Southern	151
Clover Leaf	165
Vandalia	346
Wabash	472
T., P. and W.	237

Besides the magnificent systems of trunk lines that traverse the State, the entire populous area is served by a crossing of branch lines, stubs and belt and terminal roads, which give a freight and passenger service unequaled anywhere. The suburban service, which has grown to be a factor of the greatest importance in transportation, has been removed from the general field of train operation and made a distinct feature of railroading, thus giving better service in both departments of travel.

Better Equipment Now.

Illinois has witnessed a vast improvement in the quality of her railroads during the last ten years, as well as a substantial increase in the quantity. In addition to the improvements required by the State and interstate laws, the more prosperous roads have entered into a rivalry in track improvement, operating equipment and betterment. The block signal, the telephone system of despatching, the improved roadbed, the construction of new stations, the automatic coupler, the constant increase in the size of locomotives and elaboration of traveling appointments, have all combined to put the Illinois lines on a high plane of excellence.

Mr. Yoakum's Optimism.

B. F. Yoakum, chairman of the Frisco lines, like nearly all the prominent railroad executives, is unusually optimistic. He never tires of telling Eastern capitalists about the wonderful resources of the South and Southwest, and few men can discuss important questions more convincingly than he.

In a speech at the Oklahoma State Fair recently, Mr. Yoakum had for his theme, "Wagon Roads and Railroads." He said that the founders of this government had no conception of the vast commerce interests which would move over 235,000 miles of railroad, instead of the little which then dragged over a few miles of bad wagon roads. This was no reason, however, why this new development should be treated in any sense as lawless, nor is there any reason for attempting to arrest it because it requires a readjustment of Federal and State jurisdiction. As the commerce between States expanded and as transportation was extended, a far-reaching, con-

nected, and interdependent industrial system was created, and this must be subject to some system of law.

"But, after all," said Mr. Yoakum, "this thing called interstate commerce and these instrumentalities called railroads represent the very vitals of our national progress and the very health and wealth of our whole people. The people of the country, instead of being aroused by inflammatory appeals to adopt measures to destroy them, should be taught by enlightened discussion to find some way to promote them and, at the same time, fairly regulate them."

Increased Railroad Earnings.

Record earnings and record expenses are shown by the Interstate Commerce Commission's monthly reports of income returns of the railways of the United States for the year ending June 30, 1910. Compared with the previous banner year, 1907, the earnings show an increase of $190,141,290, and the expenses an increase of $92,609,953, leaving $97,531,337 increase in net income from operation to take care of an increase of $23,321,000 in taxes and the interest on at least $2,000,000,000 new capital invested in the railways since 1907.

Between the high water marks of 1907 and 1910 occurred the greatest slump in operating revenues ever known in the history of American railways—the descent to the bottom in May, 1908, and the slow recovery from which is shown in the following statement of earnings by months and half years for the past three years. Unfortunately, no official figures by months are obtainable prior to July, 1907.

More significant than the splendid recovery of 1910, or than the totals for 1908 and 1909, are the figures for the half year ending June 30, 1908. These are $317,835,614 below the earnings of the preceding half year, and nearly $300,000,000 below these for the corresponding months of 1910, with which they are more properly comparable. The six months from January to June, 1908, is the "mildewed ear" that for the past twenty-four months has blasted and infected wholesome railway operations in the United States.

In following the rapid increase in gross earnings, the public has lost sight of the burden of forced, and sometimes false economies the railways have had to bear as a result of what happened to them in the winter and spring of 1907-1908.

While the figures for 1910 are not properly comparable with those for 1907, owing to changes in methods of accounting prescribed by the Commission, they are sufficiently so to enable the student to note the sag in the two essential departments of maintenance between 1907 and 1910. In order to appreciate this at its true value, it is necessary to recall that between 1897 and 1907, the charge for maintenance of way and structures increased from $159,434,403 to $343,545,907, or well over seven per cent annually. Instead of such increase, the table shows a decrease for 1908 and 1909, while the larger figures for 1910 are very far from showing a normal increase over 1907.

The figures for maintenance of equipment in a lesser degree show the results of the enforced economies of 1908 and 1909. Between 1897 and 1907 expenditures for equipment rose from $122,762,358 to $368,061,728, or nearly twelve per cent annually.

Any corresponding increases between 1907 and 1910 would have necessitated an expenditure of at least $415,000,000 for maintenance of way and structures, and $500,000,000 for equipment in 1910, without providing anything for the deferred expenditures of 1908 and 1909.

That there is nothing speculative or unwarranted about these percentages of increase in expenditures for maintenance is demonstrated by the fact that, in 1907, the railways carried 126 per cent more passengers and 148 per cent more tons one mile than they did in 1897, and the traffic congestion in 1907 demonstrated the inadequacy of the decade's expenditures for equipment, road and terminal facilities.

Mr. Harahan's Retirement.

With the passing of James Harahan from the Presidency of the Illinois Central Railroad, which must take place not later than January 12, 1911, through the operation of the pension system, there will come the close of one of the most strenuous and interesting careers in the history of American railroading. Mr. Harahan will be seventy years old on January 12.

"Of course," said Mr. Harahan, in speaking of his retirement, "I feel deep re-

gret that I have arrived at the age where I must retire, but I suppose every man must feel the same. My deepest regret is in having to leave the men with whom I have been pleasantly associated so long. I have given the best of my life to the railroad service and have taken great pride in seeing the Illinois Central grow from 2,875 miles in 1890 to 4,550 miles. During that period it has increased its yearly earnings from $17,881,000 to $62,000,000."

Mr. Harahan's first railroad job was a clerkship with the Boston and Providence road in 1860. One year later he joined the First Massachusetts Infantry and served three years in the Civil War. He reentered the railway service in 1864, when he took a position in the shops at Alexandria, Virginia.

Although Mr. Harahan refuses to talk about his success, his ability to do most of the things that he insisted others in the operating service should do contributed largely to it. W. L. Park, his probable successor, was taken from the Union Pacific, where he was general superintendent, and was made vice-president of the Illinois Central early in the year.

Railroads Teaching Farmers.

The railroads are teaching the farmers to make two blades of grass grow where only one grew before.

In some States the agricultural schools are working hand in hand with the railroads to teach the latest and best methods to the farmers, almost at their own farms, by using cars as traveling laboratories, lecture-rooms, and museums. A writer in the *Farm Press* says that the farmers need this sort of instruction badly. He quotes Commissioner Coburn, of the Kansas State Agricultural College, as thus defining what he calls "the crime of agriculture":

"The average yield per acre is a disgrace. The farmers are not seizing the opportunities among which they are thrust, they are not doing justice to the land and climate with which a generous Creator has endowed them. When they realize how much more per acre can be produced by only a little additional labor and at no great additional expense, and when they meet the soil and climate half-way, then the farmers may be truly proud of their achievements."

Commenting on this, the Chicago farm paper goes on to note that the farmer did not take advantage of the work of the agricultural colleges until the experts decided to "take the mountain to Mohammed." In the meantime, we are told the railroads began to realize that they were not getting the freight they wanted, and they decided that the crops would have to be increased.

At first, corn was the subject tackled, and "Corn Specials" were sent out to enlighten farmers on the breeding and selection of corn, its cultivation and harvesting—in fact, on every krinkle of corn culture that leads to an increased yield and better quality. Stopping at towns and villages, hamlets and way-stations, they were met by many farmers who could manage to take off the few hours necessary to visit the train and hear the lectures, but to whom a trip to the State Agricultural College had seemed like the Mohammedan's journey to Mecca, a thing to be performed but once in a lifetime, if at all. The farmers had, by the way, been duly notified beforehand as to the exact hour of stopping so that they lost no more than they had planned to give. Already results are very noticeable in many sections by the increase per acre yielded in the last two or three years. But this contact with the farmers in their own locality only emphasized the need in the minds of experts for instruction on all branches of farming, and it was not long before the "Dairy Special" was going its rounds, to be followed later by trains covering other subjects.

Prominent among the roads which have been, from the start, especially active in this work are the Northern Pacific in the West and the New York Central lines in the East, and this year they took a long step in the march of progress when they put on their "Better Farming Specials," made up of trains of cars in each of which some one branch of farming is treated. The Pennsylvania Railroad has instituted a similar service in the territory which it traverses. As one observer expressed it, these trains cover everything from the "kitchen to the pig-pen."

The plan of procedure is to have a meeting between the farmers and lecturers in the town hall at a stopping-point, if it has one.

After the "lecture," the crowd is taken through the train in detachments, and a demonstration lasting eight or ten minutes is given in each car. As one party passes from the first car on to the next one, another party enters the car they vacate, and in this way there are eight or ten demonstrations

going on continually in the train, which remains from three to four hours at a stop.

However true the charge against the farmers may be, as regards their failure to make the most of their opportunities in the past, they are proving by their attendance upon the "Farm Specials" that they are men of intelligence and willing to employ progressive ideas when once they have had the chance to acquaint themselves with such.

They are meeting these trains by the hundreds and thousands, and showing an enthusiastic interest in whatever the experts have to show them. So far as they have had the chance to put the knowledge thus gained into practise, a large percentage of them have done so. With the coming of another spring and harvest-time, they will place tangible results before us in proof of the claim the experts make that the food shortage may be staved off so long as man inhabits the earth.

CAMPAIGN AGAINST TRESPASSERS.

Pennsylvania Adopts Vigorous Methods to Rid Its Right-of-Way of All Types of Intruders.

TRESPASSING on railroad property has caused the death of more than 50,000 people in the United States in the last eleven years. In this same period more than 55,000 trespassers have been injured.

With a view of reducing to a minimum the practise of trespassing on its property, the Pennsylvania Railroad has determined to redouble its efforts to secure on its lines that rigid enforcement of the law against trespassing which in foreign countries has done so much to decrease the number of fatalities resulting from trespassing on railroads.

In 1907 the Pennsylvania Railroad inaugurated a vigorous campaign against trespassing, and, due doubtless to this, the number of trespassers killed in 1908 was only 757. In 1909, 732 lost their lives in this way.

In the eleven years prior to January 1, 1910, exactly 7,972 people who were on the Pennsylvania Railroad's right-of-way in violation of the law, in spite of thousands of warning signs along the railroad, were killed. It is thus seen that in the eleven years an average of two trespassers a day have been killed on Pennsylvania Railroad property.

This long death roll is every year charged up to the railroad even though these people are killed as a result of their violation of the law, under conditions over which the company has no control.

It is not only tramps who are killed and injured while trespassing, though thousands of them lose their lives in this way every year; men of the laboring class, factory workmen, their wives and children, who use railroad tracks as thoroughfares, are killed by the hundreds. That the practise of walking on railroad tracks is prevalent in industrial districts gives added significance to the fatalities on the Pennsylvania Railroad system as a result of trespassing.

The tracks of the Pennsylvania are lined with factories, as they run through the densest industrial section, through territory which holds more than half of the population of the United States. Over 10,000 trespassers were arrested in 1909.

The Pennsylvania Railroad has now posted its tracks and stationed watchmen to see that warnings against trespassing are respected. By redoubling its efforts the company is endeavoring to reduce the number of trespassers who are killed and injured by an even greater number than it has done in the last three years.

The cooperation of city and county authorities has been solicited in this campaign. Heretofore the actual punishment of persons violating the laws forbidding trespassing on a railroad's private property has been infrequent. The cost of imprisonment has deterred the local courts from holding those arrested while trespassing on railroad property.—*Machinery.*

Big rails are harder to lay than light ones, but they carry more, last longer, and are safer. Same way with character.

—Remarks of the Roadmaster.

The Fine Art of Bridge Building.

BY OTTO SCHULTZ.

THERE is no feature of railroad building in which so much depends on careful construction and the maintenance of a large safety factor than bridges and trestles. Tunnels may cave in and landslides block the right-of-way, but compared with the collapse of a high bridge, all these are as nothing.

Fortunately for those who follow the iron trail, American bridge builders are recognized the world over as the most efficient and rapid workers of all the engineering fraternity. Their work may be found not only in North and South America, but in Europe, Asia, and Africa, and are known as models of safe and economical construction.

We present this month the first of two articles giving some of the hard nuts these men have had to crack; situations where nicety of calculation and ingenious methods in overcoming difficulties have played an important part. You will find these two articles full of valuable information.

Some Examples in Bridge Building When American Hustling Won Out Against Foreign Competition. Moving Bridges by Locomotives and Other Feats.

PART I.

ASK an engineer how big a bridge he can build and he will counter by inquiring: "How much money can I have to build it with?" The only limitations recognized by the bridge engineer are financial. At nature's barriers, however formidable they may appear to the unsophisticated, he snaps his fingers.

A commission of army engineers appointed by the Secretary of War, in 1894, to investigate the practicability of bridging the Hudson River, from New York to New Jersey, with a span of 3,100 feet, reported that under certain conditions the practicable limit of a bridge was 4,335 feet. Commenting on this report Gustav Lindenthal, a noted bridge engineer, said:

"I have no hesitation in saying that a bridge with a span of 6000 feet could be built for the heaviest trains running at express speed. Fantastic as it may seem, it is nevertheless true that, based on theoretical resources, a bridge could be built over the Atlantic Ocean which would be perfectly safe, resting on anchored piers which the fiercest hurricane or the impact of the heaviest steamer in collision could not disturb, and with long spans so high

above the water that the tallest vessels could pass beneath."

So long as one can be ferried across comfortably on a big liner, there does not appear to be any pressing need of spanning the Atlantic with a steel highway; but smaller bodies of water in these modern days are bridged at will, provided, always, that the precaution is observed of securing the services of an American engineer.

Supremacy of Our Engineers.

It must be conceded that the first metal bridge ever built was the cast-iron structure with a span of 102 feet erected over the River Severn in England in 1779, and that the Firth of Forth cantilever bridge at Queensboro, Scotland, with its two main spans of 1,710 feet each, is the largest in the world, but with these exceptions all the honors in bridge building belong to the United States.

American engineers have built more bridges, better bridges, and built them under greater difficulties, in quicker time, and at less cost than those of all other nations combined. The railroad bridge carrying the greatest number of tracks is to be found in America. It is the thirty-three track bridge which carries the Erie Railroad over a certain street in Chicago. The only two railroad bridges in the world that are built lengthwise of rivers are to be found in the United States. One of these carries the Santa Fe over the Rio Galisteo in Apache Cañon near Lamy, New Mexico, while the other enables the Denver and Rio Grande to get through a crack in the granite heart of the Rocky Mountains two miles west of Cañon City, Colorado, known as the "Royal Gorge," which is more than half a mile deep and has walls so nearly vertical that from its depths stars can be seen at noon as from the bottom of a well.

Whenever a particularly difficult piece of bridge building has been contemplated anywhere in the world, American engineers have always been called on to do the work. The most spectacular feats of these man spiders in spinning their steel webs in impossible places have always been performed for the railroads.

First Bridges of Wood.

Timber, being abundant and cheap, was the material employed in bridge building. Some of the wooden structures erected during the first years of the nineteenth century were unparalleled in the history of bridge building. One of these notable structures was the bridge across the Delaware River at Trenton, New Jersey, consisting of five spans, the center one of which was 200 feet long.

It was built in 1803, many years before railroads were thought of, yet when the time came to establish railroad connection between New York and Philadelphia, this sturdy old bridge was found to be strong enough to bear the weight of trains. It was used as a railroad bridge until 1875—a period of nearly thirty years—before it was replaced by an iron structure. This was the only old wooden highway bridge in the world ever converted to railroad use.

Lasting Wooden Structures.

The Portage Viaduct on the Erie Railroad, 234 feet high, designed by Silas Seymour in 1851, built in 1852, and burned down in 1875, has always been considered the boldest attempt ever made in timber trestles. American wooden railroad bridges have given wonderful service. The last of the wooden bridges on the Philadelphia and Reading, consisting of two spans 143 feet and 158 feet at Port Clinton, built in 1874, stood up under the steadily growing traffic until it was replaced with a steel structure in July, 1905, a period of thirty-one years.

Recognition of American supremacy in bridge building has not been limited to Americans. M. M. Malezieux, *Ingenieur L'Ecole des Ponts et Chausses,* who in 1870 was sent by the Minister of Public Works of France to study methods of construction in England and the United States, said in his official report:

> In bridges we saw nothing original; nothing to be compared with the instructive novelties of America.

When Henry Meiggs, the spectacular American who went to South America to build railroads some thirty years ago, had amassed railroad contracts aggregating $134,000,000, he was about the easiest mark for solicitors that ever appeared. No man who applied to Meiggs for a contract went away empty handed—that is, for a while.

Later in the proceedings, no contractor who could not prove that he was a free-born American citizen and who did not have the

grip and password could get a red cent out of Señor Enrique. How this great change was wrought was clearly set forth in a letter written by Meiggs in reply to inquiries from a Mr. Slater, a contractor on a government railway in Chile, who sought information. The letter, dated Lima, January 2, 1874, read in part as follows:

> I am in receipt of your favor of Nov. 28, concerning French bridges. I must say, for these countries, at any rate, they are a complete failure. They may, perhaps, stand well enough when once erected, but when I tell you that the French contractors were engaged on the Oroya Railroad three months and twenty-four days putting up a single-span, lattice-girder bridge a little over fifty yards long, against three months and fifteen days occupied by our men on the Varrugas Viaduct, 575 feet long, with three piers, one of which was 252 feet high, you can form an idea of the fearful cost of transportation caused by such delays, amounting on this road to more than the value of the bridge.
>
> I have been still more unfortunate in my experiments with English bridges, two of which failed miserably on the Pascamayo Railway. So after all these trials I have returned entirely to the American market for all bridges.

Meiggs might have added a wealth of interesting details, but he didn't. For instance, he might have told that the order to the foreign contractor was for three single-track bridges of 170 feet span. When the first one was erected it collapsed under the weight of three cars, which was only one-twentieth of the load it should have carried.

A Few Comparisons.

It was lost in deep water, with the cars and three men who happened to be on them. The foreigner rebuilt the bridge on the original abutments. This time the bridge fell down under the weight of five cars before there was a chance to remove the false work.

An American then put up a bridge that would stay up. The last foreign bridge to collapse weighed 127 tons, cost $33,497, and required eight weeks to erect. The American bridge that replaced it weighed only sixty-one tons, cost $19,569, and was put up in eight days. The third foreign bridge is still lying at Pascamayo just where it was unloaded from the ship unless some enterprising Peruvian youngster has sold it for junk.

The Varrugas Viaduct to which Meiggs referred was a job which attracted world-wide attention. It was fifty-one miles from Callao and 5,836 feet above sea level. Being 575 feet long and 252 feet high, it required a lot of iron, all of which had to be shipped to the spot on the backs of mules.

The building of the trail for the mules along the fearful slopes and gorges of the Andes cost more than the grading of some American railroads. Even at that the trail was so perilous that ten or twelve mules tumbled off it into the depths below every day.

Sometimes the iron could be recovered, but the mules weren't much use. However, a few hundred mules, more or less, were nothing to a man who could afford to spend two hundred thousand dollars in gold to celebrate the completion of a railroad and charter steamships and build roads to gather his guests. He kept a herd of 1,500 mules at it until the material was assembled.

Examples of American Hustling.

Then L. L. Buck, an American who has since made a great name for himself, took charge. He strung eight wire cables across the chasm, from which he suspended tackle by which the tall towers for the bridge were erected. After the towers were up, Buck, with a construction gang consisting chiefly of common sailors picked up in Callao, finished the job in ten days, and did it so well that a party of insurgents during one of the frequent Peruvian revolutions tried in vain to tear it down.

It was a barren triumph, however, for London *Engineering*, in a ponderous editorial, proved that he couldn't have built such a bridge in so short a time, and as if that were not enough, a flood came down the ravine, carrying with it boulders weighing fifty tons, and swept the bridge to the bottom. It was replaced in 1890 by a cantilever structure designed by Buck.

As another example of American hustling, the Louisiana bridge across the Mississippi will serve very well. This bridge which had a draw span of 444 feet, a work of great magnitude, was completed in less than seven months.

A span of the Cairo bridge across the Ohio, 518 feet long, was erected in six days; two spans were erected, the false work and traveler being erected for each span and taken down and put up again

for each span, in one month and three days, no work being done on five days of this time. Compare this with the construction of the Godavari bridge at Rajahmundry on the East Coast Railway in India.

The bridge, 9,096 feet long, in fifty-six spans of 150 feet, was begun November 11, 1897, and was not opened for traffic until August 6, 1900. It actually took those Englishmen, by their own account, an average of twenty-one hours to lift one pair of girders and seat them. In building the Krisna bridge, on a branch of the Great India Peninsula Railway, between Bombay and Madras, the builders doddered over each span for six weeks.

Contractors Were Too Slow.

With this glimpse of British methods, it is easy to perceive why the Egyptian Government turned to America when, in 1899, it needed a bridge in a hurry to get Kitchener across the Atbara River to chase the Mahdi out of the Sudan. The army officers first asked British bridge manufacturing firms how quick they could turn out a rush job. Time just then was of more consequence than money. The best the Britishers could do was seven months for a modest little bridge of seven spans of 147 feet each, weighing altogether only 800 tons.

Fearing that in seven months the Mahdi might get tired of waiting to be whipped and do something really unpleasant to Kitchener, the London agents of the Egyptian Government, on January 7, 1899, cabled to the Pencoyd Steel Works asking if the American firm could do the job. The answer was in the affirmative.

On January 24 the specifications for the bridge were received. On January 27 the Pencoyd people cabled their bid, which was accepted as quickly as the message could be flashed under the ocean, and March 7 saw the steel for the entire bridge shipped to Alexandria.

Beyond Their Comprehension.

The Pencoyd Company undertook to turn out the steel and get it on shipboard in forty-two days. This was actually accomplished in forty days.

Thirty-two days more sufficed to erect the bridge, though it could have been done in six days less but for a storm that stopped all work. Yet, as the Atbara was a torrential stream, the bridge had to be erected without false work.

Maybe there wasn't a row in England about it. The army officers who were responsible for sending the order to America were abused until the English press ran out of ink and epithets. Then they said it wasn't so, anyway. A Mr. Rigby, of the firm of Rigby & Westwood, one of the British bidders, said in an interview:

"I simply do not believe that any firm in the world can turn out a bridge of that size in the time mentioned. We and other British firms made special efforts to secure this particular contract. At a meeting of our directors who are all connected with large steel works it was agreed to divide the supply of the required material and let other orders wait.

"We made a very low tender, guaranteeing delivery by April 30, but no tenders of British firms were even acknowledged. Of course the bridge has undoubtedly been shipped from Philadelphia, but I absolutely decline to believe that work commenced February 8. The American firm either had the specifications beforehand or adopted a standard bridge to suit the requirements of the case. No other explanation is possible."

An American Bridge in Burma.

Another case in which some Britishers wanted a bridge they couldn't get at home was that of the Gokteik Viaduct in Burma on the line from Mandalay. This structure, one of the famous viaducts of the world, 400 miles inland from Rangoon, and 4,000 feet above sea level, is 2,260 feet long, 320 feet high and contains 9,703,831 pounds of steel.

This quantity of material, together with that for the great traveler weighing 180,000 pounds with which it was erected, had to be shipped from Rangoon over a narrow-gage road with four per cent grades on which eighty tons made a train-load.

Seventy American bridge builders went out with the material. They began construction in January, 1900, and with the aid of five hundred natives, who thought their pay of seventeen dollars a month exceptionally good, finished the job in October of the same year. The fourteen towers were erected with the traveler, which had an overhang of one hundred and sixty-

five feet. Again there was such a row in England over the impudence of the Americans that Lord George Hamilton, Secretary of State for India, wrote as follows to the London *Times:*

> In the case of the Gokteik Viaduct, the Burma Railway Company had no option but to place the order for its construction with the Pennsylvania Steel Company. There were no British firms who had anything like the same experience in this class of construction. The tender of the Pennsylvania Steel Company was much less in price and quicker in time than any of its competitors.

Because one has the good fortune to be an American it does not necessarily follow that one is therefore a born bridge builder. The New York canal commissioners found this out when the first enlargement of the Erie Canal was undertaken in 1836. Knowing that some hundreds of bridges would be required and wishing to have a uniform design, the commissioners asked the chief engineers to submit plans.

When all the plans had been sent in the commissioners thought they could make something a great deal better. So they took a feature out of this plan and a dab out of that and more or less out of the others and fixed up a crazy-quilt design that was altogether lovely in their eyes. They presented it to the engineers as a masterpiece of genius and ordered it adopted as the general plan for all the bridges on a canal three hundred and fifty miles long.

John B. Jervis told the commissioners such a bridge could not stand up, but they attributed this remark to professional jealousy and went ahead. The first bridge, built at Utica, tumbled down as soon as it was completed and killed two men. The second, at Syracuse, also toppled over the moment the false work was removed.

The President of the Mexican National Railway, in 1883, conceived the clever idea of saving some money by manipulating Belgian iron with American brains. So, after securing some American plans for bridges, he trotted over to Belgium and placed contracts for the material much cheaper than he could have done in the United States.

But when the bridges were shipped, the iron turned out to be so wretchedly inferior that some of the eye-bars actually broke before ever reaching Mexico. Then the engineers tested a number. They all broke at 24,690 pounds per square inch or less, while the lowest for American iron was 58,000 pounds. The whole lot of bridges was condemned, and the road, on which large sums had been expended, was bankrupted.

Some of the cleverest feats of the bridge magicians have been performed in the work of rebuilding. Railroad bridges have to be rebuilt almost as soon as they are completed, not because they are not made properly, but because the operating department keeps increasing the size of cars and locomotives so rapidly that a bridge which in the spring is deemed amply strong to support the traffic for several generations is discovered in the succeeding autumn to be altogether inadequate for the growing loads it is called upon to bear.

No railroad management was ever known to discover that a bridge needed rebuilding until it was wanted immediately. This means that some pretty lively hustling has to be done by the bridge department and, of course, traffic must not be interrupted.

The engineer who laid out a passenger-train for a minute or two, no matter what kind of a bridge he was rebuilding, could confidently count on having something pretty harsh said to him as soon as the president could get to the wire. This condition leads to some phenomenal records in handling ponderous masses of steel.

(To be concluded.)

TO TELL STEEL FROM IRON.

IT is often so difficult for users of pipe to distinguish iron pipe from steel that a few hints on the subject may be found helpful. The scale on steel pipe is very light and has the appearance of small blisters or bubbles; the surface underneath being smooth and rather white; on iron pipe the scale is heavy and rough. Steel pipe seldom breaks when flattened, but when it does break the grain is very fine; whereas the fiber of iron is long, and when the pipe breaks, as it readily does in the flattening test, the fracture is rough. Steel pipe is soft and tough, says *Domestic Engineering,* and when it is threaded, the threads do not break, but tear off. It requires very sharp dies to cut the thread on steel pipe successfully, and a blunt die, which might be used with satisfactory results on iron pipe, will tear the threads on steel pipe, because of softness of the metal.

GETTING EASY MONEY.

BY EMMET F. HARTE.

Honk and Horace, for a Brief Moment, Enjoy a Rich Reward for Baffling a Brigand.

SOMEBODY came along one day and tacked up a dodger on the waiting-room wall. Neither time, expense nor skill had been squandered on that dodger. It had been struck off, how-come-you-so, on rotten paper, with cheap ink, but it set forth, specifically, three facts of importance:

First, that a depot, presumably containing ticket, telegraph, baggage, express and accident insurance privileges, located in the town of Pleasant Lake, Montana, had been looted to the tune of—they never tell you the exact amount—

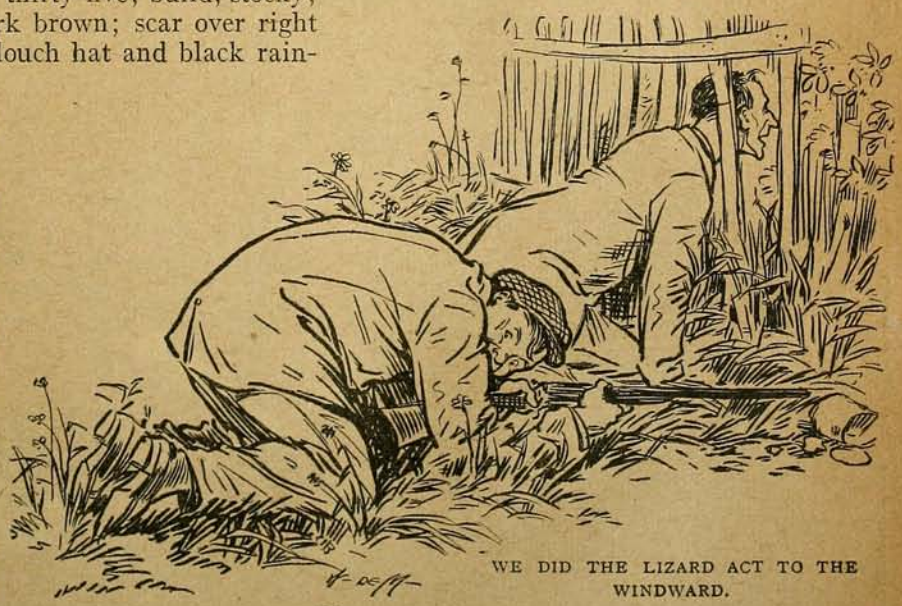
Second, that the brigandage, robbery, thieving, outlawry or dastardly deed in question had been performed, accomplished, perpetrated and pulled off by a lone bandit, described to wit: Height, about 5 feet 8 inches; age, about thirty-five; build, stocky; hair and eyes, dark brown; scar over right eye; wore black slouch hat and black raincoat, and—

Third, that a reward of five thousand dollars would be paid for the before-described young gentleman, duly apprehended and delivered, or upon satisfactory proof of his demise during the process of such apprehension and delivery.

Honk and I read it over and palavered about it considerably while we were resting every now and then. We couldn't either of us recall an instance where anybody had ever caught or killed a brigand and collected a wad of easy money like that, but it appealed to us, nevertheless.

I shouldn't wonder if it wasn't because we were a couple of devil-may-care fellows, who relished personal danger and hazard for the sake of the pure excitement of it. In fact, we would both go out of our way to—how's that? I didn't say, to avoid danger. Oh, very well, never mind.

"It would be too much to expect that the rummy would ever light around this neck of the woods," remarked Honk to me. "In the first place, he'd have no occasion to come to Valhalla, it being no suitable haven for crooks and, moreover, anybody with the sense that is set apart for little geese would



WE DID THE LIZARD ACT TO THE WINDWARD.

know better than to try to sneak past us. We'd nail 'em on the spot. My clairvoyant sense would detect 'em at once."

"Right!" I agreed. "We'd detect 'em as far as we could see 'em—maybe. But, say! What would we do with—well, five thousand dollars, now, for instance, if we had it? All paid down in crackly yellow and brown fifties and hundred-case notes? I believe I'd lay off another month—"

"Why need you? Your job is an endless vacation, as it is. I know what I'd do with my share. I'd buy that new Ruhmkorff coil and the big concert grand phonograph we've been wanting, and then I'd sit back in a new leather rocker, with a fan and a panatela and a colored boy to bring me cracked ice for my lemonade—and under the table, I'd have a bucket, with four, gold-labeled, dusty—"

"And we'd send off for caviar and reed birds and a barrel of oysters, bearded like the prophets of old, and we'd have pheasants and rice and chop suey cooked by an imported chop su-maker," I murmured, with rapturous and shining eyes.

"Hush!" he said. "In another minute you won't leave me nothing to tell."

Although the matter did not come up for discussion again for several days, we could not entirely dismiss the idea of that five thousand. In the meantime, I noticed Honk scrutinizing every newcomer very narrowly, and whenever I saw anybody who looked anywhere near five feet eight and age about thirty-five, my left palm would begin to itch, which is an almost infallible sign that I'm going to get money.

Not even my most intimate acquaintances were entirely exempt from suspicion during this period. So far as that's concerned, though, it is sometimes a stroke of good business policy to be suspicious of your best friends. For instance, there's that "I'll-hand-this-to-you-Saturday" gag. And the guy that wants you to make a talk for him up at the shoe store so he can work his face for a six-dollar pair of kicks, the day before he leaves town forever.

But there I go, holding another autopsy while the gang is waiting for the score.

So far as I was implicated in this manhunt, the prize money began to look dim and miragic to me as soon as I'd had time to cast up a brief census of everybody in and near Valhalla. I couldn't even fasten the thing on Butch Poteet's father-in-law.

While I harbored all sorts of villainous opinions and ugly intents toward my fellow citizens, I would have been compelled to admit, under cross-examination, that I couldn't lay my hand on the Pleasant Lake bandit if I'd had to, and that five thous' was some incentive, too. If there's anything I wouldn't make a stab at for five thous', what it is has clear slipped my mind.

As is usual, however, just when I decided that there was nothing doing, Honk struck what he classified as a clue. He broached the subject to me one evening while we sat on the observation platform of the Medicine House, listening to the cicadas cicada-ing in a near-by sycamore tree.

"I see there's a fellow stopping at Henry Hinton's who never came in on the motor-car," he remarked.

The aforesaid Henry Hinton was one of the "poor white trash" truck-farmers, out by the reservoir. He owned a five-acre tract—that is, he'd paid a hundred dollars on it and was behind with the rest of his payments.

"This person answers to the name of Teegarten—Ezekiel or Zeke Teegarten. He's about five feet eight, and might be thirty-four or thirty-six years old, according to the light. He looked thirty-two to me, but it was cloudy this morning when I saw him. He claims to be a cousin of Hinton's."

"How did he get here, if he didn't come on the train?" I asked. "Did he come on horseback, in an auto, or blow in on a biplane?"

"Neither one of the six," Honk vouchsafed. "He hoofed it in. I made a few judicious inquiries, this morning. He is supposed to 've come from Kankakee, Illinois, on foot, for his health. He is Westoning his way westward for the benefit of his lungs, or indigestion, or neuralgia, or something, presumably.

"He appears just about stiff and sore enough to me, from a distance, to have just about piled off from the rods of some night freight-train at Millardsville and walked on over here during the wee small hours."

"Well," I said, scratching my left palm. "We'd better slip over and get him this evening hadn't we? It would be very disheartening to make the arrest to-morrow or next day and find him gone. An arrest, without an arrestee," I declared, sagely, "is as unsatisfying as a clam-bake without clams."

"Yes, but it might not be our man?"

"I'm convinced it's him," I said. "From your description, it must be him. My sakes! —besides, we need this reward money mighty bad. Let us arm ourselves, go out quietly and you can secure him while I keep watch at the gate to see that he don't elude you. Then we'll put him through the third degree, make him cough up the hiding-place of his loot, and wire for the officers to bring on their prize money. It will be as easy as catching chiggers in a weed-patch."

It required some urging to get Honk sufficiently warmed to it. I was even forced to play my big trump, *i. e.*, that he was afraid to go out and help arrest this Ezekiel Teegarten person, before I got him started. I was crazy about that five thousand, myself, I tell you.

We armed ourselves. I took the target rifle and Honk his trusty old navy revolver. Then we stole sleuthfully into the night.

Henry Hinton lived in a manor house, that, in the gloaming, oh, my darling, might easily be taken for a common shack. A numerous, noisy colony of dogs of various sizes and ancestry made the premises a stamping-ground.

We approached warily. In fact, as old Uncle Tobe, in the town where I was raised, used to say when describing one of the battles he participated in "endurin' ob de war," we "snuck up froo dem dar weeds des lack Ku-Kluxers." It wasn't late.

"SPEAK UP, YOU OLD BUCCANEER! WHERE'S THE DOUGH?"

Henry and his supposed cousin sat smoking their pipes on the lawn—or the place where the lawn should have been.

We held a whispered consultation. Honk's feet began to chill just a trifle.

"I tell you we might be too precipitate in this," he insisted. "You can't jump in and pinch anybody, haphazard and hit-or-miss, without no warrant or anything but an empty suspicion. What if the guy wasn't guilty? He might get pretty sore about it, don't you think?"

"Oh, he'll be sore anyway, as far as that goes," I whispered, airily. "If he can prove that he's innocent, why, we'll let him go. That's all there is to it. What more can he ask, than that? What I'm trying to beat into your batter-cake of a brain is this: that he's liable to be the man we want and we can't afford to take chances on him getting away. Better that ninety-nine inno-

cent should suffer than one guilty escape," I quoted. "Think of that five—"

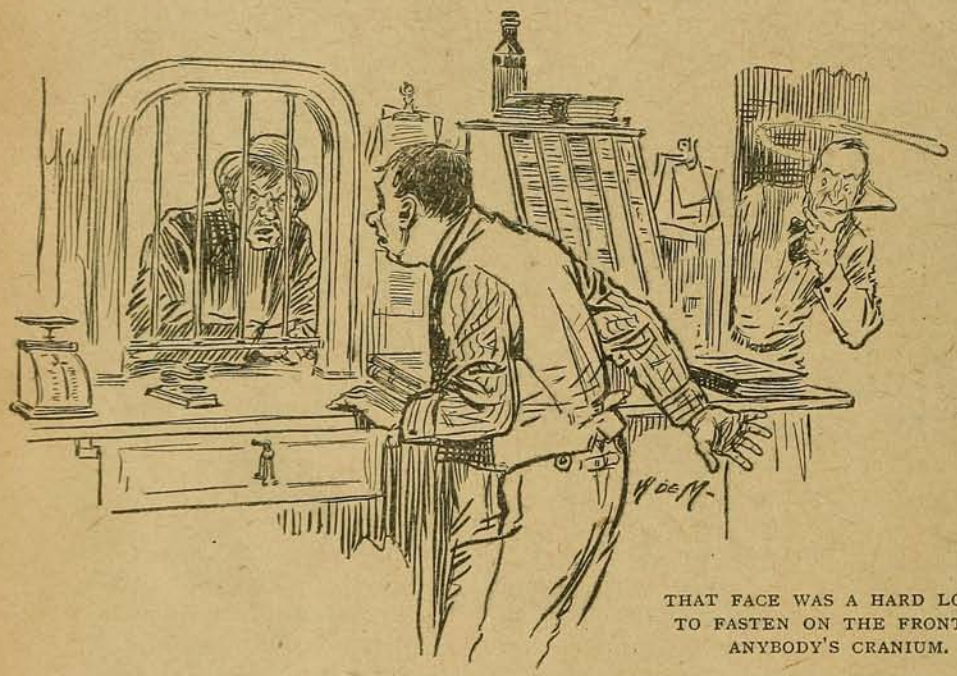
"All right, all right," he said, grumpily. "Had we better rush in by main strength and clumsiness, or use a little suavity and stratagem? What do you think—or do you ever? Maybe you'd better saunter up and ask to borrow a bicycle pump or something and grab his hands. Then I can come and help tie him with a rope—by George! we forgot to bring a rope!"

"How would it do to crawl quietly along the fence to where we can hear what they

"'Tain't no more dangerous than soldierin', Hen. An' look at the diff-runce in the pay. If I wuz you, I'd quit this farmin' as quick as I could pack my grip. Of course, it ain't like clerkin' in a store, but you can make more money in one month than you ever could here in your whole life."

"Aw, it's too much scramblin' around in the dark, Zeke. I never would git used to that."

"Yes, you would. You'd git so's you could see like a cat . . . an' then, you don't



THAT FACE WAS A HARD LOOKER TO FASTEN ON THE FRONT OF ANYBODY'S CRANIUM.

are talking about, if you're so picayunish about the fellow's innocence?" I suggested. "Mayhap the caitiff will convict himself by his own word of mouth."

Honk was perfectly agreeable to this, so we did the lizard act to the windward. That was a move in the right direction, for the immediate vicinity of the shack was alive with dogs and if they had caught our scent we would have been the focal point of an uproar that could have been heard for miles.

The same balmy breeze that carried away the odoriferous evidence of our presence, also brought us snatches of conversation we could use in our business. Something like this:

"Yes, but Zeke. You take it all around, and it's durned dangerous work. You never know what minute—"

have to work in any one part of the country all the time. You can go East or West or North or anywhere you want to . . . the biggest killin' I ever made wuz in—"

"Maybe there's other rewards out for this guy," I whispered to Honk, significantly.

"We'll find out," he replied. "He's a bad egg and no mistake. Let's worm back to the road and come up on them from the front."

This we did. We stopped at the fence and halloed. A riotous chorus of howls, yelps and ki-yis greeted the hail. When a lull came, punctuated at intervals by the yap of some cur that had just arrived from a distance, we climbed the fence and made ourselves known to Hinton.

"Seen anything of a spotted setter pup, hereabouts?" asked Honk, improvising an

excuse. "We're looking for one. You seem to have a pretty fair assortment here, from the noise they make."

"It's the fellers that run the depot," we heard Hinton tell his companion.

"No, I don't know's I've saw your dawg," he replied, "but you c'n take a look amongst the bunch if you want to."

Hinton had no family whose peace might be disturbed, so we felt no qualms at kicking a dog or using unparliamentary language to deter the boldest from securing souvenirs out of our legs.

After making a desultory search, we decided that the lost pup was not among those present and paused to chat a minute.

"This here's my cousin, from Illinoy; name's Teegarten," Hinton said.

"Teegarten," said Honk. "Any kin to the Teegartens in Streator, Illinois?"

"Got an uncle there," said our man, grouchily.

"What's his first name?"

"John."

"Listen to that, Horace," said Honk. "A nephew of old John Teegarten, at Streator, away out here! You boys have got to go down and have a drink on that—we've got a brand new jug—just came today. "Who'd 've thought we'd find a man from the old home country up here? Get your hats, both of you—you've got to come."

The prospect of a free drink or two is a potent dispeller of erstwhile dulness and indifference in citizens of the Hen Hinton and Zeke Teegarten persuasion. They came like little piggies to the lure of the slop-trough.

"Sure thing," said Hinton. "Never was more willin' in my life, was you, Zeke?"

"Never a time," said our prospective bank-roll.

Thus does acumen and sagacity triumph over the coarser and less discreet methods of the knock-down-and-drag-out school of criminal catchers. It is the supremacy of the trained detective over the village night-watch; the preponderance of brain against brawn; the vindication of mentality as opposed to the old-fashioned, water-elm club.

We led the way in high glee, escorting the not particularly valuable looking Zeke, but worth five thousand to us, by the shortest cuts, to the Medicine House. On arrival at that temple of progress and seat of learning, I dallied with friend Hinton on the outer battlements for a minute while Honk playfully shoved Ezekiel ahead of him, through the gangway, and introduced the muzzle of his forty-four caliber persuader under the gentleman's right ear.

It was done quietly, scientifically and with despatch. I kept up a running fire of voluble discourse, springing wastefully many of my famous epigrams and brilliant quips, at the same time keeping an ear cocked for war news from within.

All I heard was a muffled command or two, some clatter and the tinkle of an oil can or something falling off the table, and then Honk called affably:

"Well, what are you fellows waiting for? Aren't you going to get in on this?"

"Coming," I said, and in we bustled, Hinton first. Honk had his prisoner trussed up in a chair, as neatly as if he had been tied on a wager, while he was leaning against the table where our electric reading-lamp glowed brightly, with his redoubtable revolver poised in readiness and a good-humored grin overspreading his cheery countenance.

"Stick up those unwashed paws of yours a minute, Henry," he directed. "Horace, tap his pockets lightly for a chance weapon, will you? No gun or knife on him? Good! Sit down, Henry, and behave yourself."

The surprised and speechless truck-farmer did as Honk directed. Our other captive stared in a dumb amazement no less pronounced.

"Now," said Honk, easily. "Mr. Teegarten, so-called, your harvest days are over. That last Pleasant Lake, Montana, deal was the blow that killed father. What we intend to ascertain, just at this juncture, is whereabouts did you put that satchel full of spoil. Speak up, you old buccaneer! Where's the dough?"

"What's this crazy mark, here, talkin' about?" the five-foot-eight man asked me huskily. In the stress of the moment, he looked almost forty years of age to me.

"Oh, we're on, kiddo," I said. "No use quibbling. It won't go, with us. We know you stuck up the Pleasant Lake depot, and we've got you faded. It's all off."

"Me? Stuck up the what depot? Say, what's the joke, fellers?"

"That's what it is," Hinton chipped in, relieved. "They're tryin' to play a joke on us, Zeke."

"Horace," said Honk. "You slip over the way and get that dodger. We'll compare this brigand with his description. I'm satis-

fied he's the crook we're after, but we'll have to convince him, it seems."

When I returned, Honk catechized the prisoner. "How tall are you?" he began.

"What the—" A little revolver play and—"Five feet 'n eight inches, I reckon," sullenly.

"How old are you?"

"Thutty-five."

"What color hair?"

"Say, what'n thunder you—"

"Stocky build," Honk read aloud. "Yes, he might be called stocky built. But, say—wait a minute! Horace!" Honk seemed to be losing some of his assurance. "What about this scar business over the right eye? He's short a scar over his right eye. What'll we do about that?"

"I can hack one in a second," I said. "Where's my little ax?"

Honk wavered and then began to backfire.

"I guess it's a horse on us," he said. "Cut him loose, while I get out the jug and tin cup, Horace. Teegarten, old-timer, this is a simple case of mistaken identity. Deeply as I regret it, you're not the man we want. Pour yourself a snifter."

"Lemme see that paper," our ex-captive requested. It undoubtedly interested him.

"Five thousand dollars reward!" he ejaculated. "How many years in the pen do you s'pose they'd give the feller, if they was to catch him, now?"

"That would depend on the judge," said Honk. "Maybe two years, maybe ten, maybe twenty-five. Why?"

"I was just a-thinkin'," returned Teegarten. "I wouldn't mind to serve two or three years fer half of that there reward. Of course, I ain't the man, but that wouldn't matter. I could make out that I was. But, excuse me, they might give me twenty-five."

"You ought to have twenty-five," Honk declared. "Any man that proposes to serve a term in prison for half the reward is a swindler. It's mighty lucky for you you haven't got that scar over your eye—aw, scat! Get out! I don't like your looks."

"Just a minute," I interposed. "I've got a curiosity to know what it was you fellows were talking about when we came up over there awhile ago. Some kind of a dangerous occupation, I believe."

"Coal minin'," said Hinton, promptly. "Zeke, here, wanted me to quit truck-farmin' and go to minin'."

With that, we closed the interview. Our guests left, taking with them four generous drinks from our best jug, for which we had received absolutely nothing in return—not even entertainment.

"So much for that," said Honk. "Charge up four drinks to the P. & L. account."

"Anyhow, it was a neat capture," I said, ingratiatingly. "Slick as a greased eel. You're there with the claw-hammer and alligator-wrench clutch if we only find the right man."

He grunted something and went to bed.

And what do you think?

The right man came, all right. Looking at it from the viewpoint of a booky, there was about one chance out of a million for the man to actually come to Valhalla, but that one chance turned out to be a safe bet.

Two or three days after the Teegarten incident, Honk and I were inside our little grating, pretending to be busy. It was an hour or so before the motor-car was due to leave for Millardsville. Somebody came into the waiting-room and approached the ticket-wicket. After the proper amount of time had elapsed to preserve professional dignity, I looked up. One mustn't be too prompt, it looks like they were scared of their job.

A dark and gloomy face was peering at me. No, no, I'm rattled! I don't mean that the face was peering at me. I mean that the man was peering at me, with his f—no, not that, either. Anyhow, I took a second look to make sure I wasn't covered with a revolver. Gee, but that face was a hard looker to fasten on the front of anybody's cranium! Then I noticed the scar above the right eye. Five feet eight, and age about—

"Wot time does this yer car leave for north?" rumbled a hoarse voice, ominously.

"Honk," I said. "Information!" Then I added a warning "S-st!" which, in our order, same as geese, snakes and other flora and fauna, means "wake up, look out and beware! There's something doing!"

Honk hopped up, with alacrity.

"Train for Millardsville leaves at nine-thirty," he said. "Where to, please?"

"I want to send this yer grip to Kansas City. Kin I send it by express?"

"Sure thing. What's in it?"

"Wot you want to know that for?" suspiciously.

"Have to know, to tell the rate." Honk toyed with a paper-cutter while the fellow deliberated.

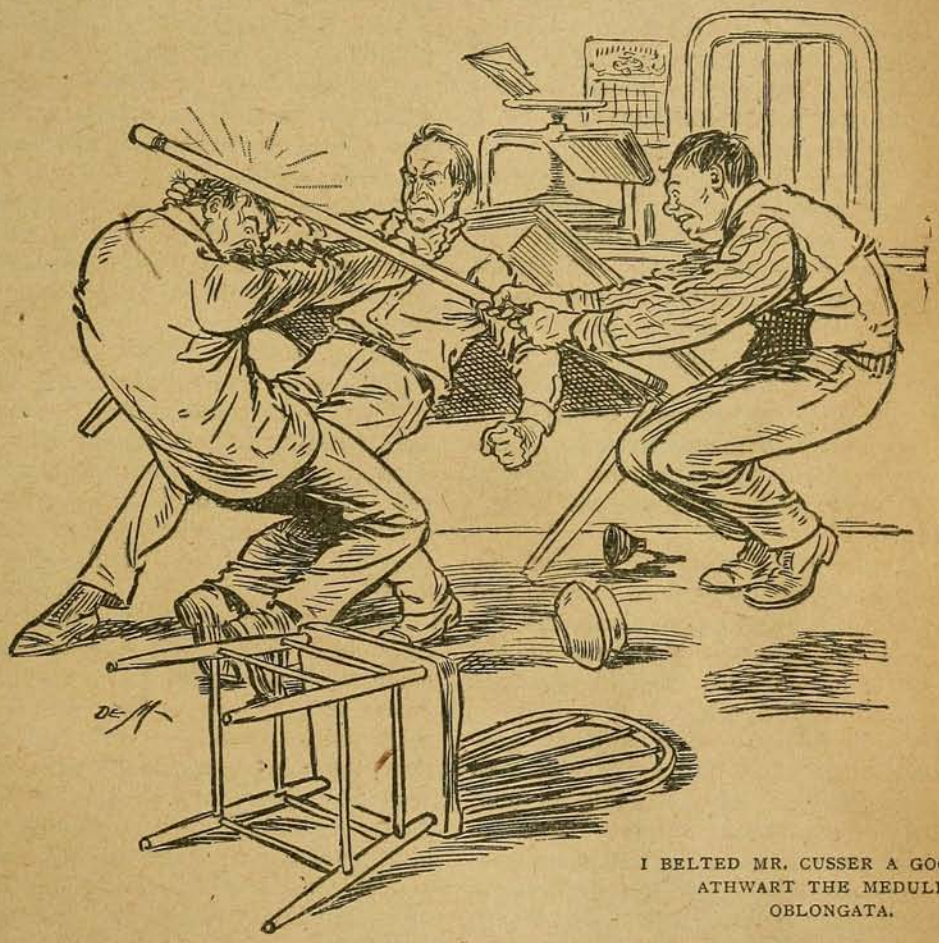
"Ore samples," the man said finally. Honk dashed off the way-bills, entered a nominal valuation and scratched his head, but did not collect the fee.

"I'll have to verify that rate by wire," he told the man. "You come in in half an hour and pay the charges and she'll go on the next train."

Our friend with the scar shuffled out. He silver money included to make a pretty hefty package.

"Aha!" said Honk. I "Aha-ed" a few times myself. Honk continued briskly:

"When this lad comes back we'll have him come around behind, to sign the book, or for some pretext or other, and then we'll nab him. Take no chances. He looks husky. If necessary crack him over the



I BELTED MR. CUSSER A GOOD ONE ATHWART THE MEDULLA OBLONGATA.

didn't have on a black slouch hat, neither did he have a rain-coat, but my left palm was doing some tall itching, just the same.

"Quick!" said Honk. "Let's see what's in this. Gimme a piece of wire. I'll pick this lock before you can say what's trumps—"

There were a few clicks and squeaks and some seconds of suspense and then—the grip was open.

Yes, it had ore samples in it all right—not! It had express money orders and packages of currency and rolls of gold coin in original sealed wrappers, with enough loose bobbin with a stool or the stove poker or anything handy."

We hadn't long to wait. Our man returned promptly at the time agreed. Honk invited him to come inside our scantum scantorum, and he came. It's a wonder he didn't come with a gun in each hand and stick us up in regulation style, but I guess it wasn't his working day. Honk supplied a pen and showed him where to sign. At that moment we pounced.

Did you ever fall down a flight of steps in company with a cook-stove filled with fire, a bee-hive in working order, a bunch

or two of bananas, and a spool of barbed wire with the end loose? If you did, you can sympathize with Honk and me. We undoubtedly started something when we pounced.

That fellow was a bucking buzz-saw. If I had ever got in reach of him, he'd have suffered severe punishment, but he invariably hit or kicked me or both before I could close in and use my terrible infield punch.

Honk got fastened to the guy somehow, and when he could have let loose, wouldn't. Later, when he would have, most gladly, he couldn't. And the fellow cussed without pause, real hateful, throughout the fight. That was what aroused my ire.

To be kicked in the stomach and given a knuckle-wrist-elbow swipe simultaneously is annoying. But when your assailant—or, let's see, was he the assailant?—well, when the kicker and swiper before mentioned, calls you a whang-blam-boom-zip, blankety-blank little sausage along with it, one's soul rebels.

So I rose up from my corner clasping a section of inch galvanized-iron pipe, some seven feet long, and danced across and belted Mr. Cusser a good one athwart the medulla oblongata.

Honk wrenched his throat out of the clutch of the fellow's twitching fingers, and we laid the geezer out on the floor with his hands and feet tied and the ropes spiked fast. When he woke up from his nap, we kept away from him, too.

But that belt I gave him with the gas-pipe stopped his saw-mill. He was very quiet and well-behaved, and made no more comments of a personal nature.

We had wrecked the office and, as a conflict always attracts the idle and the curious, soon the depot windows were clogged with sightseers. It became noised about that we had captured a desperado and Valhalla rang with the stirring tale of our bravery and reckless daring.

Once or twice I noticed the haunting eyes of Zeke Teegarten, green with a dash of yellow in them, watching us from the outskirts of the crowd. He looked envious. I suppose he felt that he'd been cheated out of twenty-five hundred dollars by the rottenest kind of a fluke.

As soon as we could get 'em word, a whole flock of officers came to get our brigand. Yes, he was the right man and he'd been caught with the goods. It was a great catch, they all said so, and our five thousand was paid over promptly, without a whimper. We heard that the fellow got fifty years, as the direct result of his visit to Valhalla.

Five thousand dollars, in one gloojous, joyful wad! Think of it! We spread it out on the table in the Medicine House, while the phonograph played: "Since I've Got Money in the Bank," and "Shine, Little Glow Worm, Shine!"

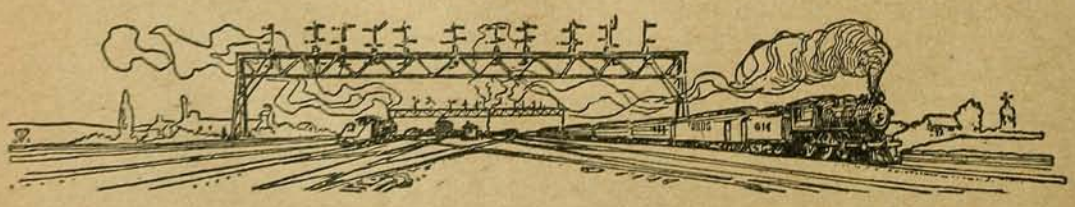
Valhalla came down to rubber at it through the windows and to admire and point the finger of pride at Honk and me. Toward evening of that delirious day, I had one lucid moment.

"Say," I said. "Let's get this bunch of dough up to the bank, before it closes."

"Tut, tut!" said Honk. "What's the use of hiding it in a gloomy bank? We'll keep it here in the car, where we can see, hear and handle it; it has such a cheerful crackle to it. Besides, nobody could steal it while we're here. Huh-nuh! I guess not!"

The rest, alas, can be told in a few words. Ah's me! Heigh ho! It was nearly noon when we awoke, the following day. Our heads felt as big as the pumpkins they really were. The sweet, oily odor of chloroform hung in the air of the tightly shut car. And our five thous'? Yes, it was gone. And the thieves left no clue—except a few hoof-marks, a bandanna handkerchief we'd seen in the possession of Zeke Teegarten, and Hen Hinton's pipe lying beside the empty jug on our table.

We traced them to the Mexico line, or more explicitly, El Paso. At that point we learned of a certain game of chance or hazard in which one Velvet-Fingered Martin had participated. Under the circumstances, the least we could do was to abandon the chase.



Helping 'Em Over the Hill.

BY CHARLES FREDERIC.

HEAVY grades are the bane of railroad men. Besides furnishing many brain-racking problems for civil engineers and construction bosses, the tallow-pot always has to work harder, the eagle-eye has more to worry about, and a thousand and one things are apt to happen to keep a train-crew in hot water that could never occur on a level track.

But before the Mallet compounds and the small-wheeled, mountain-climbing hogs came into use, things were a good deal worse than they are now, and hundreds of inventors put in all their spare time trying to find a way to keep the peanut-roasters of those days from getting stalled on the steep curves and burning holes in their tires.

Instead of planning heavier and more powerful engines, however, many of these early locomotive designers seemed to have been convinced that if they could only get a hard enough grip on the rails, the weakest sort of an engine could pull a full-sized train up anything that was not an absolute precipice.

Freak Devices and Strange Schemes of Early-Day Inventors, Concocted To Make Hill-Climbing Easy, Found Their Way, One by One, to the Scrap-Heap.

IF you wanted to build a railroad and there was a mountain right in your way, what would you do about it?

Out West that might not be regarded as very much of a conundrum. There, when a mountain doesn't get out of the way, so much the worse for the mountain; for the railroad builders run right over it without compunction or remorse. Nevertheless, this same problem has caused many men lots of sleepless nights, not to mention patent-office fees, expenses for stationery and models, and time without limit.

For twenty years after Trevithick's first engine was built everybody was certain that the locomotive would never be able to move even its own weight on level ground. To help the poor thing out, Blenkinsopp provided it with cog-wheels in 1811, while Bruntou improved upon this by substituting legs in imitation of those of a horse in 1813.

After it had demonstrated its ability to haul a goodly load in addition to its own weight, the knowing ones compromised on a certainty that the locomotive could never run up-hill. Afterward this was amended so as to limit the climbing capacity of the locomotive to a grade of forty feet to the mile.

But if railroads had been limited to a grade of forty feet to the mile, their field of usefulness would have been so narrow that they would have been practically valueless. Perceiving this, a host of inventors has sought in every way but the right one to help the locomotive out. Their efforts form a most singular chapter in the history of the railroad.

The earliest and most persistent device, upon which many a fantastic variation has been embroidered, is the center rail. Not

a rack rail, but just a plain rail by which the locomotive was to pull itself up by adhesion instead of by cog-wheels.

The first inventors to appear on the scene with a center-rail locomotive were Vignoles and Ericsson, whose British patent, No. 5,995, was dated September 7, 1830. Charles Vignoles was one of the earliest railroad engineers who laid tracks in Austria, Prussia, and Russia, and, besides, being a pioneer railroad builder in South America.

He was the inventor of the T-rail, which was long known as the "Vignoles rail." He was president of the Institute of Civil Engineers, the foremost engineering society in Great Britain, in 1870, a fact which indicates his professional standing.

The Vignoles and Ericsson engine was to have two horizontal driving-wheels, in addition to the usual vertical ones, to be used only in hill climbing. One horizontal wheel was larger than the other, and was worked by bevel-gear from the axle of the ordinary driving-wheel, which could be thrown into gear on reaching the hill and out again after getting to the top. The smaller horizontal wheel was to be pressed against a smooth center rail by a lever controlled by the engineer.

A Locomotive with a Grip.

Henry Pinkus improved upon the original device with a contraption for which he obtained British patent No. 8,663, dated October 15, 1840. Both horizontal wheels in the Pinkus attachment were of equal size. Both were carried on the ends of bent levers crossed like a pair of shears, the pivot being in the vertical plane of the center rail.

The long ends of the levers were connected by a screw with right and left hand threads, which was tightened by a ratchet-wheel and lever. Talk about adhesion! Pinkus had adhesion to burn. With the terrible leverage of his ratchet and screw he could pinch that center rail until it shrieked in agony. An earthquake could not have shaken a Pinkus locomotive loose from its prey.

Next in chronological order comes an American inventor, George Eschol Sellers, whose "improvements in locomotive engines" were given to the world from Cincinnati in 1848. Whether Mark Twain had this inventor in mind when he created the immortal character of *Colonel Mulberry Sellers* may never be known; but there is a tradition that Mark Twain's *Colonel Sellers* was originally christened "Eschol," Mulberry being substituted before the manuscript was given to the printer.

George Eschol Sellers was the son of Coleman Sellers, one of the earliest locomotive builders at Philadelphia. He died in 1834, leaving his machine-shops, at which locomotives were built, to his sons, George and Charles. The Sellers boys built several engines for the Pennsylvania State railroads before George gave it up and went West to improve the railroads.

By 1848, locomotives in some instances had reached the prodigious weight of thirty tons and more. In a long and elaborate treatise, Sellers pointed out that "the consequences of running such enormous weights at high velocities over the level parts of the road are ruinous in the highest degree to the rails and superstructure of the road."

Engines upon Engines.

Sellers proposed to avoid all the expense and vexation of railroads by building them as cheaply as possible. Instead of heavy grading he would lay his railroad on the surface of the ground with as little preparation as possible. He would also use wooden rails. This would bring the cost of railroading within the reach of all.

Of course heavy locomotives could not be used on such a road; but, then, he didn't want heavy locomotives. On the contrary, he would build them as light as possible so that they could run at the highest speed over the flimsy track without injury to it or to the machine. The only difficulty would be in getting over the hills, and he was ready with a device to obviate this lone drawback.

He would have a third rail in the center of the track on the hills, which was to be gripped by two horizontal driving-wheels, driven through bevel-gear by a separate pair of engines placed beside the smoke-box over the ordinary engines. In order to get adhesion the horizontal drivers were connected by a toggle-joint to which the train was hitched, so that its whole weight hung on the horizontal drivers in going up-hill.

The center rail was also to serve as part of a brake that was certainly effective in theory. The brake was an arrangement like a pair of ice-tongs which was suspend-

ed over the center rail by triggers. When necessary to apply the brake, or rather the anchor, you touched off the trigger, the ice-tongs grabbed the rail, and there you were.

There can be no doubt that the Sellers locomotive created something of a sensation when a model thereof was exhibited in New York in the autumn of 1848. It was enthusiastically approved by the *American Railroad Journal,* and some of the very foremost railroad men of the day actually wrote letters indorsing the device.

Disaster in Spite of Followers.

Among them were Horatio Allen, who ran the Stourbridge Lion, the first locomotive that ever turned a wheel on American soil, who built the Charleston and Hamburg Railroad, who played an important part in introducing the locomotive, and who, in 1848, was consulting engineer of the Erie Railroad; John B. Jervis and B. H. Latrobe, both among the very foremost of early railroad engineers; C. E. Hudson, and John Brandt, a superintendent of motive power of the Erie, were also among those who thought Sellers had made a great discovery. Small wonder if, under the circumstances, Sellers could see millions in it.

The millions seemed just on the point of materializing, but they vanished before the inventor's outstretched hands could grasp them. In 1850 the board of directors of the Panama Railroad instructed John C. Trautwine, then chief engineer, and Horatio Allen to make tests with the Sellers model and report. Their report being unqualifiedly favorable, two engines were ordered, but the Panama Railroad was destined never to have a center rail.

Chief Engineer Trautwine lost his position and Colonel Totten, his successor, took the horizontal drivers, extra cylinders, and ice-tongs off the Sellers locomotives and reduced them to the ignominious necessity of climbing hills like any other engine. Trautwine, who next became chief engineer of the New York and Middle Coal Field Railroad in 1854, recommended Sellers locomotives for use on grades of one hundred and fifty feet to the mile.

Two engines were built and delivered, but the New York and Middle Coal Field Railroad went bankrupt, the engines were sold, and the new owners removed the horizontal drivers and used them as ordinary locomotives.

While Sellers was pursuing his delusion to its ultimate disaster, another American genius was helping the railroads out with a variation on the same idea. This was James S. French, a Virginian, who was so plausibly certain he had hit upon the correct principle for railroads that he actually induced the Legislature of his State to appropriate money in 1850 to build an experimental track and locomotive after his plans.

Document No. 65 of the session of 1857 contains the report of the legislative committee which was appointed to witness the tests of French's experimental railway. It was built on the Manchester side of the river, a few hundred yards above the Petersburg road. It was one thousand nine hundred feet long and had a grade of two hundred feet to the mile except for one hundred feet at the lower end. Like Sellers, French was sure that what the country really needed was flimsy wooden railroads laid on the surface of the ground, which could be built cheaply.

His scheme to get adhesion was to lay flat iron bars six inches wide and five-eighths of an inch thick for rails. The outer edges of these bars projected over the sill two and one-half inches, and as the ends of the ties were cut off flush with the sills there was left a free open space for the adhesion wheels.

The driving-wheels were solid. The cranks were on the outer ends of the driving-axle, while between the cranks and the inner surface of the driving-wheels friction-wheels were suspended from the axle so that they revolved under the outer edge of the rails. They could be pressed up by a compound lever by the engineer, and the axle being the fulcrum, the driving-wheels were pressed down.

Won Praise, but Not Success.

When not in use the friction-wheels dropped by gravity below the rails. A small steam-cylinder was arranged to throw the friction-wheels out and above the rails at crossings and turn-outs. The locomotive weighed three and three-quarter tons, and had cylinders eight by six inches. With the aid of the friction-wheels it took a car containing a hundred passengers up the hill at fifteen miles an hour, but it couldn't move without them. This led the committee to report:

"The mechanical arrangement is extremely simple, and so far as we can judge, works remarkably well. The committee think that Mr. French has offered sufficient evidence of his success to entitle him to the approbation of the general assembly and to further encouragement in his efforts to introduce his very ingenious invention into general use. As a native citizen of Virginia his success may well gratify our feeling of State pride and claim for him our favorable consideration."

This was very gratifying, yet in spite of it French's railway was never heard of afterward.

The Rack Railways.

After all these rosy prospects for American inventors, it remained for an English engineer, J. B. Fell, to reap the honor of building and actually operating the first adhesion railway. It was built in 1863 on Mount Cenis, and was actually used on an eight-per-cent grade during the construction of that famous first Alpine tunnel. Fell's railway had the usual smooth rail in the center of the track.

The engine had two pairs of horizontal drivers driven by bevel-gear, which could be made to press on the center rail by wedges actuated by screws. Fell's road was unsatisfactory and was abandoned after extensive tests, yet it attracted so much attention that it was tried for a time on a steep grade on the Cantogallo Railway in Brazil, and also on a steep grade in New Zealand.

It really performed a great service, however, for its failure led Riggenbach to invent the first rack road, which was the Vitznau-Righi Railway, with grades of twenty-five per cent, built in 1870. To-day there are eight hundred miles of rack railway in operation in the world.

In spite of its conspicuous failures and obvious impracticability the center-rail adhesion idea dies hard. In 1892 H. L. Van Zite, a young civil engineer of Albany, New York, again patented the venerable idea. Finally, as recently as 1907, M. Claret, a French engineer, actually built a center-rail, adhesion railway from Clermont-Ferrand to the summit of the Puy de Dome, three thousand one hundred feet above the town.

M. Claret convinced the directors that neither a rack-rail nor a funicular, as foreigners persist in calling a cable road, for some reason not explained, was practicable. Therefore they adopted the center rail. The road is nine and a quarter miles long with eight per cent grades part of the way. The gage is one meter. The center rail, which is double-headed and weighs fifty-four pounds to the yard, is mounted on brackets seven inches above the level of the track.

It is gripped by horizontal driving-wheels, two feet eight and a half inches in diameter, at both ends of the locomotive, driven by a chain from the driving-axle and bevel-gear. The pressure on the horizontal rail, which may be anything up to fifty tons, is regulated by air. The locomotive weighs twenty-eight tons.

Thus, after a checkered career of three-quarters of a century the center rail at length has had a chance to vindicate itself. It is still in operation; and, if it holds on for a few years more, may earn a sum equal to the amount squandered in patent fees on the idea.

After all, though, the center rail is lacking in picturesqueness. Also, it is deficient in action. For an original scheme for getting over the hills and one which always gave the stockholders and the spectators the worth of their money, Henry Handyside's scheme was much superior.

Henry Handyside was an Englishman who undertook to find the only true way of getting a train up-hill. He did it, too. He organized the Handyside Steep Gardient Company to build his locomotives. The London and Northwestern Railway, of England, was the Come-on.

It Wound Up Its Train.

Two of the Handyside locomotives were built and were operated for a short time in 1876 on the Hopton incline of the Cromford and High Peak branch of the London and Northwestern, which had a quarter of a mile of seven-per-cent grade.

Handyside's locomotives were English saddle-tank affairs, weighing twenty-two tons, with three pairs of drivers, and cylinders thirteen by twenty inches. The novelty consisted in a pair of winding engines, which worked a winding drum on which was several hundred feet of wire rope back of the fire-box, and an anchor, consisting of a steam-cylinder coupled to a rock-shaft on which were arms that reached down and gripped the tops and sides of both rails. This clutch was connected to the engine

frame, fore and aft, so that it could not slip.

When the train came to the bottom of the hill, the engine was uncoupled, the loose end of the wire rope was hooked into the draw-bar of the head car, and then the engine started off up the hill alone, paying out the rope as it went. When the rope was all out the engine anchored by jamming the clutches down on the rails and the engineer started the winding-engines which hauled the train up, hand over hand, so to speak.

When the train had been brought up it was anchored and the engine proceeded up the hill another cable length, and repeated the process as before, the average time uphill, including all stops, being two miles per hour. *London Engineering*, one of the greatest English technical periodicals, was deeply interested in this performance, but avoided committing itself either way. This was in 1876.

If Handyside and George L. Vose, of Augusta, Georgia, could only have got together they undoubtedly could have produced a locomotive that would really have been worth while—one that could not only have climbed all the hills that could be brought to them, but could also have got over level ground. Vose wrote a booklet in 1854 to tell railroad builders how to speed up the trains. He was not worrying about grades.

Two Engines in One.

Vose's locomotive, as planned by the inventor, was to consist of two ordinary locomotives built smoke-box to smoke-box. The drivers placed in the center of this arrangement were to be eleven feet four inches in diameter, and were to be without flanges. Thus, according to the inventor, "the passage of curves is perfectly easy." There were to be four cylinders sixteen by twenty-four inches, one on each side of both fire-boxes. The engines were to exhaust into the open air because "the steam would require too early a release to act with sufficient force for effective blast after so long a passage."

Probably the firemen were to help out the draft with their breath or by fanning the fire with their hats. They could have done it easily enough, for there were to be two firemen and two engineers on each of these Siamese twins. If they kept her hot Vose thought there would be no difficulty in running a hundred miles an hour.

Both Vose and Handyside were outdone by a genius who appeared on the scene much later—as recently as 1888-1889, in fact. Railroad men who have got thirty days to go a fishing for the indiscretion of sliding wheels, will find no little consolation in the discovery that in adding those flat spots they were doing just what was needed. C. E. Swinerton, of New York, was the first to discover that the cause of all the trouble with locomotives was that their wheels were round.

An Advocate of Flat Wheels.

To overcome this he patented the polygonal driving-wheel which, as he described it, was "formed by cutting a large number of facets, or flat places on the tread, connected by very obtuse angles, so that when the wheel passes over the rail an inch or more is successively presented in actual contact with the rail, thus obtaining far greater traction than is possible with the cylindrical wheel, which depends for its traction upon merely a mathematical line, a point of contact so slight that scientific works state that if the contact of locomotive driving-wheels was any less than at present locomotion by railway trains would be impossible."

The most amazing thing about Swinerton's polygonal wheel was that it was thoroughly tried out, no fewer than four locomotives equipped with it being tried in regular service on the Boston and Maine. William Smith, superintendent of motive-power and machinery on the Boston and Maine, asserted over his signature that the locomotive "Onward," equipped with the polygonal drivers, had hauled the Portland Express, which consisted of six to eight cars and which made a run of 115 miles, including fifteen stops, in four hours, from January 7 to July 6, 1889, giving good satisfaction and "made her time."

Then the "Onward" started on a triumphal tour to convince the railroad world that wheels should not be round, but got no farther onward than the Jersey Central where, in February, 1890, it achieved a brilliant failure.

Polygonal wheels were tried on engine No. 19 on the Manhattan elevated road, but the *Engineering News*, which had no use for the polygonal wheel, naively alleged that it made a great deal of noise, a statement which will probably be accepted by most folk without an affidavit to that effect.

At the very time that Swinerton was demonstrating that wheels should not be round, E. Moody Boynton was still further improving the locomotive by amputating most of its wheels. His famous bicycle locomotives, built in 1888-1889, had just three wheels and no more, all being designed to run on a single rail.

Boynton's scheme was the usual monorail; that is, it had three rails, two of them being sixteen feet up in the air to balance the locomotive on the other rail, which was on the ground. The standard railroad of to-day is just as much a monorail as the crankiest scheme ever devised if you forget to count half the rails.

Boynton's first locomotive weighed eight tons. It never ran anywhere, but it so pleased the builder that he at once built a second one weighing twenty-two tons. It had one lonely driver eight feet in diameter under the center of the boiler, which had a recess built in it, a sort of wheel-house, to receive it.

The other two wheels were placed tandem under the tank, which was on the same frame as the boiler. The cylinders were 12 by 14 inches; the locomotive was 27 feet 5 inches long, 4 feet 6 inches wide, and 15 feet 6 inches from the rail to the top of the stack. Brackets on top carried guide-wheels running between the two guide-rails.

Eliminated Friction.

Boynton accomplished the remarkable feat of totally eliminating friction—at least, so he said. Moreover, his bicycle railroad could be built at one-third the cost of the ordinary railroad; its trains weighed one-fifth as much as standard trains hauling the same number of passengers. Besides, it could be built right over mountain tops and alongside cliffs on brackets fixed to the wall.

Finally, one hundred miles an hour would be just an ordinary speed for it. Think of it! A hundred miles an hour on brackets on a cañon wall! No wonder Boynton figured out that his royalties at one mill per passenger or per ton per mile would amount to $70,000,000 per year.

But of all the railroad schemes that ever have been proposed, the most startlingly original was the one which the *Scientific American* described as follows in 1867:

"It is a quick and feasible method of ascending elevations — cheap, safe, and worthy the investigation of our scientific men and capitalists."

A One-Balloon-Power Road.

This cheap, safe, and feasible method was embodied in "The American Mountain Railroad," patented by Dr. Joseph Auguste Fontaine and described by him in a booklet penned by his own ingenious hand.

Briefly, the American Mountain Railroad consisted of four lines of cylindrical iron rails supported from brackets on two lines of wooden posts considerably higher than telegraph poles spaced about fifteen feet apart. Between these rails ran a wooden platform high enough above the ground to allow a car to be swung beneath. Grooved wheels above and below the platform engaged the upper and lower rails.

To the platform was to be hitched a balloon. When the car was loaded all you had to do was to unhitch the balloon, and away you went, the upper wheels of the platform trundling serenely along the upper rails, preventing the balloon from getting too gay. On reaching the summit a windlass was hitched to the outfit, which was then snaked over to the beginning of the down grade. There water was pumped from a reservoir on the hill-top into a tank in the bottom of the car until gravity overcame the buoyancy of the balloon and down you went.

"Science teaches and experience shows," wrote Dr. Fontaine, "that a very small buoyancy (ten pounds) is sufficient to generate the ascent of a very huge balloon with a high rate of speed; and also that a very little weight is sufficient to generate its descent. A superficial inspection might lead to belief that the balloons of the elevators can be easily inclined by the winds in the opposite direction to that from whence they blow. It is not so. The pressures from the winds are counterbalanced by the weight of the cars."

Apparently the scientific men and capitalists did not agree with Dr. Fontaine, for the American Mountain Railroad was never built. Indeed, if the discouraging truth must be told, notwithstanding all the efforts of genius to simplify the operation, the only method of getting trains over the hill that seems to be known in this so-called enlightened age is to hitch engines to them and snake them over by main strength.

Swarming an I. C. Locomotive.

THE picture on this page shows the boys of the Illinois Central shops, in Chicago, taking a little noon-day airing. They pulled onto the turntable engine 1048, and swarmed her from trucks to sand-dome, that a photograph might be taken for the *Illinois Central Employes' Magazine,* a monthly publication, issued in the interest of the I. C. men. They are a loyal set, proud of their line, and filled with the proper enthusiasm. We take pleasure in reprinting here part of a short article that appeared in the October, 1910, *I. C. Magazine,* by A. L. Chapin, entitled, "Don't Knock—Boost":

One continually meets men with a chronic kick because the other fellow has something better, or is having an easier time, when, if the truth were known, the fact that the other fellow is living easier is due to the absence of the perpetual grouch and the continual nursing of the grouch as a hobby.

If the grouch would pull himself together and take an optimistic view of things in general, he would realize that he is much better off than a large majority of people. Life is what we make it, and the "man above" is hardly inclined to boost when your inclinations are to knock, growl or grumble.

Be not afraid that you will do more than your share, and be ever ready to help the other fellow—you may need help sometimes yourself. Do the best you can at all times and at any old place.

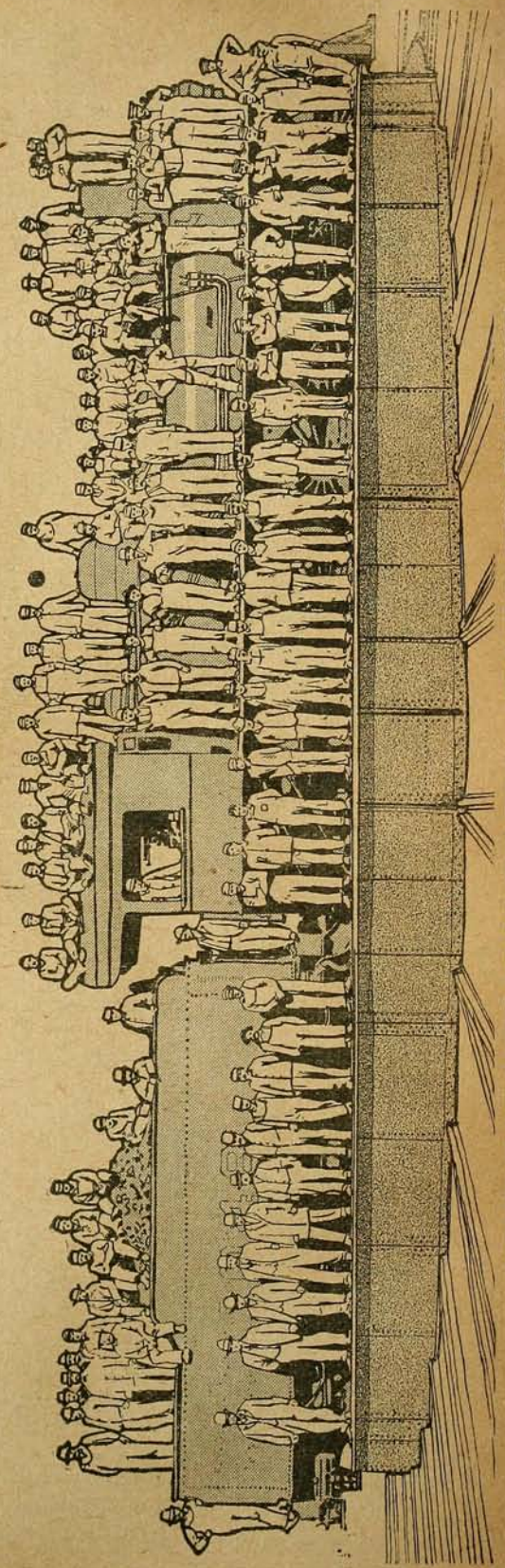
At this particular time of adverse legislation against railroad companies, if all employees would take a hand in the fight to overcome the general sentiment of rate curtailing, etc., things would soon change and the other fellow would sit up and take notice. Don't be afraid to "put in your little oars" for the company which treats you right, and needs your help.

One hears men say, "I wouldn't do that, you're not paid for it." Such employees should be dropped from the pay-roll forthwith, as they not only retard the work of their fellows, but put a stone in the path of the man who would serve his employer conscientiously if left alone.

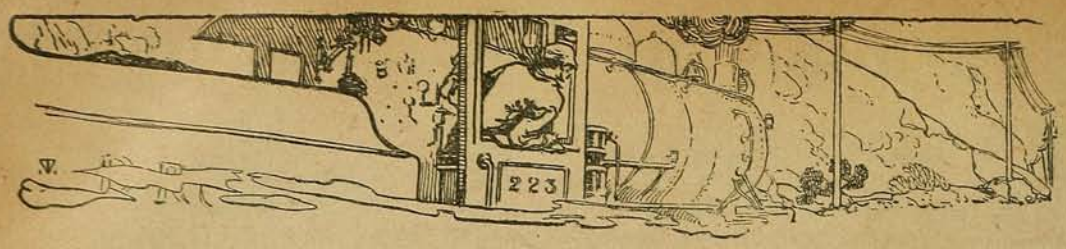
A man can do more harm in continually growling about his position, his superior, or his pay, than by adopting the alternative. If things don't suit, grit your teeth. Your silence will have a greater tendency to make matters right than will your growls.

Get in and boost, and, if you cannot boost, DON'T KNOCK. We are all treated right and better than the average working man, in that we are put upon our honor and expected to perform an honest day's work for fair pay.

When you hear an outsider finding fault with the railroad, remember he is talking about your employer, and if you do not think you can dissuade him from his way of thinking, do not take sides with him. Let the world know, if necessary, that you are proud to be a railroad man.



WORKMEN OF THE ILLINOIS CENTRAL SHOPS TAKING A LITTLE AIRING DURING THE NOON HOUR.
Drawn from a photograph by J. C. Lindgren.



WINNING A WIDOW.

BY FRANK CONDON.

Is It Lucky for Fireman and Engineer to Travel Together When They Love the Same Woman?

THERE was once a widow in Chicago. There are still widows in Chicago — handsome, dashing, buxom widows—with eyes like the stars, and a fund of miscellaneous information concerning the opposite sex that would make an encyclopedia look puny. There will always be widows in the city on the edge of the inland sea, but if you happened to be connected with the operating department of the Genesee Central Railroad, and knew the facts, as you certainly would know them, you would instantly recall *the* widow.

Her name was Marie, which is one of the most appropriate names a widow can have. She had a final name, but it doesn't matter now—it is her name no longer.

When Judson took the throttle of the Eastern Limited, he sent in an immediate requisition, the burden of which was, that unless O'Rourke were made his fireman, life would be a dull, drab thing. The Genesee Central people looked over O'Rourke's record and found that he had been firing freight-trains in a thoroughly patient manner for three years, and that there was no particular reason why he should not be appointed fireman on the Eastern Limited. So O'Rourke got the job, and Judson demanded thanks.

"I don't see any particular advantage in this new job," said O'Rourke ungraciously. "I'll have to work a little harder on this old wreck you run, that's all. If you'd have let me alone, I'd still be sleeping peacefully on the Coal and Iron special."

"You have no ambition," retorted Judson. "I am directly responsible for this promotion, and if you work hard you'll be elected some day to handle a throttle."

"All right, son," responded O'Rourke. "Much obliged for the new job. As a matter of fact, you had me appointed because you need an intelligent human being in the cab with you. Most of the rummies who have fired for you wouldn't know the difference between locomotive firing and locomotor ataxia."

O'Rourke was twenty-nine and Judson had slipped along to thirty-seven. They had known each other for fifteen years, eaten out of the same chowder bowl, slept in the same bunk, worn the same clothes, smoked the same pipe, and loved the same women.

They admired each other's good qualities in secret and openly criticized each other's weaknesses. As often as the exigencies of the business permitted, they hunted each other up, and, consequently, they were the best friends in the world and continued to be such, until—until the coming of the Widow Marie.

This happened months after O'Rourke began firing for Judson. Almost from the very first, the Widow Marie brought a baleful influence into two hitherto peaceful existences.

Judson met her at the annual ball. After he had danced with her until the matter became public scandal, he escorted her to an expensive food hangar, and spent an amount of money buying her choice viands that would have driven his old mother frantic, had she known.

Then, as a matter of course, he introduced O'Rourke. From that vital moment the forces of trouble began to gird on their armor.

O'Rourke discovered the cause before Judson. He was standing before the gage of the big Atlantic, when it occurred to him that a little conversation might help matters along.

"There is no sense in it," he said shortly, looking up at Judson, who was staring glumly out of the cab window.

"There is no sense in what?" replied the engineer, without moving.

"In the way you've been acting lately. You'd think I had suddenly murdered your entire family, by the way you've been treating me. What you need is to have some large, brawny individual come along and hand you a tunk on the cabeeza."

"I don't know what you're talking about," replied Judson coldly.

"I'm talking about Marie," said O'Rourke.

"What about her?"

"Nothing, except that you think I've cut in on your preserves, that's all. I will admit that I've tried to be pleasant to the lady. I've called at her home and she is certainly one swell little widow. I have seen some very dapper widows in my time, but this one leads the army. But the idea of your getting sour thoughts—my, my, my!"

"I don't think I care to talk about this matter. Just drop it," said Judson, climbing down from his seat. "If you'll keep the steam up about twelve pounds, we'll be pulling out soon."

They dragged the Eastern Limited through Illinois and Indiana that evening without indulging in unnecessary conversation. Other evenings followed, all similar, and the breach between the erstwhile good friends began to acquire an appearance of permanency.

The Widow Marie went calmly on her way. Judson had long since passed the last stage of complete sanity, where she was the question, and O'Rourke took an added interest in her because of Judson's hostile attitude.

He visited her as often as he was permitted and spent ridiculous portions of his salary buying her gifts. Friends of Judson said things that in no way contributed to his peace of mind.

On the night of the 26th of September, the heat sizzled and eddied through the roundhouse. In a cab it was almost unbearable, and Judson climbed up the ladder in a temper that needed one harsh word—just one harsh word and then devastation and death.

O'Rourke was late. For the first time since his appointment to the Eastern Limited the fireman was behind time, and Judson puttered about the cab thinking of appropriate remarks.

The excessive heat had acted directly on O'Rourke's disposition and he was boiling in several places when he hurried through the yards to his engine. Oddly enough, Judson said nothing. Neither did O'Rourke.

They jolted the Atlantic out through the yards and down the side-track to await the arrival of the limited from the west. Any close student of human nature could perceive at once that a cyclone was slowly gathering in the cab. Judson poured oil into the monster of steel and steam. O'Rourke busied himself in the cab and occasionally cast an idle glance towards the passenger gates where the usual hurrying, nervous, petulant mob waited for the limited.

She came in twenty minutes late. The engineer and fireman had not spoken a word to each other and it was at Scarsdale that the storm broke. In the comparative silence of the cab, Judson looked across at O'Rourke through a wispy eddy of steam, and remarked:

"You're a cur, aren't you?"

At first the fireman simply stared across the boiler-head in mute amazement. Then the full force of the question struck him, and his bronzed face flushed.

"What did you say?" he asked quietly, looking intently at Judson.

"I said you were a cur."

"Meaning what," continued O'Rourke, still more quietly. His fingers were trembling over the wrench in his lap.

"I mean that and nothing else. You think that I don't know what you've been doing and what you've been saying about me to—to her. You think that you've been a sly, clever dog and that you've pulled the

wool over my eyes; that I don't know how you've been telling lies to her about me and how you've been knocking me just because you want to win her yourself.

"I've always thought you'd play fair no matter what happened between you and me, and now I find you out. I've got friends, otherwise I don't suppose I'd ever have found out what a mean pup you are."

"If you mean all you've just said," replied O'Rourke, rising to his feet and dropping to the floor of the cab, "you're a liar."

Judson half rose, with rage glaring in his eyes. The shrill squeal of the air-whistle halted him midway and he sank back. Mechanically the throttle came out under his firm pull and the Eastern Limited grunted and bucked as it gathered headway.

"I said you were a liar!" bellowed O'Rourke. "You're a chump to believe what you heard—but you wanted to believe it. Who introduced me to that woman? You did."

Judson heard him and turned to answer. O'Rourke was glaring up at him angrily, oil-can in hand, with the light from the fire-box throwing flashes in his face. For five minutes they yelled insults at each other—hot, bitter words that escape from a man's lips when rage has the upper hand. Judson turned suddenly and leaped from his seat straight at his fireman.

O'Rourke threw himself aside and caught Judson on his shoulder. In the same moment, the engineer swung his fist in half a circle and the blow fell with a crash upon O'Rourke's open mouth. The fire-box door clattered back and forth and the blaze from the furnace below outlined the two men as they stood in the center of the cab lunging wickedly at each other.

O'Rourke dropped his oil-can and recovered from the impact of the engineer's blow. He forgot that he was fighting a superior officer and his heavy fist descended, rocking Judson's head. The men backed away from each other, poised a moment and then came together. O'Rourke landed a heavy swing and Judson fought him back madly almost to the tender.

There was no room for fancy fighting in the cramped space. Fist crashed against face, neck, and stomach. For five minutes, the former friends battered each other with every ounce of strength in their bodies.

The Eastern Limited, twelve loaded Pullmans, slipped along into the night, picking up speed momentarily—a rushing monster on twin strips of steel. At Lisbon, the hurtling mass flashed by a red danger lamp at sixty-five miles an hour. Three minutes later, the trucks struck the open edge of a switch and held. An instant later, the rushing train smashed into the rear of a coal train.

The wreck of the Atlantic was complete. Twelve Pullman coaches jammed her snorting hulk deep into the coal-cars. With a final gasp, she turned over. Judson and O'Rourke went under with the cab.

The wrecking outfit hustled along within an hour. The big crane groaned and creaked as it tugged at the hot mass of coal-encrusted metal. Fifty men leaped forward as the cab rose and disclosed the unconscious figures of the fireman and engineer. Somebody placed a skilful ear to their hearts and announced that they were still alive.

In the third Pullman, Judson and O'Rourke were laid out carefully and the only physician on the train went at them with sharp steel. He found both men badly battered. He noted also, with surprise, that both men displayed facial and bodily injuries that scarcely could have come to them in the wreck.

"They will live," he said.

Judson and O'Rourke came back to their senses almost at the same instant.

The head of each man was supported by a silk sleeve, and the silk sleeve covered the tapering and shapely arm of a woman.

They looked up painfully, as the Widow Marie smiled at them.

"You'll get well," she whispered gently, bending low. "The physician says so."

Judson tried to speak. O'Rourke attempted a brief conversation. The effort threw both into their former state of oblivion.

The injured men were hurried to Chicago and placed side by side in a hospital. The nurses worked over them determinedly, but it was more than a day before O'Rourke opened his eyes again. Judson lay five feet off in a peaceful slumber.

"What happened?" O'Rourke asked the attendant. "We were wrecked, weren't we?"

"You ought to be glad you're alive," said the nurse smilingly. She was seated at O'Rourke's side and in her lap lay a morning newspaper. "This is what happened."

She held the open paper before the fireman's eyes and he read the account of the wreck painfully and laboriously. Half-way

down the column he ceased reading and stared uncomprehendingly at a sub-heading which ran, "Angel of Mercy Aboard Wrecked Flier."

Then he remembered. What followed assisted him. It told of a beautiful woman, a heroine. She had plunged into the worst of the wreck; she had given the injured men every possible aid; she had helped the surgeon as he worked over them and she had held their battered heads in her arms.

"The Widow Marie," O'Rourke muttered, as he read on.

"While her husband of a few hours labored to restore life to the two mangled trainmen, this beautiful bride, etc. etc.," ran the article. O'Rourke kept his eyes open by a violent effort and continued down the column.

The Widow Marie had married the surgeon that morning. They were beginning their honeymoon. Fortunately, they had taken the wrecked train, and were thus able to render valuable assistance. The surgeon's name was Manners. O'Rourke brushed the paper from him with his unbandaged arm and turned to the sleeping Judson.

"How soon will he wake up?" he asked.

"In an hour or two," replied the nurse.

"Are you sure?" murmured O'Rourke sleepily.

"He should awaken then or a little later."

"I'm pretty tired—pretty tired," continued the fireman; "but I'll wait until he awakes. Will you please look at that newspaper again and tell me the name of the doctor who was on his honeymoon with the beautiful lady who held our heads."

"His name was Manners," replied the nurse.

"Manners—Manners. Thank you," said O'Rourke. "Judson will probably want to know."

When Bill Was Boss.

BY CY WARMAN.

And It Came to Pass that Bill Is Now the President of a Great Railroad and the Judge the Governor of a Great State.

SOON after he had emerged from the dewy dawn of his railway career, Bill got a night-trick at Detroit, and in a short time was made trainmaster, for he was a steady worker and one of the best listeners on the West End.

An enterprising traveling passenger-agent conceived the idea of persuading some of the people of Bay City to circulate over a part of the Grand Trunk, to visit Detroit and see Belle Isle bust the river wide open, and told Bill of his plan. Bill listened, wide-eyed, to the rosy pipe of the passenger man, and in a few days the latter went to it. Scores of people said it was a good idea, and some said they'd go, sure.

Unfortunately for the affair, however, it began raining in the early evening of the day before, and on the morning set for the excursion it was still pouring. About noon Bill got a wire from the T. P. A., dated Durand, saying: "Still raining; only one excursionist; what shall I do?"

Bill answered: "Chain the poor boob to the seat and run him through to Detroit. We can't have anything fail on the West End."

In due time Bill became superintendent, and was sent down to a certain city where the force was all flat-wheeled from being too long in one place. Bill had been notified that the baggage department at the East End wanted icing, and, finding it in pretty bad

shape, he wired the head of that department: "Send help, quick!" The answer came: "Sending Thompson."

Thompson took his place in the baggage-room looking very much like the bulldog in the express picture.

Next morning one of the excess boys blew in and saluted the new baggageman.

"Here, Cholly!" he called airily. "Check me this box to Kingston." As Thompson placed the box on the scales the other man laughed loudly.

"Evidently he is new on the job," thought Mr. Excess.

"That'll be a dollar," said Thompson.

"Oh, I guess not—D. H. and P. D.," said the other with a smile, as he shoved his hands deep into his sack-coat pockets, squared his shoulders, and turned to leave.

He glanced back, but as Thompson had only rolled the box to one side, he came back, leaned over the low counter, and said: "Check, please."

"Dollar, please," said Thompson.

"Say, are you trying to be funny?"

"No," said Thompson.

"Know anything about *me?*"

"No."

"Know anything about anything?"

"Some."

"Well, I'm goin' to report you to the sup, right now."

"He's up-stairs."

"Don't you give me any lip!"

Thompson went on with his work, and Mr. Excess hit the third step from the floor and went up. He knew Bill by sight, and, pulling up in front of the superintendent's desk, he began to tell his story. Bill just looked and listened. When he finished, Bill was still looking and listening.

Mr. Excess thought Bill didn't understand, and started in to tell it all over again. Presently Bill asked:

"Who told you that?"

"Why, your new trunk-wrestler."

"Sure he was the baggageman."

"Nothin' surer—got the literature on his headpiece."

"And he told you that?"

"Sure."

"Well, I guess he knows. He's the baggageman."

Mr. Excess went down slowly, produced a dollar, got a receipt, and said:

"Say, Mr. Wise Guy, do you know somethin's goin' to happen to this Jim Crow, jerk-water parody on a railroad."

"Yes?"

"Yaas! I'm goin' to send everything I sell over the C. P. after this."

"Then," said Thompson, "I presume the Grand Trunk will stop buying supplies from Black and White."

That made Mr. Excess sit up and think. Still, he had a little fight left.

"It's lucky for us you don't do the buying."

"No; but I'll let 'em know how you feel about it."

Presently Mr. Excess came back, and said: "Guess we'll call it off, eh?"

"Too late," said Thompson. "Just dropped an R. R. B. in the mail."

Mr. Excess became nervous.

"That's your train," said Thompson, as a ticket-taker bellowed "Board!"

"Look here," pleaded Excess. "You stop that report, or I'll lose my job."

"Can't stop that."

"Then send another. Kill it, and you've got my freight for life. Here's my hand."

"All right," said Thompson, as the tamed traveler sprang for the last car.

In the course of railway events, Bill became general manager of a considerable railroad which had fallen into the hands of a receiver. This latter official was a judge—he's a Governor and Presidential possibility now—and he started out to look the line over, to cheer the live ones, and remove the dead ones.

When he stepped ashore at Detroit he was somewhat surprised that the G. M. did not appear to make him welcome, and, incidentally to water his own stock personally. Presently the judge observed a stout man looking at him with big, frank eyes.

Each looked steadily into the eye of the other for several seconds, when the judge ventured:

"You're Mr. So-and-So."

"Yes. You're Judge Blank."

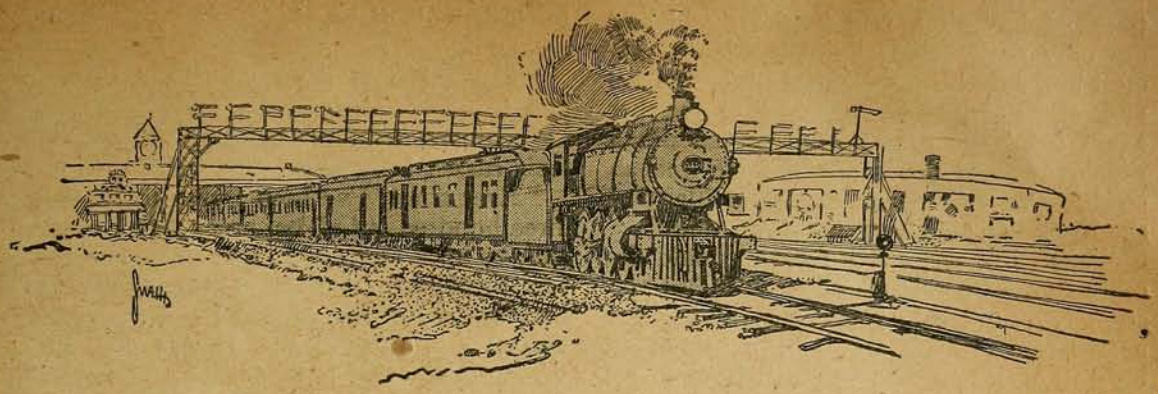
"Yes."

When they had looked and listened for a long time the judge side-stepped slowly and leaned on a fence. Bill followed, and, facing each other again, they both said nothing for a spell. Presently the judge spoke.

"Well, I guess we understand each other now. Like to have you stay on the job."

"All right," said Bill.

Of course, I'm not mentioning any names, but William is president of the Pere Marquette now, and the judge is the Governor of Ohio.



Told in the Smoker.

BY RICHARD MAXWELL WINANS.

The Things that Happen to the Captains of the Grip in the Day's Run Are as Varied as the Lines of Goods They Carry, and as Exciting as Some of the Stories They Tell.

HOW THE RAILROAD PAID.

THERE were three of us in the small smoking compartment on an afternoon train eastbound out of Asheville, North Carolina. Paxton had covered his territory as far down as Mobile with a line of hats, and Welling was just in from the Mississippi Valley, where he had been showing dress goods.

About the time we were comfortably settled, the train slowed up before the little station at Biltmore. Among the passengers who came aboard there was a middle-aged farmer who entered the smoking compartment and took a seat opposite me. He was a seedy individual, not only in his dilapidated exterior, but in his manner as well. He was a good type of the mountaineer class of tar-heels of that section.

He didn't wait for the formality of an introduction, but immediately put himself in communication with any one mutually inclined. He impressed me as being a man with a great mental burden who was looking about for a little assistance to help tote it around.

"I done reckon," he said, in a tone of inquiry, looking directly at me, "that you-all am gen'elmen from the No'th?"

"We all live in New York," I replied.

"Well, sah, in that case I don' min' confidin' in you-all, an' trustin' to yo' honah not to—"

Just here his confidences were rudely interrupted by the appearance of the conductor in the doorway with his polite request: "Tickets, gentlemen!"

Each of the occupants of the compartment pulled out a mileage book, except one man with a strip ticket, and the farmer, who presented the most woful countenance I have seen o tside of a funeral.

The conductor waited a decent length of time for the man to produce a ticket, and then said firmly:

"Ticket, please, sir."

The man with the woful face had been looking at his hands, which were nervously clasping and unclasping on his lap. When the conductor spoke, he looked up, and I saw tears trickling down his wrinkled face.

"Please, mistah conductor," he said, half choked with strong emotion, "I'm a po'h lone man, an' I'm in a pow'ful lot of dis-

tress. I haven't a cent in the world and my only daughtah is dyin'"—here he almost broke down, but he choked back a sob and continued—"an' I want to see her again befo' she passes ovah to the othah shoah. Please don't put me off, mistah conductor. It's down at Statesville that she lives. It ain't very far down thar."

"Well, I'm very sorry for you," said the conductor, with a touch of pity. "But you see, sir, I can't help you out by giving you a free ride on this train. I'm sorry, but orders are orders, and you will have to get off at the first stop we make, which is Marion. That is quite a way down the line and will give you quite a lift on the trip."

"See here, conductor," said Welling, who was much interested in the little scene, "that's all right. We are all gentlemen here. No one will ever be the wiser if you let him ride through. Pass him along, and let him go to his sick daughter."

"I haven't a doubt but that you are gentlemen, all of you," the conductor replied, "but I've a tip that there is a ticket auditor on this train, and if he checks me up after I've done collecting, why I'm going to be short if I pass this man. That's worth as much as my job. No, I can't take any such risk to-day."

"Well, then," said Welling, "I'll pay for his trip. What is the fare to Statesville?" and he pulled out a roll of bills.

"Oh, no, you don't! Not on your life!" the broken-hearted man almost shouted. Both the tone of his voice and his diction had decidedly changed. "I won't let any man do that for me; though I thank you just the same, sir."

As he spoke, he drew from his inner coat-pocket a big bill-case packed tight with yellow boys, from which he selected a twenty and paid his fare. The conductor, after collecting the fare, gave us a look of compassion and passed out the door.

"Gentlemen," said the farmer as the conductor slammed the door, "I owe you an explanation and an apology for what has just happened."

"All right," said Paxton, giving Welling a look that made him feel uncomfortable, "we are all good listeners. Fire away."

"Well, it's this way," continued the would-be free rider, passing around a case full of good cigars. "About five years ago this here railroad killed a mare of mine—a fine roadster, too, she was—run over her in broad daylight, before a dozen witnesses.

"She got onto the tracks because of a gap in one of their rotten fences. I sued the company for three hundred dollars, but their cussed lawyers beat me out.

"Ever since, I've been trying to get that three hundred out of 'em every way I could, and, by hook and crook, sometimes one way and sometimes another, I've managed to beat 'em out of two hundred and ninety-six dollars and fifty cents. It was the other three dollars and a half I was trying for just now. I failed this time, but I'll get the money yet."

WHEN PURDY PAID UP.

"WELL," said Paxton, when the man had finished, "I take off my hat to you for hanging on till you get even. However, you haven't much on an old friend of mine for dogged patience in waiting for an opportunity to even up a score.

"There was Purdy," said Paxton, "I guess you fellows remember Purdy when he was traveling through the South for a firm of overall makers.

"One trip, when he was working Asheville, he met another drummer carrying the same line out of Chicago. Although they were working the same territory and were strong competitors, they came to be very fast friends, sometimes going so far as to split up a town between them or working separate towns in the same territory and dividing the orders at the end of the week.

"Some time after their acquaintance they met in a hotel in Raleigh, and a few minutes' conversation developed the fact that both intended to work the same towns on one of the roads leading out of Raleigh. Each of them had calculated on working four towns during the day.

"It was summer-time, during one of those hot spells that just about meets a Northern man in the South; so, when his friend Harris suggested a community of interests, Purdy instantly accepted. Neither was falling over himself to make those burgs the scene of a heat-selling contest.

"There were seven towns. Each took three, agreeing to meet at the seventh at the end of the day's work. When they reached it they put up together in the same room at the hotel.

"Both men had done a rattling good day's business in the towns he had cov-

ered; but both were fighters, and, in order to keep in practise, they agreed to fight it out over the business in the last town the next morning.

"They went to sleep, joking about the hot fight each was going to give the other on the following day. Purdy was a very heavy sleeper, and had said that he would leave a call with the hotel clerk; but Harris told him that he always woke early, and that he would call Purdy when he arose—so Purdy let it go at that.

"But Harris did not keep his promise. In fact, he hadn't intended to. When Purdy finally awoke it was after eleven o'clock. Harris had not only gone, but had locked the door.

"By the time Purdy dressed and was able to get out it was after noon, and when he got down-town he found that Harris had sold every customer in the place and had taken the limited to Raleigh. He had left a note at the hotel for Purdy, saying he was sorry that he forgot to call him; and that, as he had only a few minutes to catch his train, he wasn't able to drop in to say good-by, which he regretted.

"They met several times after that, but neither referred to the incident. Purdy was waiting his chance to get even, and he waited nearly six years before the opportunity came.

"They were both working the same territory in the southern tier. Fever was raging on the Gulf Coast, and a shotgun quarantine had been established in southern Alabama.

"When Purdy landed in one of the best towns in that section he learned that Harris was to arrive the next day. Here was his chance. Without hesitation he went to the excited authorities of the place and informed them that he knew of a man who had been exposed to the fever in southern Mississippi, and who had declared his intention of defying quarantine and coming into town the next morning.

"Beside giving them Harris's name, he furnished them an accurate description of him, and the officials were soon carefully watching every train that arrived. When Harris finally landed he faced a dozen shotguns in the hands of the local authorities, who, despite all protests, placed him in the pest-house, and kept him there for a week.

"In the meantime, Purdy was unusually busy. He worked and secured all the business in every town in the surrounding section. Before he left he wired Harris his congratulations, with a very pointed reference to old times and an early call. Harris thought it was just a bit more than an even game, and he has been gunning for Purdy ever since."

THE PERFIDY OF THE PLUG CUSTODIAN.

"WELL," said Welling when Paxton had concluded, "I hope he has better luck than two other fellows and I had in our attempt to get even for the trick played on us by a fellow traveler on a trip over in Tennessee a couple of years ago.

"We four fell in together in a little town, and ran into a combination of circumstances that would make a good comic opera.

"We stopped at the best hotel, but it was one of those slipshod places where they have four rooms with baths and only one bath-tub plug. When one of us got ready for a dip he had to call the porter and have him beg the holder of the precious plug for a loan of it.

"As you can imagine, this was pretty awkward at first; but toward the last we four got together and formed a close organization which we called the 'Independent Order of the Knights of the Plug.'

"We had a constitution and by-laws, and formulated rules by which we swore to govern ourselves with regard to this very desirable and indispensable article. We agreed upon a schedule of hours when each was to have the plug, and the order in which it was to be rotated among us.

"We also placed a time limit on the period for keeping the plug. A system of fines was established for keeping it overtime.

"The fines thus collected were to be donated to the hotel management at the end of our stay, together with a pertinent recommendation that the money be used to purchase a full supply of plugs for our next visit.

"Quite a sum was realized, however, and we decided at the last moment to amend the constitution and spend the money in a way that would give us pleasanter results. To this end we concluded to give a banquet for the members of the I. O. K. P.

"The funds of the order were turned over to a committee of one, who was to

arrange for the feast. When the time came for the banquet we waited and waited about the door of the place where the spread was to be served.

"The man with the funds had not yet arrived. After the end of an almost interminable time, when our patience was altogether exhausted, a messenger came with a note, which read as follows:

> FELLOW MEMBERS, KNIGHTS OF THE PLUG:
>
> I received a telegram this afternoon from the house calling me in. I had no time to communicate with the other members, so I have taken the afternoon train for Chicago, finding the funds of the organization very convenient as expense money. Also, which will perhaps be even more reprehensible in your sight, I took the plug with me. I had become so attached to it that I just couldn't bear to part from it.
>
> So I have gone—plug, money, and all. I have no excuse to offer except that I couldn't stand to think of you fellows making merry at that feed without me, and I knew you couldn't have the extra eats without the price.
>
> Forgive me, as you hope to be forgiven for stopping at a hotel with four bathtubs and one plug. I don't believe it will be laid up against me in the final judgment—that is, if you fellows ever get a chance at me before that time. Yours brazenly,
>
> CUSTODIAN OF THE PLUG.

"Well," concluded Welling reminiscently, "I guess you can imagine what a disappointed lot we were. It was too late to get him back and mob him!"

PAXTON'S HOT BATH.

"SAY, but you were lucky, though, to have a real bath-tub," laughed Paxton. "It isn't every place in the South, even to-day, where you can have that. The South has awakened, all right, and is booming along; but even now in some of the little back-country towns the hotel service is about the limit, even to a fellow who knows what it is to rough it.

"I'll never forget an experience I had one evening in March down in the wilds of Kentucky. I had driven thirty miles that day over mud roads, and I was wet and chilled clear through. Arriving at the hotel, which had the outward appearance of being quite comfortable, I inquired if I could get a hot bath. To my delight, I was told that I could.

"I went to my room, disrobed, and, throwing a bath-robe around me, I called the negro porter. At his command I followed him down the corridor. Outside a fine rain, half snow and sleet, was falling, and a high, piercing wind was blowing.

"By and by we emerged upon the latticed back porch on the second story of the hotel. There in a latticework that was covered with vines in summer stood a bath-tub, into which the negro boy had dumped a couple of buckets of steaming hot water.

"The latticework was all open, and the flaring lamp, sizzling as the snow-flakes struck its hot chimney, revealed me to all the neighbors in the rear of the hotel. After I had sized up the situation, I tried to tell the porter, my teeth chattering till they fairly snapped, what I thought of such an arrangement, and passed up my bath in as good order as was possible under the circumstances."

"Well, you had the advantage of hot water, anyway," said Welling. "That's something they didn't give me down in Georgia, when I asked for a bath after I'd come in from a hot day's work. I told the proprietor of the little two-by-four hostelry that I wanted a bath, and he turned me over to the colored boy, who led me out to the wagon-shed.

"He told me there was 'rangements fo' washin' ' out there. I was piloted to an abandoned granary to disrobe, after which I was to step 'ovah to th' othah end whah th' 'rangements was.'

"When I got there I found the boy waiting for me with a line of hose in one hand and a big palmetto-fiber scrub-brush in the other, ready to turn on the water and give me a bath, together with a regular horse-currying with that wire-edged brush.

"The water in that hydrant was from a tank filled by a windmill from a well, and cold enough to freeze the marrow in a fellow's bones. I forswore the bath, and also swore at the 'rangements.'

A PATENT CYCLONE-CELLAR.

"SPEAKING of arrangements," continued Welling, "I had an experience once that beat anything I've ever run up against. It was in my early days of traveling, when I was selling farm-machinery in western Kansas. I had struck some queer hotels, but the oddest lay-out of all was owned and operated by a genius named Sellers, and I'm willing to wager he was

some relation to old *Colonel Mulberry Sellers*. His place was in a little village in Sheridan County, about eighteen miles from Hoxie.

"Sellers was a queer character. His specialty was invention, and he was always telling of his dreams of that proverbial million. I suppose he had invented more worthless things than any man. Almost everything he made would work, but they all required more time and labor than the things he had tried to improve.

"His barn-lot and his barn, as well as his little one-story hotel, were filled with the things he had invented, and I really think he was only handicapped in his inventing mania by lack of space to store his creations.

"When I first called on him for accommodations, he put me to bed in a small room, possibly not more than eight by ten feet, with one small window and an extremely narrow door. One peculiarity I noticed as he showed me into the room was that the place appeared to have double walls. He had the reputation of being a fine old chap generally, or I would have felt a bit squeamish about occupying the room.

"The night was unusually sultry and close. With only one window open at the top, there was little ventilation. During the night, I was aroused from a sound sleep by a creaking, jarring, and rumbling. The first thought that flashed into my mind was that a cyclone had struck us. With a bound, I leaped out of bed and ran to the window.

"As soon as I touched the floor, a sickening sensation of falling came over me. Everything was as dark as the Black Hole. In my excitement, I rammed my arm clear through the window, and was dumfounded to the point of speechlessness when my fist struck solid earth.

"To say that I was terror-stricken isn't overdrawing it a bit. I was on the point of doing something desperate, when, with a sudden jar, the movement ceased and we began to ascend again, and then stopped suddenly.

"Just as we stopped, a gust of wind struck me through the open window, and I was about to climb out through the opening when Sellers opened the door and asked in a triumphant tone:

"'Well, how did she work? Were you scared, mister?'

"In no very mild language I demanded an explanation of what had occurred.

"'Cyclone,' was his cheerful reply. 'Took the hoss-barn and two haystacks clean, pulled the windmill up by the roots, and mussed up the best part of town. I thought it was going to hit this shack, and so I let you down.'

"The next morning he showed me the mechanism of his arrangement. Every sleeping-room was, as I had surmised, a double room, the inside being on the same principle as an elevator. He had rigged up weights and counterweights on these elevator-rooms so that by working a small windlass he could drop all the sleepers in his hotel down into the cellar until an approaching cyclone had passed over."

WHY HE ASKED.

"THAT reminds me," said Paxton, "of a cyclone I once took part in out in Kansas. I was selling windmills and pumps those days, and the hotel accommodations weren't anything to make a boast of in the territory I was covering.

"One night I had to double up with two cattle-drovers in one dinky little bed, and I thought that was going some. But the limit was reached, three days later, when I came to a small town, tired out from a long drive across country, and inquired of the only hotel in the place for quarters over night.

"The hotel proprietor said he regretted exceedingly that he had but one small room, and that was occupied, but he hoped I would not object to doubling up with the occupant, who had already retired.

"He lighted me up to the room, showed me the bed, put down the light, and as he started to leave he asked casually:

"'I suppose you have had smallpox?'

"'No, I have not had smallpox,' I replied, wondering at the question.

"'Well, that's bad,' he remarked, and added cheerfully, as he again turned to the door, 'but I suppose it can't be helped.'

"He was about to close the door, when I called after him:

"'Say, what has smallpox got to do with this deal?'

"'Oh, nothing,' he answered coolly, 'nothing—only your bedmate has it!'

"Right then is when the cyclone started. It was a double-header the length of the hall, all the way down a flight of stairs, through the cluttered-up little office, out across the porch, and into the starry night, finally winding up on the north side of the horse-barn, where it just naturally flickered out because I was winded."

THROUGH BY SUNRISE.

BY WILLIAM S. WRIGHT.

SYNOPSIS OF PREVIOUS CHAPTERS.

HERMAN TILLMAN, whose real name is George Clifford, son of a titled Englishman, has earned his father's displeasure by marrying the daughter of a Commoner and has sought seclusion on a small island off the Scottish coast. Here he is traced by his father's secretary, Peter Raymond, who for his own evil ends leads the villagers to believe that Tillman is a murderer, forger, and robber. An old minister, Mr. Moreland, who has come from Tillman's father, is assaulted, and Raymond tries to lay the crime at Tillman's door but is, himself, accused by Moreland. The old minister has been instrumental in winning the father over to the extent of providing a yearly allowance for his son, with the proviso that he and his family leave England and settle in America. They are wrecked and, in the excitement of manning the life-boats, Clifford disappears.

CHAPTER VI.

In an Open Boat.

AS the life-boat in which George Clifford was being lowered to the sea, a block that had in some way become detached from the rigging fell and struck him on the head. He was rendered unconscious, but his body in falling struck squarely in the boat that was being lowered at the time.

Several of the excited sailors, imagining that he was killed, actually kicked the body under the seats of the boat, for, be it known, a life-boat is unusually large and roomy and its peculiar construction makes it safer in a heavy sea than an ordinary ship.

It was useless to ply the oars in order to make any headway. All that the sailors could do was to keep them in the water in the hope of steadying the boat as much as possible and wait for the terrible storm to subside. This they did, the terrible blackness only adding to their horror.

The heavy sea dashed over the boat, drenching the men. The able-bodied seaman knows how to brace himself against such an enemy, however, and when he understands that the boat, if not loaded too heavily, will ride the waves like a cork, he knows that he is perfectly safe.

He is much safer, in fact, than he would be in a large steamer or sailing vessel, for the great weight of such craft puts them in the position of a buffer, and the waves are liable to dash them to pieces while the vessel is trying to ride them.

When morning dawned, the sea had somewhat abated, and the cliffs of Dover on the Maine coast stood sheer and high in the distance.

Though famished and weak, the men plied the oars willingly. They estimated that it would not take more than an hour to make a landing. They knew the coast well.

They had not paid much attention to Clifford, but some time during the night, the terrific onrush of the cold water had brought him to his senses, and he faintly realized that he was in an open boat at sea.

He thought of his wife and little ones and prayed that they were as safe as he at that moment. The thought that they might have perished unnerved him so that he could not keep his mind at ease.

The position he was forced to occupy in the boat was more than uncomfortable, but he bore it with fortitude, and a kindly sleep robbed him of further torture.

A few hours after the men had sighted the Dover cliffs, Clifford awoke. The bright day startled him. He sat up, rubbed his head and looked around. There he was in a large open boat. Five lusty men—some in oil-skins, others with scarcely any cloth-

ing on—were tugging at the oars with all their strength.

Clifford looked around. The air was crisp and cool, the sun was shining brightly, and the greenish-blue sea with its succession of whitecaps somewhat fascinated him.

His first thought was one of thankfulness for his own life. As for his wife and children—if a merciful Providence had taken them from him, he would bear up bravely under the strain and let the terrible visitation make a better man of him. It would not suffer him to do otherwise, he said to himself. He would take it all philosophically.

But we cannot always do what we wish to do the most.

He looked at the men plying their oars and they looked at him.

"Are we safe?" he asked, his voice trembling with suppressed emotion.

"There is land ahead, sir," said one of the men. "It will not be long before we pull into shore."

"Where are we?" he asked again.

"Dover cliffs are on our bow, sir. If I know my bearings, and methinks I do, sir, we are not far from Devon."

"It was awful," said Clifford, recalling the storm that had separated him, perhaps forever, from all on earth that was dear to him.

"A bad storm, sir," went on the sailor who was acting as the spokesman.

There was a long pause, and then Clifford asked:

"Is this the only boat launched?"

"We were trying to launch them all when the full force of the gale struck us, sir. I saw one of them cut loose from the davits and swamp," said the spokesman. "I have been in a good many blows, sir, but that was the worst—the most sudden."

Clifford pulled himself up into a seat alongside one of the men.

Eagerly he scanned the now placidly beautiful water—but there was no other boat to be seen.

"I have seen no boat, sir," went on the sailor as if anticipating what was in the mind of the searcher. "When we got away, I pulled in the direction of the shore. It was very hard to discern anything, but I do not think that the old hulk stayed on top long after this boat-load got away."

"My God!" Clifford hid his eyes for a moment.

"I wouldn't be surprised if this were the only boat-load saved."

The words cut Clifford to the heart. The man meant to be kindly and sincere. He did not know the terrible force of that statement which pierced the heart of the grieved man as a blade pierces flesh.

CHAPTER VII.

At South Devon.

AS they pulled into a little cove near South Devon, Clifford gave a sigh of relief. The men had naught to say. They abandoned the boat and hastened to the nearest exchange to report the disaster, after bidding "good-by" to their grief-stricken passenger.

Soon the news spread through the little town and scores of people left their homes and their businesses to journey down to the beach where the boat stood—a grim spectacle of the terrible night.

Clifford made up his mind that he would stay in Devon until some news of his wife and children came to him. Day after day he went down to the edge of the cliffs and watched and scanned the great ocean for some tidings. He took the solemn oath that he would not return to his father or tell him what had happened. In the years to come, he would find surcease in his despair alone—if Fate had separated him forever from them.

He decided to return to England. So he took the first steamer for Liverpool, and went to live in Devon because it bore the same name as the American town in which he had landed.

He stayed in Devon, found employment in a draper's shop, and lived with the greatest frugality. Every penny that he did not need for his living expenses he put away, for he intended to make occasional journeys to America in the hope of finding his loved ones if they were still alive. All that Lloyds could tell him was that the ship had never been heard from and was reported to her owners as a total loss.

Tiring of Devon and having saved sufficient money he made a trip to New York. In the big American metropolis he found work and prospered, and he grew to like America so well that he resolved to make it his future home.

Time wore on and he prospered more and more, and then came the day when he fully

realized that there was no further need to search so blindly for the wife and little ones.

They had undoubtedly gone to their eternal rest in the ocean on that fatal night—now ten years ago. If they were alive, he would have heard from them.

In the course of time, Clifford became an American citizen and established his home in New York. He had been in correspondence with his father and had received his allowance, but when he renounced the British crown, his father asked to see him no more. That was more than he could stand.

But Clifford did not desert England altogether. He made frequent trips to South Devon, and in the little church there he erected a memorial window to his dead. He resolved too, that he would make frequent journeys to the little town—perhaps every summer.

CHAPTER VIII.

The Nightingale.

A GOODLY portion of the summer of 189–, had been spent by George Clifford in England. It included a lovingly remembered fortnight in South Devon, so dear to him—a land to whose ruddy headlands and topaz sands the Gulf Stream, tired of its lonely windings across the Atlantic, gives warm kisses of welcome.

Devon not only receives a largess of quaint and beautiful seaweeds and brilliant-hued fish and water like transparent sapphires, but other beauties that are not for less lucky coasts. The Devon air is ever bland and luscious, and the dialect of her people is full of softened consonants and emphasized vowels. Her maidens are famed for eyes of the hue of the deep waters off Mount Edgecomb.

Yet aside from its tender memories and the memorial window, the thing that made the memory of Devon dear and lasting to Clifford was just a little bird.

Clifford on one of his journeys from New York, had as a fellow passenger on the Altic a fine, sturdy, mahogany-faced specimen of the British squire, who, like himself, detested cards and preferred a quiet talk in the saloon or a promenade on deck.

George Trelawney was his name, and he was lord of one of those English country homes which is a big spreading structure of gray stone, covered with ivy, and lichen stained, laced with running roses and bowered in apple orchards, with a trout stream purling through the surrounding grounds. From a gorse-clad slope, one could glimpse the play and sparkle of the Channel.

"Run down and see us at Lynntor when you've nothing better to do," said the squire, with a touch of Devonshire dialect.

Clifford went to Lynntor, and the first night at dinner his host said:

"Mr. Clifford, you have no nightingales in America?"

"No," replied Clifford, adding with instinctive patriotism, "but we have mocking-birds."

"So I've heard, so I've heard, and fine singers at that, I'm told. But our nightingales are a bit different, I believe, in their—in their—"

"Technique," ventured Mrs. Trelawney.

"Thanks, dear," replied the squire.

"We generally go and listen to them if the night is fine. They're only little brown birds, but as a substitute for grand opera, they're not bad. Would you like to hear them?"

"I should be delighted," replied Clifford.

In the late twilight, the party started. A quarter of a mile back from Lynntor was a copse, its ledges fringed with clusters of primroses, whose blossoms shone luminous through the dusk. From the copse itself came many fragrances, including those of countless violets. The air was rich and sweet and full of hints of small, sleepy bird songs. In the hedges, the glowworms looked like blobs of brilliant emeralds.

The squire indicated the gnarled knee of a big oak as a seat for his guest, arranged shawls on a grassy slope for his wife, and was in the act of lighting his brier when from a point not far distant in the wood came a tremulous burst of exquisite melody.

The squire slid quietly down by the side of his wife, dropped his match, and nodded to Clifford, who nodded in return. The unseen minstrel's notes grew faint, swelled again, quavered, stopped, and then filled the night with music.

The far-off recesses of the copse yielded an answering song. The nearer bird replied in those liquidly tender phrases that make the nightingale's hymnal so infinitely sweet and so entirely sad. It was, so Clifford said afterwards, as if a lover was telling his love to her who loved him and who yet was saddening at the moment of his triumph, knowing that neither love nor beauty last.

Then, too, there was a longing for things beyond, inspired by the music that seemed woven out of the magic and mystery of the perfect night. Clifford listening, felt much that he had not felt before. Most did he feel the rebuke that the aspirational purity of the tones conveyed to him. It was as if an angel had come to him in the being of his wife and children. So his eyes were misty and his heart beating heavily when they started home.

CHAPTER IX.

Back in New York.

HE was back in New York once again. His cozy apartment seemed more like home than ever.

Nor was his pleasure in his habitation diminished by the discovery that he had desirable neighbors on the other side of the hall.

There were four of them and they were unmistakably bachelor-maids at that. They were young, good to look upon, possessed of a certain dainty self-possession many degrees removed from effrontery, kept no servant, usually came in burdened with divers parcels and made their abode tuneful at night with girl chat and a piano.

The walls of the Lysandria Apartments being not too thick, Clifford shared in their talk and their music to the extent of hearing a pleasant, if unrecognizable, medley of both.

The Lysandria was a Bohemian caravansary of the better class. The dwellers within its walls were for the most part writers and artists. The histrionic element was sparsely represented by a few of the lambkins from the fold of a neighboring dramatic school, innocents whose papas and mamas paid big fees in order that their offspring might learn much which they would have to unlearn if they ever "backed the lights," which ninety-nine per cent of them never would.

Clifford, after a chance meeting or two with his neighbors on the stairway, decided that the tall girl with the pretty face and tired mouth was a newspaper woman; that the dark, plump little soul, was in business —a stenographer or bookkeeper; that the young woman with the corn-silk hair and dainty figure was a prospective Maude Adams—or thought herself to be.

But the last, she of the white forehead, placid gray eyes and trembling lips, who was usually dressed in brown and had such an indefinable charm, was the one that attracted him most.

Clifford after many guesses at her occupation gave it up, but he discovered that she seemed to be at home more than the others, and that she it was who was responsible for most of the music at night and all of it by day.

But what attracted him most was that she appeared to be an indefinable memory of his. He had a vague, haunting impression that he had been with her, or talked with her, amid surroundings that were dimly dear or somberly sweet.

An inquisitorial review of his woman friends of the past, and even his mere acquaintances, resulted in nothing save the conclusion that he had never met the girl in all his life.

"In all my life," he said to himself, as he dabbed mechanically at a bit of moonlight on a nearly finished canvas, for he had taken up painting to while away his idle hours.

"Perhaps not in this life, but in some other life when I was—I was"—here he dropped his maul-stick, thoughtfully filled his pipe, and smoked dreamily.

"When I was what? This is queer! I was—unless I'm going dotty on the subject —about to get to the very verge of the little break in the recollections that lead up to her, and then—then I come to a dead stop. This kind of thing hints at the reincarnation chaps being on the right track after all. Yet it might be inconvenient, not to say unpleasant, if we could chuck bridges of memory over to our own and other people's defunct pasts. Suppose I discovered that a couple of eons ago, I borrowed the equivalent of a thousand dollars from that cad Dauber, and didn't make good, and Dauber had a similar revelation. Of course, the debt would be outlawed under the statute of limitations, but Dauber would talk horribly."

Clifford rose and took off his painting coat.

"Yet I do wish, simply as a matter of satisfied curiosity, that I could find out what has put this idea about the girl into my head. Does it come from within or without? Is it a mild mania or a spiritual intuition? It is—oh, hang it! I'll take in the Elysian Roof Garden to-night, and come back to sanity."

So matters stood for two or three weeks

and, in the interval, the singular impression that the girl in the brown dress had made on Clifford did not weaken.

In spite of his efforts, he failed to establish a friendship with his neighbors, or, rather, to advance the acquaintanceship whose horizons never came closer than a bow on the stairs and a salutation on the street.

Many were the devices he used to break down the barriers of reserve which the girls had built around them, but all to no purpose. These devices were, however, of a legitimate nature, for Clifford's instinct as a gentleman debarred him from using aught else.

For example, he sent them a formal invitation to one of his receptions. It was, as formally, declined on the score of previous engagements. A civic procession was to pass the Lysandria. Clifford's windows commanded the street, while the windows of the other flat did not. So he sent a message to the Lysandria janitor to the effect that his flat was at the service of less fortunate tenants, but that he desired his neighbors to be included in the invitation.

Again a brief and conventional note of thanks and regrets.

Meantime, Clifford thought that he detected symptoms of trouble in the other home. The girl with the tired mouth began to look more tired than ever, and "his" girl was certainly paler and a trifle thinner than when he met her first.

The music at night became less and less and the cheery flood of chatter in the evenings had begun to diminish. Twice, and in the middle of the month, he ran across the man who collected the Lysandria rents calling at the girls' flat with a dissatisfied visage.

CHAPTER X.

A Woman's Voice.

THEN came the incident which established his fears. An old Southern mammy had been discovered by him and used as a model. Subsequently he discovered that she was a cook of a divine sort, so he made her mistress of his kitchen and overseer of his household, much to her delight and his satisfaction.

One evening he walked out to where she was transmuting chicken into brown-coated ambrosia, and he sketched her while she was so engaged. The dumb-waiter door was open. On the other side of the shelf was another opening belonging to the other flat. Punctuated by the twinkle of plates, Clifford couldn't help hearing this as spoken by "his" girl and another:

"Mr. Gillespie says that he must have the balance of the rent by Saturday, Elaine. I met him on the stairs to-night. He was very unpleasant. What shall we do?"

"Well," came the voice of "his" girl, after a pause, "I still have my bracelet, dear, if the worst comes to the worst."

"That mustn't be," said the other, "you've already done more than your share for us all. Besides, if you do part with it, it will only put off the evil day."

"We won't say that. Let's say it will tide us over to the good day."

"That never seems to come."

"But it will if we wait long enough. On Saturday, Mr. Baring has promised to pay me something on account of my work. That will enable us to look the grocer and the laundress in the face again. I sold that little picture of the surf to Mr. Robinson, to-day, for three dollars, so that we sha'n't starve to-morrow, anyhow."

"Three dollars only? What a despicable shame for any man to offer you that figure for such a lovely thing."

"His" girl laughed cheerily. "Better than an empty ice-chest."

"True, but think what things will go into Robinson's ice-chest that really and truly belong to you."

Again the other's laugh rippled musically, as she said:

"Well, let's hope that he will have indigestion. But what about yourself?"

"Nothing very hopeful. The newspapers cut down expenses in the summer, you know. I may have a story in the *Planet* a week from Sunday; but I'm not sure. I have exactly four dollars and eighty cents to collect on Monday, Elaine. I wish I sold matches for a living."

Something like a sob followed.

"Never mind, May," said the other, "we'll pull through yet."

"I suppose so. But, oh! it's heartbreaking—this perpetual hoping against hope. This working for—"

"Now, May," said the other decisively, "I insist that you sit down, swallow this cup of tea and be good."

"Don't you think," suggested May, after a silence, "that Nellie and Ethel might—

well, do a little more than they are doing for the sake of themselves if not for others."

"You must remember," said Elaine gently, "that Nellie's salary is very small and Ethel's allowance is only just enough to cover her studies and incidental expenses."

"Incidentals in her case include a host of things that you manage to do without, I notice."

"Well, what are luxuries to me may be necessities to her."

"You angel!" cried May impulsively, "always making excuses for others and sacrificing yourself. Why, Elaine, you've worn that heavy old brown dress of yours all this summer, just because—"

"I liked it."

"Fibber! Because you couldn't afford to buy another, which you certainly would have been able to do if you hadn't done more than your share for the flat, and—for me."

The speaker sobbed again.

"You are in danger of being put to bed," remarked Elaine severely.

"And—I—know that you had intended—going home for a—holiday and now—you—can't."

"Listen! you bad girl," replied the other, with mock anger, "and, listening, dry your tears and rejoice! A winning tale I would tell thee—at least, I hope it will be winning. I've struck a theme that is simply delicious. As sure as you're sitting there it's going to capture everybody, make me famous, all of us rich and—and—enable us to welcome Gillespie unabashed on the first of the month."

"Really?"

"Positively. The thing has simply taken possession of me. It will do the same to the public. And, May," the speaker's voice broke a trifle, "I think I shall be able to see mother this summer after all—if one-half of my hopes about it come true."

CHAPTER XI.

To Be Answered.

AT this juncture Clifford awoke to the fact that he was, to put it plainly, eavesdropping. With a flush of self-contempt on his cheek, he beat a retreat to the dining-room, muttering things of an uncomplimentary nature about himself.

Later, when Mammy June came to clear the table, she found her chicken untouched and her employer staring at the gleaming coffee-pot as if it were a "gazing crystal" wherein he was trying to learn his fate and future.

An hour passed, and from the flat next door came the thrill of music, followed by a series of disconnected, dropping, flute-like phrases.

It was as if a string of melody had broken and its silvern beads were falling in rhythmical confusion.

Presently the notes lapsed and died a death of lingering beauty.

Then came a resurrection of exquisite liquid tones, as of a flute played beside a forest brook. The harmony gained strength and shape, but lost none of its repressed tenderness.

Clifford, listening, felt himself back in Devon. The primroses loomed through the dusk, the fragrant copse lay before him, and the song of the nightingale with all its love and longing was touching the fibers of his heart.

The music haunted him all the next day. From out the wreaths of misty emotion it had evoked, there seemed to gradually shape an interpretation of his feeling for Elaine.

The love notes of the nightingale had caused something in his heart to vibrate in unison. The silent music of the girls had renewed the work of the "little brown bird."

Then a daring inspiration came to him—one of those inspirations that took immediate action. During the day he dropped in on Doure. Doure was a musician, who, had he cared, might have been much more than what he was, a partner of and the "arranger" for a well-known firm of music publishers. He put crude material into the crucible of his genius, and the result was music.

"Doure," said Clifford, "this is a confidential mission. I've a theme suggested by the song of the nightingale. Ever heard them?"

Doure had.

"Now, I want you to retain the melody but put your soul into the—the frills so to speak. I mean the introduction, the accompaniment, and the interludes."

Doure nodded. He was chary of words. Then he listened and jotted notes on a music score.

"When will it be finished?"

"In a hurry?"

"In a desperate hurry."

"To-morrow afternoon. No—evening."

"Good. Come round and dine with me and bring it with you."

Another nod and a grunt on the part of Doure, and Clifford departed.

Clifford had the knack of writing rimes when the humor seized him, and the humor was strong upon him now.

So he proceeded to fit words to the music that was insistently beating on his heart and brain. I forget most of the lines, but the final verse ran thus:

Oh, bird, Oh! unseen bird!
Who art by night and leafy curtains hid,
Whose throat and heart alike by love are stirred,
Whose song into my waiting life has slid!
Oh, bird with passioned trill,
Beneath the stars above,
Would not thy song with joy more fully thrill,
In the dear day of love?

Doure was punctual. Dinner ended, and the pair adjourned to Clifford's den, wherein was a piano. From the flat next door came the ripple of music. Doure opened the instrument.

"Want to try it over?" he asked.

The other nodded, but not without a curious tightening around his heart. Doure began to play.

Clifford was a fair musician as amateurs go and the owner of a good, robust barytone voice. The influences of the hour were strong upon him, and his voice waxed more tender with the advent of each line. Doure had done his part magnificently, and in the pauses Clifford, under the spell of the music, once more felt himself in the shadow of the Devonshire copse.

"Good," muttered Doure, as the song ended. "Want to try it again?"

Before Clifford could answer there came a hesitating ring at the bell of the private hall.

The artist answered it. There stood "his" girl. Her white cheeks told that she was laboring under distressful emotion.

"Mr. Clifford, I believe," she said with an effort.

"Yes. Won't you come in?"

"Thank you, no," said the girl, and he could see the fluttering in her throat.

"My housekeeper is here, and Mr. Doure, of whom you may have heard," remarked Clifford with gentle insistence.

"Mr. Doure, of Blank & Company?"

"Yes."

"Oh," said the girl doubtfully, "I met him once, but—"

"May I suggest that you renew his acquaintance. He is a very dear friend of mine."

She hesitated for a moment, glanced at Clifford, and then stepped inside.

The man led the way to the parlor, and was in the act of summoning Doure when she stopped him.

"Before Mr. Doure comes here," she said haltingly, "will you permit me to ask you a question?"

"Certainly."

"I heard you—at least, I presume it was you—singing to-night."

Clifford could see the unshed tears in her eyes.

"Will you—can you—tell me where you got that song?"

Clifford was for the moment at a loss to answer. The situation had developed on such different lines from what he had anticipated. She misunderstood his silence, and went on eagerly:

"Pray do not think me impertinent. I write songs for a livelihood. I—thought I had—an original theme on which I was counting much."

She sighed deeply.

"But I have heard it—to-night—here. It must," she smiled, "have been unconscious cerebration on my part, I suppose."

Clifford groaned in spirit as he saw her distress. She was younger than he had anticipated—much younger. Something drew him to her queerly.

"Miss—"

"Aldyce."

"Miss Aldyce, will you permit me to reply to your question before I call Mr. Doure?"

"If you wish," she said, looking at him with mild astonishment.

"Then pardon me for a moment."

He left the room and returned presently with the roll of music and a manuscript.

"Before I apologize to you for the great liberty I have taken with you and yours, allow me to show you a copy of the words you heard me singing to-night. Please notice that the date that they bear is three days ago."

Still wondering, the girl looked and read, "The Nightingale. Words by George Clifford. Music by Elaine—"

"I did not know your full name then," explained the man quietly. The girl crimsoned, but answered not.

"This was done to-night," went on Clifford.

There was silence for a space, and then Elaine spoke.

"But what have you done—I cannot understand all this, Mr. Clifford," she said, in a perplexed voice.

"Will you, as a preliminary, assure me that if I make my motive clear, you will at least try to forgive me for those things?"

He indicated the music and the manuscript.

"I'm much indebted—" she began.

"Is it a bargain?"

"Of which I have unquestionably the best." She had recovered her spirits and looked radiant.

"Well, then, I was impertinent enough to think that a personal introduction to Doure might be of some service to you. And I knew it could be best brought about by this." He tapped the music.

"Then you overheard me playing?"

"I did—and I've an excellent memory for music when I want to remember."

"But the words are exactly those that I wanted. How did you know my theme was the nightingale?"

"I have heard the birds, and you, too, I know."

"Yes."

"That shows the faithfulness of your treatment of the subject."

"But—Mr. Clifford, why all this trouble—this interest in—an—unknown?"

"Because—" He looked at her with eloquent eyes. "I thought you deserved it, and—Miss Aldyce—it was very hard to get an introduction to you by conventional methods. Now, I'll call Doure."

He started to go for his friend. Then he halted—looked at her steadfastly a moment, and said:

"Do tell me. Where did you hear the nightingale sing?"

"Where? Don't ask me, Mr. Clifford. It is too sad a story! I can't bear to think of it!"

"You must tell me!" he said. "You *must* tell me!"

(To be continued.)

FLANNIGAN'S REPORT.

BY W. C. DEUEL.

Written for "The Railroad Man's Magazine."

FLANNIGAN never ran an engine
That he would report "O. K.,"
There was always something broken,
Something that had gone astray.

He reported stack and head-light
The air, sander, and the bell,
And, according to his latest,
Neither injector worked too well.

His wedges were "down," to be set up,
His tank-brake traveled too far!
If they'd clean his rotary-valve,
He could stop without a jar.

She burned her fire next to the door,
Left a "bank" under the flues.
Her right main-rod needed a "liner."
Her driver-brake wanted "shoes."

Both her tank-hoses were leaking bad.
"Please test her gage and see,
If she is carrying 200;
She pops at 193!"

The foreman grabbed this last report
And scanned its width and length:
"Well, he orto write up prize-fights,
His dope sure has some strength!"

The more he read, the madder he grew,
His hair began to bristle;
And said, after he'd checked the items off,
"He don't report the whistle!

"Does he think this shop is run for him?
Sure, I'll attend to his case."
"Mister Master Mechanic," he wrote
Across that report's face:

"Me force is small, I'm behind me work,
If you'll agree, by thunder!
I'll try and jack up this man's whistle!
And put a new engine under!"

THE RAILROAD WOMAN.

BY LYDIA M. DUNHAM O'NEIL.

Written for "The Railroad Man's Magazine."

SHE'S a sittin' by the window, and her hands is folded tight;
She's a lookin' at the clock with anxious eye;
She's a waitin' for a whistle, watchin' for a headlight white,
An' a high-ball when the engine flashes by.
For there's some one that she loves—and he's out there in the dark,
With the wind and rain a howlin' all around;
And his body may be lyin' 'neath the engine, cold an' stark,
Or he may be speedin' safely homeward bound.

But the woman never tells him of the countless prayers she's said,
Of the long and lonely vigil that she's kept;
Never tells of her forebodings, of the many hours of dread—
Never tells how few the moments that she's slept.
For it's his to brave the dangers, an' it's hers to bear the rest—
Watchin', waitin', and sometimes just weepin', too,
For often there's a special—extra red-ball manifest—
An' it's Death that is the caller of the crew.

Who suffers most when there's a wreck?—the men that's in the mess,
Or the worried, white-faced women, miles away?
Them that's close enough to curse the worst an' laugh about the best,
Or the women, who can only wait an' pray?
Though the dawn will bring glad tidings, still the night has left a scar
On the woman's heart that time cannot efface;
You forget, but she remembers, just how close to death you are
Every moment, where the giant moguls race.

She's a sittin' by the window in a thousand homes, to-night;
She's a lookin' down the track with anxious eye;
She's a waitin' for a whistle, watchin' for a head-light white,
And a high-ball when the engine flashes by.
Fear is lurking in her heart, for it's Death patrols the track,
Where, through the stormy night, the engines pound;
And she prays to God to bring the man who loves her safely back—
To guide the mighty mogul, homeward bound.

The Sunny Side of the Track.

What the Busy Joke-Smiths of Our Esteemed Contemporaries Have Manufactured Lately to Force Our Laugh-Injectors to the High Point.

HER COME-BACK.

THE train was almost crowded, and the poor mother was gently tossing the baby up and down in her arms in a vain endeavor to stop its crying. As the car slowed down at the stopping place the conductor looked in the door and shouted:

"George's Cross!"

"Yes; and perhaps if you were cutting your teeth you'd be cross, too," the woman with the baby replied sharply.—*Tit-Bits.*

FOLLOWED HIS ADVICE.

THE president of one of the prominent railway corporations in America was making a stirring address to an audience of young men, and dwelt with particular emphasis on the necessity of making a good appearance.

"When you are looking for work," he said, "be careful that you are presentable. If you have only twenty-four dollars in the world, spend twenty dollars for a suit of clothes, three dollars and a half for a pair of shoes, fifty cents for a hair-cut and shave. Then walk up to the job, wherever it is, and ask for it like a man."

This advice was greeted with great applause, and the railway president sat down amid a storm of cheers.

The very next morning a dapper-looking young fellow walked into the outer office of the orator, and, handing a note to the clerk, said:

"Please give this to the president."

The note read as follows:

"I have paid twenty dollars for this suit of clothes, three dollars and a half for a pair of shoes, and fifty cents for a hair-cut and shave. I have walked from Harlem, and I would like a job as conductor on your line."

He got the job.

RYAN'S REPORT.

THE crew of a way-freight had discovered a cow on the right-of-way which they took to be dead, and the conductor had, by wire, so reported to the superintendent. The latter, anxious to get the facts of the case, immediately wired as follows to the section foreman on whose territory the animal was seen:

"Pat Ryan, foreman, Section 24:

"Wire complete report on cow killed on right-of-way near MP 45, Sec. 24."

Pat got the wire all right and immediately started out to find the animal and investigate. He found her, and, after carefully viewing the "remains," sent one of his men back to the telegraph-office with his answer to the "super." The answer read:

"Mr. Blank, Superintendent:

"Cow killed by train wasn't killed by train. She died of eating raw buckwheat, but she ain't dead yet. If she dies before morning I'll bury her to-night. She was a good-looking cow, too.

"RYAN, Foreman Sec. 24."

—*Santa Fe Employees' Magazine.*

WHAT THEY CALL THE TIME-TABLE.

A TICKET-AGENT gives a list of the names by which people not familiar with the railroad time-table call for that folder: "A book showing how the depot runs in the daytime"; "a card showing when the railroad comes back"; "a diary of the trains"; "a railroad instruction book"; "a dictionary of the trains"; "a score-card"; "a catalogue"; "a program"; "a time book"; "a fare plan"; "a transfer card"; and various other names.

BLOCKED!

HE was traveling on a branch railroad in the North. After a series of sudden bumps and unexpected stops he became uneasy.

"Look here," he said to the porter, "is this train safe?"

"It sure am," said the porter.

"Well, have they a block system on this road?"

"Block system, sah? We hab de greatest block system in de world. Ten miles back we were blocked by a load of hay, six miles back we

were blocked by a mule, just now we were blocked by a cow, and I reckon when we get further souf we'll be blocked by an alligator. Block system, boss? Well, Ah should smile."—*Exchange.*

JUST LIKE A MAN!

THE train was about to depart when a stout old lady ran onto the platform.

The obliging guard at once pounced upon her, fairly lifted her into the carriage and, as he slammed the door, the train steamed out of the station.

The first stopping place was thirty miles up the line. When the train arrived there, the guard observed the old lady stepping out of the compartment in a state of boiling indignation.

"You nearly missed it, mum," he said.

"Missed it, you silly ass!" fumed the old lady. "I didn't want to come by it at all. I simply wanted to post a letter in the late-fee box on the train. And, now, perhaps, you'll tell me who is going to pay my fare back. Talk about the intelligence of man, I'd rather have a donkey to deal with!"—*Sheffield (Eng.) Telegraph.*

HIS WERE DIFFERENT.

PASSENGER-AGENT—Here are some post-card views along our line of railroad. Would you like them?

Patron—No, thank you, I rode over the line one day last week and have views of my own on it.—*Chicago News.*

WANTED EQUAL RIGHTS.

A MAN stepped up to the counter in the ticket office of the Colorado Midland Railway, the other afternoon, and said:

"What time can a man go to Glenwood?"

"At 7.30 o'clock to-night," replied the ticket-seller.

"Thanks," said the man.

At this point a woman, who had been standing back waiting her turn to ask questions, stepped up.

"Can a woman go at that time, too?" she asked seriously.—*Denver Post.*

FULL OF REAL CAUTION.

THE old lady and her daughter entered the depot. The old lady wasn't used to traveling, and was very nervous. Her eyes wandered about the depot a moment, and then she walked nervously up to the station window, and tremblingly asked:

"When does the next train go to New York?"

"The next train, madam," said the agent, looking at his watch, "goes to New York at exactly 3.30."

"Will that be the first train?"

"Yes, madam, the first train."

"Isn't there any freights?"

"None."

"Isn't there a special?"

"No, no special."

"Now, if there was a special you would know it?"

"Certainly I would."

"And there isn't, ain't they?"

"No, madam, none."

"Well, I'm awful glad—awful glad," said the old lady. "Now, Maria, you and I can cross the track."—*Exchange.*

GRAFT.

"THE directors of the road were a precious lot of grafters."

"You don't say so!"

"Yes, every last man of them had his appendix removed and charged the cost to operating expenses."—*Puck.*

MET HIS WATERLOO.

JIM FEALEY, transfer-agent, who has something of a reputation for quick and accurate replies to all queries, went down to defeat while checking No. 6, which had a large theatrical company from Denver to Chicago. The company disbanded at Joliet and each member had his own baggage to look after. One handsome young lady, on being told her transfer would cost fifty cents, replied, "Or a kiss?"

Jim mildly replied, "No, just fifty cents, please."

The lady smilingly came back with, "Well, after a second look, I guess you are right—fifty cents is the cheapest."

Jim silently retired amid the laughter of the whole car.

E. J. BETON,
Joliet, Illinois. Ticket-Agent.

—*Santa Fe Employees' Magazine.*

THE RETORT COURTEOUS.

PRESIDENT TRUESDALE, of the Lackawanna, and President Underwood, of the Erie, were walking up Broad Street, New York, recently, when they met a good-looking colored girl to whom Mr. Truesdale bowed courteously. Mr. Underwood looked questioningly.

"Oh," said Mr. Truesdale, "thought you knew her. That's Phoebe Snow. She's been traveling on the Erie."—*New York Evening Mail.*

AN AMATEUR.

TED—I like to see a man who can forget an injury.

Ned—Well, that neighbor of mine should suit you. He's suing the railroad company for an injured leg, and every once in a while he forgets to limp.

"I'M GOING TO ADOPT IT AND LEAVE IT ALL MY MONEY."

THE BOES AND THE BABIES.

BY AUGUSTUS WITTFELD.

Loquacious Louie and His Fellow Wayfarer Embark for a Day in an Infant Industry.

"THAT job of near-work of Pete's, when he did the rescue act at the powder works," said Loquacious Louie, "puts me in mind of the time I was offered a job holding a kid for a small woman who was in a large hurry, and the mix-up my refusal of the job was responsible for.

"I was loafing outside of a railroad station one day, when a woman rushed up to me and asked me to hold her baby while she went inside and bought a ticket.

"'Avaunt, madam!' I replied. 'Do I look like the first vice-president of a foundling asylum? You are on the wrong wireless. My specialty is finance. If you want me to hold your purse while you take the kid inside and have it checked, I'm legible.'

"She gave me the Exqumaw optic and rushed over to an easy-looking mark close by. I saw her say something to him, and he took the baby. Then she took a coin from her purse and, handing it to him, made for the ticket-office. I walked over and gave him the wayfarers' wink.

"'What you going to do with the kid?' I asked.

"'I'm going to adopt it and leave it all my money,' he replied. 'What d'you think I was going to do with it? Offer it for a prize in a guessing contest?'

"'Well, if you did,' I says, 'I wouldn't want more than one guess, and that would be that your female lady-friend is trying to unload that baby on you. Didn't you ever hear of that old stunt of getting rid of a baby?'

"'Sure, I have,' he answered. 'But you

don't think I'm going to turn down real money simply on account of an infant incubatus, do you?'

"'Say,' I asked, 'what's the use of taking chances? If that female don't come to claim her kid, I see you doing the shappyrone act for life.'

"'Aw, shut up,' he growled. 'Do you want to wake this slumbering volcano?'

"I was on the point of making the retort cortuous when a porter deposited a trunk on the platform, as prescribed by the code, and the easy-looking mark started to earn his money. The kid emerged from slumberland and gave one of those shanty-cleer crows, but when it saw what was holding it, it started to yell like a Peek-a-boo Indian.

"'Better tell it a fairy-story,' I advised. 'That may keep it quiet. Cinder Ella is a favorite with the kids.'

"The easy-looking mark gave me a scornful look and started to walk the indigent infant up and down, trying to quiet it. I watched him hiking up and down the platform, and noticed that his interest in his job took him farther away on each succeeding lap.

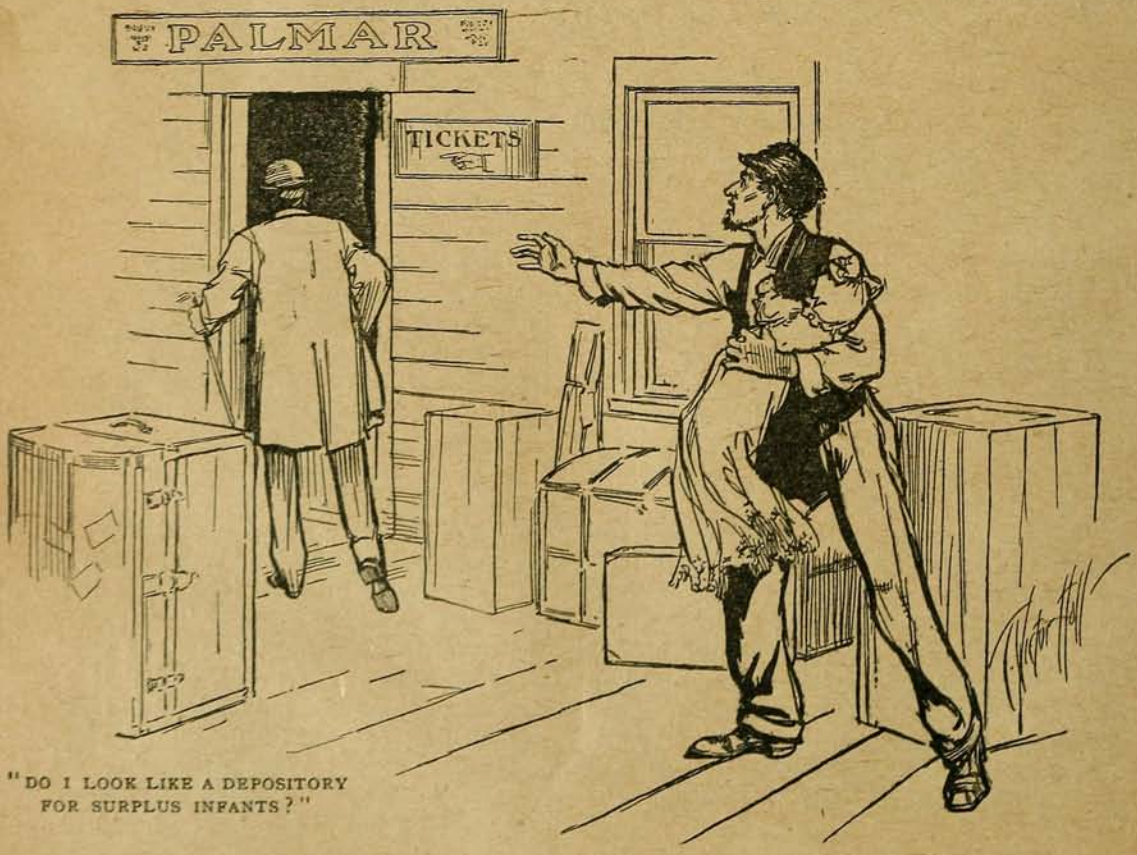
"I was patting myself on the back because it wasn't me that was holding down that strenuous situation, when a fellow rushed up to me, and, before I could enter any objections, plumped a baby bunting into my arms and made a rush for the ticket-office.

"'Hey, come back,' I shouted. 'Do I look like a depository for surplus infants?'"

"That fellow evidently took you for a man of family," commented Pugilistic Patrick.

"Well, who said I wasn't?" demanded Louie. "I guess I've had as much family as most people. I've had the usual job-lot of fathers, mothers, grandfathers, and grandmothers, and so on. I'm like the blooming aristocrat—I'm long on ancestry but short on pro-jenny, and I'm the last of my line.

"Well, as I said, that fellow shanghaied that innocent infant on the largeness of my manly bosom and left me there feeling fussed and fearful. Supposing that kid took a notion to go into executive session like the one the easy-looking mark was holding, I saw my finish. I was trying to decide on a course of action in case my prize-package awoke from its suspended



"DO I LOOK LIKE A DEPOSITORY FOR SURPLUS INFANTS?"

animation, when that woman who had given the duplicate to the easy-looking mark rushed up and grabbed the kid out of my arms. She murmured something that sounded like thanks and mama's tootsie-wootsie, and rushed aboard the south-bound train which was about to pull out.

"I felt too relieved to be astonished. When the mistaken mother relieved me of that kid she also relieved me of a large chunk of anxiety. I looked around for the easy-looking mark and located him at the other end of the station. I made my way toward him as the train pulled out.

"When I reached him, his infant had quieted down and seemed to be treating him like an infinity. It had evidently made up its mind to accept him at face value and take its chances.

"'Say,' I chortled in triumph, 'what did I tell you? She has went.'

"'Oh, you're a profit, all right,' he growled. 'Likewise you're an innishiate of the inner shrine of I-told-you-so's. If I had your power of preception, I'd hire out as a sight-seeing see-saw. What if she *has* went?'

"'But she's got the wrong kid,' I said, and then I told him about the hurrying Henry who had mistaken me for a truant officer, and how the unnatural mother had taken me for a bargain-counter, and depleted my stock of babies.

The easy-looking mark grinned.

"'Here's where I unload on an unsuspecting public,' he said. 'Keep your eye on your Uncle Dudley. What's the use of working when gray matter has the red corpuskels gasping for breath on the home-stretch?'

"He walked along the platform, carrying the kid innocently, while I stood there and wondered what kind of a game he was going to pull off.

"Pretty soon that buckaneer what had abandoned that infant to my tender mercies rushed up and grabbed the kid out of the easy-looking mark's arms, and, pushing a bill into his hand, hustled aboard a train that was about to pull out in the opposite direction from the one the woman had taken.

"'Well, what do you think of that for head work?' asked the easy-looking mark, joining me.

"'Great,' I replied. 'While your brain is working, suppose you tell me where I come in on this. You've got all the emoluments incruing from this deal, and as an equal partner in your iniquity, it seems to me that I should come in for a dividend.'

"'Just you wait until a dividend is declared,' he replied. 'There's only a dollar-fifty in the treasury, and that's not enough to declare a dividend on.'

"'Say,' I protested, 'you don't expect to get any more out of this mix-up, do you? I should think the incident was closed.'

"'Closed?' he said. 'Well, I guess not. Take two fond, doting parents, each with the wrong infant on hand, and the situation is as full of possibilities as your head seems to be deficient in ideas.'

"'How in the name of the infant industry do you expect to make anything more out of this mix-up?' I asked.

"'As I said before,' he replied, 'just you keep your eye on your Uncle Dudley and you'll learn a lot about high finance. If something don't happen in the money market pretty soon, I miss my guess.'

"There was no use arguing with that fellow, especially as he held all the trumps, so I shut up. We hung around that station for about half an hour, and then a train pulled in. About the first passenger to get off was that buckaneer who had acted as chief mixer in the mix-up. He still carried the kid in his arms, likewise a troubled look on his countenance. He made straight for me the minute he spotted me, and tried to place the kid in my arms.

"'No, you don't,' I said, dodging behind the easy-looking mark.

"That fellow tried to circulate around the easy-looking mark, who immediately got busy. He took the kid away from the frenzied father and made a bluff at examining it to see if it was all right.

"'See here, you darned stiff,' he said, 'what d'you mean by swiping that kid away from me that was given to me by a lady to hold? A fine mess you've got me into.'

"'But what has become of the baby I gave to some one to hold?' asked the puzzled parent in troubled accents.

"'I don't know anything about any baby you gave to any one to hold,' answered the easy-looking mark. 'Who'd you give it to?'

"'If I didn't give it to you,' answered the puzzled parent, 'I gave it to some one who looks like you. Perhaps it was your friend,' he continued, looking at me.

"'Say, do I look like that?' asked the easy-looking mark and me, pointing at one another.

"The maker of the motion refused to vote, so the easy-looking mark continued:

"'I was standing here, this morning, when a lady asked me to hold her baby. While I was performing this trifling service to the best of my ability, you butted in and forcibly relieved me of the infant. When the lady found that some one had kidnaped her child she gave me all sorts for my seeming carelessness, and finally took possession of the infant you had thrust upon my friend here, claiming that you had brought the baby here to facilitate the execution of your scheme.'

"'Which way did she go?' asked the frenzied father.

"'Say, look here,' answered the easy-looking mark, kinder offended-like, 'd'you take me for a blooming bureau of information or a sideboard of statistics? You've got me into a pretty mess with your bungling. Here, I've got to stand around with this kid and wait for the right owner to turn up. Who's going to pay me for my time and trouble, I'd like to know?'

The sucker fell for the bait, all right.

"'If you can tell me where the woman went,' he said, 'I will give you five dollars, and in addition I'll take the child to her.'

"'Oh, I'll tell you where she went, all right,' replied the easy-looking mark, 'and I'll take your five dollars, all right, but when it comes to surrendering this infant to any one but its rightful owner, it's nix for you. The old guard may die on the job, but it never surrenders.'

"'Which way did she go?' asked the sucker, handing the easy-looking mark a five-dollar bill.

"'She took a carriage,' lied the easy-looking mark, 'and she said she was going to hunt up the town burgess to see about getting a warrant for your arrest. No doubt you will find her at his place and be able to square things. Don't forget to tell her that I'm waiting here for her with an unredeemed package.'

"That fellow swallowed the dope, all right, and started off. After he made his get-away the easy-looking mark handed me a dollar and told me to get two one-way tickets for Berwyn.

"'What you want to go to Berwyn for?'

"'Because,' he replied, 'that's where the lady what owns this kid went. She asked me to hold it while she went in and got a ticket to Berwyn. Go on and get the tickets.'

"'Say,' I protested, 'what you want to ride inside for? Has the possession of so much money at once affected your head?'

"'I don't want to ride inside any more than you do,' he replied, 'but you can't ride on a brake-beam when you're handicapped with an infant of tender age.'

"'But what's the graft?' I asked.

"'As I said several times before, and reiterate once more again,' he replied, 'keep your eye on your Uncle Dudley. Now hustle and get that transportation.'

"Well, I got the tickets, and when the train pulled in we climbed aboard. I was glad to get into a good soft seat, for the pace that easy-looking mark had set was rather strenuous and seemed to affect my physical incapacity.

"There weren't many people on the train, consequently there wasn't much comment passed about our doing the beauty and the beast stunt, although the conductor did look at us pretty hard and asked us how we liked riding inside.

"When the train reached Berwyn we got off. The easy-looking mark went up to the station-agent and asked him if he knew the lady what owned the baby, had she gotten off of an earlier train, could he tell us where she lived, and could he spare a chew of tobacco?

"The station-agent pleaded guilty to the first three counts, but ignored the last. He said he knew her, likewise she had got off of the 10.20, and lived in the house with the gray gables that was anchored on top of a hill about a mile away, which he pointed out.

"Also he told us that it looked like rain and that the crops needed it, and that the farmers thereabout were having a hard time raising enough crops to pay for their automobiles. When we were a half-mile up the pike, he was still talking with his face and both hands. He was a very vollible man, he was. I think that he kept on talking so's we couldn't get a chance to brace him for a hand-out.

"That easy-looking mark was a natural-born nurse-girl. That innocent infant treated him with perfect trust and behaved in a dignified, discreet way. We went tramping along that hot pike with peace in our hearts and money on our minds, and once, when the beauty of that pastureal scene caused me to forget myself and offer to carry the kid, it was only the emphatically-voiced protest of the leather-lunged young-

ster that brought me back to the prosaic pike.

"When we got near the place, we saw the baby's mother sitting on the wide ver-

"DO I LOOK LIKE THAT?"

anda which ran around the house. She saw us coming with the infant and came to meet us.

"'How good of you to bring him up,' she gurgled. 'I didn't discover my mistake until I was half-way home,' and she took the kid and started to talk infantyglot to it.

"'Madam,' said the easy-looking mark, breaking in on her foolishness, 'the gent what owns that other baby is down at the other station making unparliamentary remarks about people what don't know their own children.'

"'He is, is he?' says the lady, kinder fussed like. 'I'll give him a few points on parliamentary usage when I see him. I'll teach him how to care for infants.'

"'But, lady,' persisted the easy-looking mark, 'what are you going to do with the other kid?'

"'What am I going to do with it?' she asked in surprise. 'What should I do with it, but keep it?'

"'See here, madam,' said the easy-looking mark gently but firmly, 'that other baby belongs to the gent what left the *other* baby with my friend here. He's back there, worrying his head off about it.'

"'I am aware that it belongs to him,' answered the lady, 'but it also belongs to me. These two babies are twins. All babies look alike to my husband, so I am compelled to put some distinguishing mark on whichever baby he takes out so that he will be able to identify it.

"'This morning, when he started out to visit his mother, I called his attention to the fact that little Arthur, whom he was taking along, was trimmed up with blue baby-ribbon. When things got mixed up down at Palmar, and he found that he had a baby with pink baby-ribbon trimmings, he naturally jumped at the conclusion that he had somebody else's baby.'

"'Then,' said the easy-looking mark,

with an ear-to-ear grin, 'both babies belong here.'

"'Certainly,' replied the lady. 'I wish you would tell my husband, when you return to Palmar, that I have both babies here, safely at home.'

"I DIDN'T DISCOVER MY MISTAKE UNTIL I WAS HALF-WAY HOME."

"'Madam,' said the easy-looking mark, 'I don't see how we're going to get back to Palmar. It took all the money we had to bring the baby up here. Besides, we've both lost a day away from our regular occupation. I think some one should make it good.'

"Well, he put it up to her with such candor that she couldn't very well repudiate the obligation. She insisted on giving him a five-dollar bill, which he accepted with seeming reluctance, and we bade her farewell, after promising to ship her husband home to her."

"Did you see the father of the twins again," asked Phonograph Pete.

"Yes," replied Loquacious Louie, "we saw him coming up the pike as we were on our way to the station. We saw him first; consequently, he didn't have an opportunity to hold converse with us. We suddenly became interested in cross-country running, and never stopped until we struck the railroad.

"We hopped aboard the first freight that came along, and by night we were many miles from the land of easy living. The easy-looking mark called a meeting of the board of directors and declared a dividend of five dollars and fifty cents apiece.

"I gladly voted him a resolution of thanks, and we separated and went our various ways."

"Did you learn the name of that high financier?" asked Phonograph Pete.

"I asked him what he was called," replied Loquacious Louie, "and he said: 'Wherever I go, they call me blessed.' I guess he lied."

"Well," commented Pete, "I wouldn't say he lied, exactly, but I do think he used the wrong word."

A leaky engine is like a talkative woman,—It makes more noise than a good one and refuses to dry up.—The Wails of a Wiper.

The A. B. C. of Freight Rates.

BY JOHN C. THOMSON.

OF recent years we have heard a great deal of talk between the railroads, the shippers, and the Interstate Commerce Commission on the subject of freight rates. Few writers have given us any information on the subject that has not been such a wearisome maze of unfamiliar terms and expressions, that we might as well have read a Chinook's essay on cheese.

Almost every time we go into a store to buy something, particularly if we live in a city, we unwittingly pay freight charges to one railroad system or another, so that there is every reason why we should be interested in knowing how these charges come to differ so greatly from each other, and what it is that they go to pay for.

The problem of just and equal freight charges which Mr. Thomson explains is one of the most involved in the whole field of modern commerce, but he has approached it in such a simple, masterful manner, and has so carefully avoided confusing the reader with a lot of unintelligible stock expressions, that we believe he has succeeded in throwing a great deal of light on a subject that concerns us all, whether we are railroaders or not.

Some of the Difficulties of Apportioning Freight Charges That Worry a Railroad and Keep the Interstate Commerce Commission at Work Hearing the Protests of Shippers.

IT is usually the case that an expert in any line—be it war, medicine, or freight rates—is the least capable of all men to explain his profession to the public. Words that to the expert are an every-day matter are to the outsider things of mystery; hence they are in the position of a Frenchman trying to explain the "Arabian Nights" in the original to a German, each speaking a different language, with no common meeting-ground whatever.

The best newspaper editor I ever knew used to employ a landsman, even one who could not swim, to report all cases of shipwreck, because he knew that most of his readers were landsmen, and could not understand the sailor-talk which a seaman would naturally use in his report. This is largely the reason for the fact that the railroads have wasted millions of dollars in trying to educate the public concerning railroad freight rates, and that the public is still in darkness about what deeply and directly affects every pocketbook in the United States.

Freight Department Nomenclature.

In other words, as a general rule railroad men cannot write clearly about freight rates. The phrases, "water competition," "joint cost," "blanket rates," "class rates," are a part of the railroader's native tongue, as clear and commonplace as the words "cow," "ax," and "home"; and he uses these obscure terms in almost every sentence he writes or speaks about freight rates. But these technical terms are not understood by the public, and, in fact, are practically an

unknown language even to large shippers who spend hundreds of thousands of dollars every year for freight charges.

In this article I shall try to explain some of the factors that go to make up freight rates in the words of the man in the street, and shall try to discuss this complicated subject—one of the most complex known to the business world—in terms such as Smith uses to Jones, Smith being a butcher and Jones a doctor. If the expert railroad man feels inclined to smile at times over these lines, let him but open a medical book and read a few pages; then he will see why this article is not written in "railroad language," but in "United States," with which the non-railroader and the railroader not in the freight department is more familiar.

To begin at the beginning, it might be mentioned that "distribution" is a part of "production," not something different. When a man sends an article from New York to San Francisco, he does just the same thing as if he moved it from one side of his work-bench to another, so as to get it into a more convenient position, that he may work on it to better advantage. The difference is only one of degree—simply a changing of places.

What the Consumer Pays For.

Now, every business man—in fact, every consumer—is deeply interested in "the cost of production" we hear so much about, but few of them fully realize that the railroad freight rate is one of its most important items.

For example, suppose a man has a farm ten miles from the railroad in Kansas, and raises wheat. Wheat on the Kansas farm means bread, sooner or later, in New York City or in Seattle. He sends a certain amount of wheat to market, say to New York. The cost of pulling the load from the farm to the railroad by horses is about five dollars, the cost of pulling the wheat to New York City is about five dollars, and the cost of cartage through the streets of New York City is about two dollars.

This twelve dollars is a part of what the bread costs when served on a New York City dinner-table. Now, the average man will set up a roar if the farmer gets one dollar and ten cents for his wheat instead of one dollar; but he usually ignores an increase of ten cents in the freight rate, which amounts to the same thing to the final bread-eater. The same thing applies to meat, clothing, shoes, hats, and, in fact, to everything used by human beings.

Therefore, the importance is seen, I hope, without further expansion here, of the railroad freight rate to every man, woman, and child in the United States. Nothing affects the price of real estate, the monthly rent, more than railroad rates. Cities have been made and ruined by changes of freight rates, and so have individuals by the tens of thousands, although, as a general rule, few of these knew what ruined them, or made their fortunes, as the case may be.

"Mileage" and "Joint Cost" Charges.

Now, what is a freight rate? It is the total charge made by a railroad, or a ship, or a canal-boat, or a horse-and-wagon freighter, for taking anything from one place to another. What the waiter is to the dining-room, the railroad is to the nation, the manufacturer in this case being the cook, while you and I sit at the tables and pay the bills. In this article we shall deal largely with railroad freight rates only, touching on canal, ship, and wagon rates only as they affect the railroad freight rate.

At first glance it looks simple enough, this matter of making just freight rates. "If it costs one dollar to haul one ton one mile, then it surely costs two dollars to haul one ton two miles, or two tons one mile," argues the average individual from a common-sense standpoint.

This is known as the "mileage basis," or charging for hauling goods according to the distance hauled. But soon we shall see that this apparently simple proposition is impossible in every-day practise. The "mileage basis" is the one the public are urging, while the railroads fight for the "joint-cost" system of charging for hauling.

A Multiplicity of Costs.

"Joint cost" is somewhat harder to make plain, and perhaps a simple illustration, known to every one, will help to make the matter clearer. When you go into a restaurant and order a twenty-five-cent meal, you get, let us suppose, the use of the room, table, knife, fork, and spoon, dishes, table-cloth, napkin, etc., free of apparent charge. At least nothing appears on the bill for these items; yet they must be paid for, and paid for by the eater of the meal.

The meal itself consists of soup, boiled beef, potatoes, bread and butter, coffee, and a piece of pie. The restaurant charges only for the meal, apparently; but it is clear to every one that the bill includes a charge for the other things just mentioned, such as the dishes, the rent, the lights, etc. Now, the bread and butter is also free, but there is an extra charge of five cents for another cup of coffee, and ten cents for an extra piece of pie.

This means that the restaurant-keeper makes nothing on the soup. He loses money on the bread and butter. He makes only three cents, gross, on the meat, and one cent, gross, on the potatoes, and four cents on the coffee, yet the whole meal yields him a final net profit of, say, two cents.

In other words, the restaurant man does not make an equal profit on each kind of food sold, but, in fact, actually loses money on some kinds that must be served, such as the bread, or the use of the table or the knife and fork, but makes up this loss on his coffee or pie. So, practically, he charges on each item just "what the traffic will bear," and by putting it all in together, turns out a cheaper meal to the eater than if he charged for each item separately.

A System That Averages Up.

In fact, it would be practically impossible to charge the man who stayed ten minutes and gulped down a cup of coffee and a piece of pie a just proportion of the rent and light bill, as compared with the family that spent two hours in the place and ate up half a turkey. So the restaurant man meets these "overhead charges," as they are called, by a more or less indefinite "joint-cost" system. He charges twenty-five cents for certain eatables as a whole, and out of them nets a profit of two cents.

To attempt to charge each man his exact proportion of the rent, the light, the laundry, and other bills, would be to try to put into operation the "mileage basis." In abstract theory, this last is the proper one, no doubt, but it cannot be put into practise. This is clear enough to every one in the case of the restaurant man, but it is not so clear in regard to the railroad man and his freight-rate charges, yet it is just as true.

The average man, we will say, ships a ton of wheat and a ton of coal from Kansas City to Denver. The railroad charges him, say, one dollar for hauling the coal and two dollars for hauling the wheat, though they make the trip in the same car, and one takes no more space or makes any more trouble than the other. Here is where the average man sets up a howl, and insists—with much reason, at first sight—that if the railroad makes a fair profit on the coal for one dollar, it is robbing him on the wheat at two dollars.

Bunching the Charges.

But the fact is, that it is just as impossible in this case to figure out the exact charge of the railroad president's salary and the track-walker's monthly pay that the ton of coal should bear and that the ton of wheat should bear, as it is to figure out the same problem in the restaurant case just illustrated. The railroad must bunch the charges and get three dollars for the two tons—one of coal, and one of wheat—even though on the coal it makes only ten cents profit, and on the wheat twenty cents profit. In a rough way, this illustrates "joint cost" as the railroad man uses the term when talking of freight rates.

But now the plot thickens, as the dime-novelists say. In the preceding paragraph we have seen how the charge differs on two different articles when hauled the same distance in the same car. Now let us take another case, the very bone of contention in the present freight-rate situation that is attracting national attention. This is charging less for hauling the same article, perhaps in the same car, a long distance than for a short distance.

Take the case, for instance, of two tons of wheat, one going from Kansas City to Denver and another, in the same car, going on through Denver to San Francisco. When the car stops at Denver, the Denver man pays, let us say, two dollars, to cover the cost of hauling the wheat from Kansas City. The car door is locked and the car rolls away to San Francisco. The San Francisco man pays only one dollar to the railroad for moving his ton of wheat twice as far as the other fellow's, and the Denver man shouts till stones begin to jar loose from the top of Pike's Peak.

Where the Shipper Kicks.

"Rank injustice!" cries the Denver man, and many agree with him, including, to some extent, the Interstate Commerce Commission.

But at the hearing the badgered railroad man shows the following conditions, and every one—the Denver man, and even the Interstate Commerce Commission—feel vaguely that they are up against a problem that is almost impossible to solve. Here is the case. The railroad man shows that if he charged, say, three dollars to haul that ton of wheat to San Francisco, the man in San Francisco would not ship at all, but would buy his wheat from South America, getting it by ship from around the Horn, the southern end of South America.

The Railroad's Justification.

Then the railroad would have only one ton of wheat to haul—the one to the Denver man—and would have to charge him three dollars for hauling it from Kansas City to Denver, instead of the two dollars it now gets. The railroad must be kept up, and a two-dollar income will not do it. It must have three dollars from some one or go out of business. So, by charging the San Francisco man one dollar a ton, it can afford to haul to Denver for two dollars.

But the Denver man says:

"You surely will not haul goods at a loss to San Francisco. If you make a profit, say, of ten cents on the one dollar charge to San Francisco, you should charge me, the Denver man, only fifty cents, and make a profit of five cents."

And the railroad man answers:

"It costs me two dollars and fifty cents to run the road, and ten cents to haul to Denver and twenty-five cents to haul to San Francisco, both hauls being from Kansas City. This is a total cost of two dollars and eighty-five cents for both hauls. I charge three dollars for the two hauls, and make fifteen cents profit.

"Now, if I cannot haul to San Francisco for one dollar, I cannot haul there at all; therefore, the Denver man would have to pay the cost of the road, two dollars and fifty cents, plus the cost of hauling to Denver, ten cents, or two dollars and sixty cents, plus a profit, even the five cents he mentions, a total charge to him of two dollars and sixty-five cents, or sixty-five cents more than he is paying now. Besides, there then would be no railroad from Denver to San Francisco, a very bad thing for the Denver man when he wants Japanese silk or Chinese floor-matting shipped to him from San Francisco."

To this the Denver man must agree, as there is no way out of it. But he comes back at the railroad from another point of the compass, thus:

"Your railroad is paying dividends of fifty per cent a year on the actual money invested. You are making too much money. You are getting more than your share. Charge one dollar to San Francisco if you must, but cut my charge to Denver down from two dollars to one dollar. In other words, to use a railroader's slang expression, reduce the 'hump' at Denver."

The Denver man is more or less right in this, at least the recent decisions of the United States Supreme Court and of the Interstate Commerce Commission seem to so indicate. As a matter of climax, it might be mentioned in passing, the Interstate Commerce Commission is mentioned after the Supreme Court, for the court follows to a large extent the fundamental principles gradually being worked out by the Interstate Commerce Commission. In past years the court has practically reversed its position on a number of vital questions pertaining to railroad freight rates, as national experience has educated the court as it has the Commission and the public.

An Unsolved Problem.

Freight rates, odd as it may seem at first thought, are almost a new item in commercial life, especially in America. No human brain, or no millions of human brains, can at once solve such a weighty problem. It is as vital, as deeply important, as is banking, with which the world has been experimenting for centuries and has not yet solved. But in banking, and in money affairs generally, we are much farther advanced in practical working knowledge than in the subject of freight rates.

If the United States were as smooth as a floor, with the same climate throughout the year in all parts of the country, with no snows in winter, no Rocky Mountains to cross, no big crops to haul in the fall, no other nations to send goods to our ports by ships, and no more people in New York City than in Reno, Nevada, then railroad freight rates would be a simple matter. The "mileage basis" would be the only thing to consider. But such things cannot be, hence the bewildered rate-maker resorts to "joint cost" to keep the railroad running and growing.

Now, because a system has abuses is no

reason for doing away entirely with that system. To set fire to the barn to kill the rats will kill the rats all right, but how about the barn, the live stock in winter, and the farmer? Because this joint-cost system has been, and no doubt is to-day, greatly abused in robbing the public through watered stocks in Wall Street, this is no reason for burning the "joint cost" barn just to kill these financial rats.

We, as a people, must pay freight charges according to either the "mileage basis" or the "joint-cost" system. At least we must use them till some one invents a new system now all undreamed of by man, and that seems a long way off.

In some cases the two seem to have been combined with more or less success. Thus, the freight-rate charges from the Atlantic seaboard to the Mississippi River, in the States north of the Ohio River, are a mixture to some extent of both the "mileage" and the "joint-cost" system. But more of this later. Enough to say here, that there are no mountains to cross in this section, no wide stretches of unpopulated country, and that traffic is regular enough to keep the cars full all the year round traveling in any direction, east and west, west and east, north and south, south and north—all things that deeply affect freight rates.

Now, to change the subject somewhat: The railroad man cannot talk two minutes about rates without using three terms that at once cause a blank expression on the face of his lay listener. Among these are "class rates," "commodity rates," and "flat" or "blanket rates."

An Explanation of Class Rates.

On the witness-stand the average rate-maker can toss and juggle these pet terms of his till the court-room goes round and round to the learned judge, and even to the questioning lawyer, while the man in the back seat reaches for his hat, tiptoes out into the hall, and takes refuge in a smoke. Forbid a railroad rate man using these three terms, and you might as well put a muzzle on him. He can't talk, that's all there is to it! Now, let us see what they mean, these three sacred terms.

First of all, I will give an example of "class rates." To ship a bass drum costs more per pound than to ship iron-ore. The drum takes more space in the car, and is more liable to get broken. It also was placed on the train by hand, while the iron-ore is dumped by the car-load, and nothing except a blast furnace can change its value.

Bass drums, baby-carriages, and air-ships are more fragile, however, and such kind of things are roughly grouped into a "class." Carpets, gunny-sacks, canvas, etc., might be grouped into another "class." Crowbars, nails, chains, etc., into still another class, and so on.

These classes are constantly shifting more or less; that is, on some roads crowbars might be in Class III, and on another road in Class IV, but this is a minor matter. Enough to say that certain things more or less alike from a shipping standpoint are classed together, and the freight charges on all things in one class are equal.

"Commodity Rates."

Thus, if the railroad charges $1 on crowbars it also charges $1 on nails, and if the charge is $5 on bass drums it is also $5 on air-ships. This is what is meant by "class rates," and by the terms "first class," "second class," "double first class," etc., depending on the nature of the goods, the roads over which they go, etc. In practise these classes are much alike on all roads.

But as we have seen in the case of "joint cost," some goods will not move, as the railroad man so aptly expresses it, or, in other words, will not be shipped, if the charge is too high. Take the case of nails, for instance. We will say that both nails and crowbars are made in Chicago, and nails, but not crowbars, are made in Kansas City.

Now the railroad can charge $1 for crowbars from Chicago to Omaha, but if it charges $1 on nails, then another road will haul nails to Omaha from Kansas City for fifty cents, so no nails will move out of Chicago for Omaha. So the nails are taken out of their "class" and given a "special rate" of fifty cents.

This special rate is called a "commodity rate." The public knows what a "special rate" is, but for some reason the railroad man prefers to call it a "commodity rate," a term much less apt and clear than "special rate." However, the railroad man does make a "special rate" at times, something in regard to freight what excursion rates are to the passenger service. Now that we have seen what "class rates" and "commodity rates" are, we will take up "flat" or "blanket" rates.

New York, Boston, Philadelphia, and other near-by cities all want to ship goods to Denver, Colorado, for instance. Each city has some one claim over all the others. New York, for instance, has a large tonnage to ship, while Pittsburg is nearer, though it has a somewhat smaller amount of goods to transport.

Also the kind of goods vary greatly. Pittsburgh ships iron and New York dresses, hats, and so on. So the railroad puts these cities all on an equal footing as to rates, and charges the same price for hauling the same kind of goods, say paint and varnish, from all the Atlantic coast cities to all the Colorado cities.

To do this is to make a "flat rate" to all the cities alike, or, in the picturesque language of the rail, to "lay a blanket over the coast cities and the Colorado common points." Here we meet a new term, "common points," that cuts a very deep figure in railroad freight matters.

"Blanket or Flat Rates."

A "common point" in freight-rates matters is much like the wholesale house in other business lines. Thus, because of its size and location, Denver, Colorado, can handle more business than can Fort Collins, Colorado, which is about seventy-five miles north and on but one railroad. Just as the man who buys a pound of beefsteak cannot expect to get the same low price as the man who buys a trainload of steers, so Fort Collins cannot expect to get as low a railroad rate as Denver.

But Pueblo, Colorado, on the other hand, one hundred and more miles to the south of Denver, has a large trade, and is the common business center for quite a number of small towns scattered around within one hundred miles or so. In other words, Denver, Pueblo, New York, Chicago, and other places, are "common points" not only in a railroad sense, but in many other business ways. In other words, all "common points" are under a "blanket" or "flat rate," when the freight charges from such points are equal.

Comparing roughly freight and passenger rates, we have in the passenger service the first and second class, the Pullman, the drawing-room, the special car, and even the special-train service. These in the freight end are "class rates." We have special or excursion rates in the passenger service, which are "commodity rates" when applied to freight, and when tickets are the same price from New York and Boston to San Francisco and Seattle in the passenger service, we find the corresponding condition in the freight department called "blanket" or "flat" rates.

No Hair-Splitting.

Now, let no expert railroad man grin, grab his pen, and break into print over this rough-cut comparison, or over other equally rough-hewn illustrations in this article, any more than should a horseman if I had said that horses and cows were more or less alike in that each have long tails, are covered with hair, eat hay, give milk, etc., as compared to whales or eagles. The whole subject of freight-rates cannot be handled in detail in a few thousand words, especially in an elementary way, as I am trying to do here.

The fact that the cow has split hoofs and the horse has not, if applied to freight-rates in this article, would fill this magazine. Hence I omit much detail, that, while important in daily practise, would not alter, but rather tend to confuse, the subject for the average layman. This matter of confusion is the very mistake ninety-nine out of one hundred railroad writers make, and something I am trying, even at the cost of some exactness, to avoid here. Besides, the man who knows all about railroad freight-rates has not yet been born.

Just how many elements enter into the making of a freight-rate probably no man knows. I am sure I do not, and I have never met a man who did. One thing is sure, distance alone is one of the least important items, yet at first thought it might seem to be the most important thing of all. More imporant than mere distance, within reasonable limits, of course, are terminals.

The Part a Terminal Plays.

It costs less to haul freight from the city limits of Chicago to those of New York City than it does to move it through either city a relatively short distance. The reason for this is that terminals cost hundreds of millions of dollars. Those of the Pennsylvania and the New York Central in New York City, including the tunnels under the Hudson River, are an example of what terminals cost compared to the relatively cheap

construction between the two cities. In making a freight rate these terminal expenses must be considered, though they vary greatly with each city.

Chicago is so situated that it can have a belt line railroad running around the city connecting all the railroads that enter that city, while this arrangement is almost out of the question in New York City. This "belt line" permits easy switching of a car from one railroad to another, say from the Northwestern to the New York Central, but to switch the same car in New York City from the New York Central to the Pennsylvania costs much more. In the end the shipper, or rather the consumer, pays these bills, as he must and should.

Where the Small Towns Suffer.

When one considers the vast difference in physical conditions, conditions no man can change, that exists between the terminals in Chicago and in New York City, one cannot complain if the railroad charges $1 for certain switching in Chicago and, say, $5 for practically the same service in New York City. This same question of terminals is one of the roots at the bottom of the quarrel between big and little cities over difference in freight rates.

We will say that a man wants to ship two mowing-machines from Chicago; one to Denver and another to Littleton, Colorado, a small town about ten miles to the south of Denver, both machines going over the Santa Fe, which passes through Littleton. When the train reaches Littleton it must be stopped and delayed perhaps half an hour to properly switch out the car containing the mowing-machine, a delay which costs the railroad at least $100, if not much more, counting interest on the money invested in the cars, engines, the crew's pay, etc.

In other words, the freight charge on that one mowing-machine does not pay five cents on the dollar that it costs the railroad to stop its long freight-train and deliver the machine at Littleton.

Hence in practise it pays better to take both mowing-machines straight through to Denver, break up the train, and, in a day or two, send one of the machines back ten miles to Littleton in a car loaded for Littleton. This car is so placed on a local train that it is quickly and cheaply cut out and dropped at Littleton without delaying thirty or forty other cars.

Now this seems to be the common-sense thing to do, but when the railroad comes to figure up its bill, then the trouble begins. Littleton is ten miles nearer Chicago than Denver, so according to some modes of reasoning—the abstract "mileage basis"—for instance—the charge to Littleton should be less than to Denver. If the charge were less, then the shipper would order the machine put off at Littleton but the rate to Littleton, via Denver, is made the same as to Denver and in some cases even cheaper than from Chicago to Littleton direct.

This tends, of course, to build up Denver as a business center at the expense of Littleton, and Littleton objects, giving many figures, some of which puzzle the wisest of heads. In case one place is much larger than another and better situated, there is usually little real foundation for putting the large and the small place on an equal basis; but if the two towns are nearly equal in prospects, though with yards maintained at only one of them, the other can show a pretty clear case of discrimination.

The famous "Spokane case," considered by the Interstate Commerce Commission a few years ago, was somewhat along these lines. In this case, Seattle was the Denver, and Spokane the Littleton, of the example we have quoted in the preceding paragraphs. The equally important "Reno case" is much on the same order.

Paying for the "Back Haul."

This condition of affairs is called "the back haul." That is, goods are pulled through a town to a big terminal, then back over the same tracks to the town and the local merchant is charged for the entire haul, the "direct," or "through haul," and the "back haul."

Take Spokane as a sample. Say the rate to Seattle from Chicago is $1, and the rate from Seattle to Spokane, over the same tracks, is fifty cents. The charge from Chicago to Spokane is then $1.50. Now it takes the disposition of a saint to stand on the platform and see your goods roll by to Seattle, then back to Spokane, and pay for hauling them all this useless distance, when they might just as well be put off at Spokane.

So the goods were put off at Spokane, but the bill is still $1.50. In other words, the railroad has charged you for hauling the goods to Seattle and back, although it

has not hauled them one inch of this distance. Rank robbery again! But what are you going to do about it? "Pass a law?"

Just what kind of a law, please? The man who can properly word such a law will make himself famous, for before doing so he must solve one of the hardest problems in the actual operations of a railroad. In the case of Spokane and Seattle, the two places are each large enough to make them more or less equal, and the problem is tangled, but in the case of Littleton and Denver, as I have illustrated, the same principle appears in a much clearer manner.

If Spokane is to have certain rights equal to Seattle, then how about Littleton having the same rights as compared to Denver? But if Littleton has these equal rights, then how about the lack of great switch yards at Littleton? One cannot build many sidetracks and maintain a night-and-day signal service at every little jerk-water station, where the freight in some cases will not average one car a week.

Now here are some of the actual physical conditions under which a railroad operates, and how to adjust the bills to such conditions constitutes the whole problem of freight rates. Clearly the "mileage basis" will not do, and the "joint cost" system seems to be full of weak spots, while the combination of the two systems simply causes new problems to spring into life.

This brings us to the "zones," or certain sections of country under a "blanket rate," and a "blanket rate" you will remember is one where the charges from a collection of shipping points are the same, regardless of conditions. In the part of the United States where "the blankets" are most used, that is, from the Atlantic seaboard to the Mississippi River and north of the Ohio River, the territory is divided into different "zones."

For instance, say for the first hundred miles out of New York the charge is one dollar, for the first two hundred miles the charge is two dollars, etc., all the way to the Mississippi River.

Now it is easily seen that such a system of freight charges would divide the country into "zones," according to the distance from New York, Boston or any other Atlantic seaboard city. There would be the "two-dollar zone," for instance, and the "three-dollar zone" next to it. The charge to all cities in the two-dollar zone would be two dollars, and the charge to all cities in the "three-dollar zone" would be three dollars, and so on.

All this looks very nice on paper, and even works fairly well in practise, but how about two cities near together, say twenty miles apart, one in the eastern part of the "three-dollar zone," and the other in the western edge of the "two-dollar-zone?" Here the two cities are only a short distance apart, yet the charge is one-half more to one than to another. This fifty per cent difference in freight rates from the Atlantic seaboard spells ruin for the city in the "three-dollar-zone," because the city so near it in the "two-dollar-zone" will, sooner or later, run it out of business, and reduce it to a comparatively dead town.

Now all this may seem merely abstract till you own real estate in that "three-dollar-zone" city, and your rent income drops steadily every year. This, in fact, is what is happening every day to thousands of real estate owners, and the problem to them becomes a very live and important one, indeed. Yet just how to adjust even this question so that things will be right all the way round we have not yet learned. Even the Supreme Court of the United States does not know and does not pretend to know.

The usual solution proposed by the three-dollar-town is to demand the two-dollar rate, regardless of the fact that then the town still farther west can, on the same principle, demand the same two-dollar-rate, and so on till the last, the "ten-dollar-zone," is reached. Of course this will not do, for then we would have a "flat" rate reaching clear across the continent, just like the postage-stamp system.

This very postage-stamp system has even been seriously proposed by some individuals as a possible solution of the freight-rate problem. Still it seems hardly right to charge a man as much for shipping from New York to Albany as it does from New York to Los Angeles. The Albany man would find fault, and give loud and long utterance to that universal cry, "our rate is too high."

I could go on for many pages giving one detail after another of the problems that confront the freight-rate man, and through him, the nation, for as I said in the beginning this question of freight rates touches swiftly and deeply every pocket in this country, though few persons realize it.

The second article on "The A. B. C. of Freight Rates" will appear in our next issue.

LAZY BILL BENTAK.

BY S. O. CONLEY.

Had He Not Been Such a Tight-Wad, the King's Treasury Might Have Remained Intact.

THE king wore a crown made of an iron band studded with brilliants. The king's forehead was low, and avarice had set its seal upon his face. His nose shot out from his profile like a hook used by sailors when catching sharks. It was a nose of active mien, and seemed ever ready to smell out hidden money.

The ingenious limner who carved the portrait of that venerable ruler upon the everlasting granite that marks the entrance to the Province of Gowat, chiseled beneath it the statement that King Olfactus's name had been given to him because of the peculiar prominence of his olfactory organ.

The king was a miser, and ordered a stone-mason to build him a small pyramid —a sort of stone purse wherein he could lock up his untold wealth. In those days money was not loaned out at interest, and Wall Street was unheard of, happily for the simple-minded Egyptians.

So the king had the pyramid built, and during the long, weary winter nights he had his hoards quietly carted to his treasury. One morning at breakfast, while he was eating his oil-smeared fish and drinking his wine, the factotum reported that the deposit had been completed, and, lo! the key!

The king jumped from his seat at the table and cried: "My mare! My mare! The desert!"

The slave bowed his black head, and in a few moments the neigh of the caparisoned animal was heard at the gate.

The king mounted—he of the deep, copper-colored face, he of the nose—and, with the speed of the wind, he sped across the plain. A cloud of dust obscured the horizon marking his trail; but an instant after the veil of the uplifted sand had been removed, no eye could discern the king, for he had entered his pyramid, and his mare was hitched in the shade at its base. He locked himself in, and began to gloat over his enormous and dazzling store.

Diamonds, rubies, charmed bracelets, antique rings, jewels worn by Noah, before and after the flood, together with his rich drugs, golden candlesticks, pearl-headed canes, images in gold and silver, crocodiles with emerald eyes, amber full of jet flies, silver lizards, and bronze serpents miraculously formed.

Ali Bentak, the humble stone-mason who built the pyramid, lay on the bed in the second floor, front, of his unpretentious dwelling on Salem thoroughfare, Egypt. His breath came feebly; he was almost ashen in pallor. The doctor who had been attending him for weeks shook his perfumed curls and waved an everlasting adieu.

The good old stone-mason was dying; a lingering illness was dragging him into the realms of "the mystic beyond." His widow-to-be leaned over his couch. She was a hard-working woman, and toil had given her a sad countenance. Her left eye squinted, and was tearful; her right eye was out, and, therefore, could do nothing.

Two youths stood beside the bed of the coming mummy. They were his sons; two idle boys who had done nothing to earn a living beyond holding horses and sweeping the streets of their native city. The stone-mason, having been the architect of the king's treasury, had nothing to leave his children save a secret and a blessing.

What he had put up, he philosophized, that also could he tear down; and as his bill for labor at one dollar and seventy-five cents a day had not been paid by the king,

he had no compunction of conscience. He beckoned to William C. Bentak, his eldest and laziest son, to draw near.

"I have a secret, Bill," said the mason; "and, before I die, I want to tell it to you.

"I built, you know, the pyramid for that avaricious old fossil, King Olfactus. He has his treasure in it, and goes there nightly to see it.

"When he leaves he locks the door and puts his seal upon it, so that any one getting in will have to break the wax, and the king will find him out. There are no windows in the pyramid, and, therefore, there is but one way of entering, and that is through the door."

Here old Ali Bentak gave a knowing look at his son, who winked away a tear and was all attention.

"Perhaps there is another way of getting into the strong box," he continued; "and perhaps there is a stone-mason who knows it. By the tail of the holy crocodile, there is! Four blocks up on the side fronting east there is a stone that turns on a pivot.

"The eye of the holy ibis might search in vain to find it, but it is there. Touch it where you see a rude and very small mark that looks as if it had been made by the slip of a chisel, and—you can get in. There is a corresponding mark on the inside, and by pressing that you can get out."

Finishing the thread of his discourse, he gave his bronze-colored soul to the protection of the holy crocodile and the holy ibis, and started for the domain of mummydom.

Old Ali Bentak had been sewn into his last shroud and placed in the front line of the long ranks of mummies in the catacombs, and his widow and sons looked around them and bethought of the pyramid. As it was the work of the late lamented head and guide of the family, they felt a natural pride in this monument to his genius.

Mrs. Ali Bentak was too proud to take in washing and too old to marry again, so she entered her right of dower to the secret, and suggested to her hopeful offsprings the excitement that would attend a midnight visit to the treasury department. During the day it was but natural that the sons of Ali Bentak should walk around the pyramid and admire the handiwork of the man who had built it; and while thus listlessly engaged they easily discovered the mark made by the chisel, and they took note of it.

That night the bureau of Mrs. Ali Bentak sparkled with a few rare stones of nameless value, and the dining-room displayed a sumptuous supper.

Frequent were the incursions made into the hoards by those children of want; aye, so frequent and so incursive were they that the aged Olfactus was bewildered. His gods were leaving his heaven! Not singly, but in handfuls, his coins were winging their flight. His crocodile's eyes had been picked out, and his mythology was orbless. Even his coral eagle had lost its golden front teeth.

Where was this to end? Who was the evil spirit who was to finish it and him? In vain he searched with his hooked nose among his chests and boxes. In vain he examined every corner of his mine. No red gnome or spirit-bat was found tucked beneath a ruby or crouching in the shady side of a diamond. Amazement filled the king—despair, the miser. Twofold emotions took possession of the twofold man.

He had entered his treasury, and, as usual, the sacred seal of the kingdom was unbroken. He tapped on the walls; it was like striking a skull—a dead sound was the only answer. He appealed to the ibis, the bull, the crocodile, and all other sacred animals in Egypt's holy "zoo," that he had been robbed and robbed vilely; and the worst of it was he could not discover the robber.

Why not take all the treasure away and thwart the miscreant, he thought? Why not cast it far and wide over the Lybian sands that stretched southward and westward from his regal home? Why not give it to the cutpurses of the desert; build churches to the sacred birds and beasts; crown his queen with a diadem whose light would make her dusky beauty shine like a star over the dim mountains of the moon? But the old Shylock of the Nile left his great wealth in the dark vault, for its luster to shine on the somber walls and cheer the bandit in his foul success.

The king ate no supper that night, and, next morning, his breakfast left the table untouched. He mounted his trusty mare and flew around the sacred depository of his treasure. No bird had lit upon the apex of the edifice; no serpent coiling through the blazing sands had wriggled its way to cool its scaly skin in the dark shadows of the walls. The wind from the lone lands of Africa had hidden the footsteps of the mason's sons, and all was mystery and all

was dim. Those sisters of seclusion, Silence and Safety, reigned supreme.

A storm had gathered in the Afric air. The day had fled, and the night, the robber's friend, was abroad in the land. Loud howled the blast, and the mysterious Nile chafed against her reed-fringed banks. The monstrous deities of her flood found safety in their muddy shrine as they listened to the rattling thunder of the skies.

All was gloom and darkness, tempest and terror. And, in the midst of it, the brothers once more left their home for their Egyptian El Dorado. The stone turned on its pivot, and they entered. A torch was lighted and stuck into the ground. William C. Bentak and his brother picked their way in quest of the golden stores. William lifted from an open box a bracelet that was worth a battle between nations. His brother was staring in hypnotic admiration at the sparkling eyes of an ivory god.

"Hark! There is a voice at the door! The wax is being broken! Quick! Fly!"

It was the younger brother who spoke. Both started to escape. William was first out of the secret passage, and his brother was following; but the king was too fast. He had entered just in time to see a body fall to the floor.

The gleam of a sword, and the deed was done. William C. Bentak severed his brother's head from its body, and the secret opening snapped closed. He seized the gory head and fled from the pyramid into the sheltering seclusion of the stormy night.

He gloried in his freedom, and in the fact that he was outside of his brother's tomb. With his brother's head in his hand, he reveled in knowing that he had left the king inside with the lifeless trunk, and William C. Bentak ran on and on.

The king thought that he had made a gallant capture; but the lifeless, headless body before him only added to his misery and chagrin. He looked around and wondered whether he was in a dream, or whether the inmates of the sacred "zoo" had given him into the hands of conjurers. Then it dawned upon him that he had no time to waste in thinking, if he wanted to catch the culprit.

He dragged the body out through the door and onto the wet sands. He reentered, extinguished the torch, locked the pyramid, and hastened back to his palace. His private guard was commanded to fetch the headless body from the pyramid; and then the worried, fretted, frightened, puzzled king began to lay his plans for the morrow. Wrapped in his dressing-gown and his thoughts, he drew a chair before the fire and, in it, fell asleep.

William C. Bentak had cut off his brother's head to save his own. He believed that the force of this argument would acquit him of premeditated murder. Had both been detected, he soliloquized, both would have been destroyed; and, to prevent the secret being discovered, he had removed the only evidence against himself—his brother's speechless head.

The next morning the king was busy issuing an edict. That edict commanded that every inhabitant, from the oldest to the youngest, of his city and the neighborhood within a radius of one hundred miles, should pass before a gibbet on which was to be exposed the body of the unfortunate thief.

Soldiers were placed near the gibbet whose duty it was to scrutinize the face of every person who passed, to see if they could trace any expression of recognition. By ten o'clock the public square was crowded with the dusky people. They passed on, wondering, but not recognizing. None knew the mason's son.

In Egypt, in those days, death was looked upon as a peculiar institution of nature, and great care was paid to the bodies of the departed. Without burial they could not pass that glorious gulf which separates mortality from immortality. An unattended mummy was no mummy at all, and was excluded from that paradise where the highest enjoyment is a full and social intercourse with the crocodile, the ibis, and the bull.

"You must bury your brother," said Mrs. Ali Bentak to Bill.

"How can I?" asked the son.

"You must bury your brother," repeated Mrs. Bentak, with seemingly unnecessary vehemence. "And," she added, "if you do not, I will tell old Olfactus all about it."

William Bentak left the room, and proceeded to saddle his mother's mule. In the panniers of the impervious leather he poured wine; in the wine he poured a poisonous opiate; in the saddle he deposited his person, and made his way toward the public place. The sun was setting. Tower and dome and steeple glowed in its ruddy splendor; and afar, over the sands, the wind began its mourning wail; but onward, in the deepening twilight, jogged the fratricide.

The people had obeyed, in awe and silence, the dread mandate of the law, and had returned to their homes to talk over the wonders of the affair. The guard, with their white shawls folded over their heads, and armed with spears and heavy stone hammers, were grouped about the base of the gibbet. They were tired with the weary and useless ordeal.

William Bentak dismounted from his mule and carelessly approached the group. He was the only civilian among the soldiery. It was but an instant's work to prick a hole in one of the panniers and let the wine flow out. Speedily it was observed by the tired guardsmen. They rushed to the wine sacks—they filled the hollow of their hands — they pressed their mouths to the aperture—they laughed at the rider's well-affected grief. And what was it to them whose wine it was so long as they could drink it!

The wine was not tardy in its potent effect. Through the brain, through the marrow of the bones, through the arteries of the heart, it flew like molten quicksilver, and, worse than the arrows of the sand-enveloped Bedouin, it killed the life within them; and, one and all, the captain and his men were stretched upon the ground. Then, with all the dead about him in the thick gloom of the evening, William C. Bentak tore his brother's body from the gibbet and fled to the safety of his mother's house.

Poor old Olfactus. His eyes turned so red from weeping, his famous nose so blue from constant blowing, and his step so tottering that many thought he had begun a life of dissipation. His treasury invaded, his guards murdered, the body rescued, the culprit fled, and, worse than all, the secret of the mysterious entrance to the pyramid unraveled!

He could not understand why the crocodile, the ibis, and the bull had been so unkind to him. He had acted like a king, he had been open and aboveboard, and there was no guile in any of his commands. Why not change it all? Ha! Ha! He would be tricky, and he would beguile. He would show the populace that in his old bald head there were a few ideas worth knowing. So he feigned wonder and admiration for the cleverness of the mysteries, and published a brief exposition of his royal views and intentions, in which he said:

> Be it known that I, King Olfactus, under the blessing of the great water-god of the Nile, the crocodile, and his brethren in holiness, the ibis and the bull, am willing to pardon the wonderful man who has robbed my coffers, killed part of my brave and victorious army, and robbed the gallows of its fruit.
>
> Not only do I pardon him, but I invite him to come forward on the fourth day of the next moon and stand before my daughter, the beautiful Princess Sophina, who will be present on that day, beneath the palms in the Golden Hall of the Whispers, in my palace of the Silver Peach. And if he will recount to her, and prove that he is the person who performed the aforesaid wonders, he shall have the hand of my daughter in marriage for his astounding and wonderful acts.

This was signed in the name of the crocodile, and posted in the public square. It had a wonderful effect.

The Princess Sophina was beautiful among women—lovely, but not whiter than the lotus of the Nile—and heiress to the large estates of the monarch. Day by day the princes and peasants filed into the Hall of Whispers to tell their gruesome, concocted tales. Hope had inspired them with wit, and their tongues were eloquent, but none could account for the mystery of the pyramid.

The princess sat in patience. Flowers of infinite size and hue exhaled their loaded sweets on the air of the capacious hall; wondrous birds fluttered from branch to branch in the evergreen palm-trees of this wilderness of shrubbery; and, chained by a golden link, a huge crocodile spread his flabby feet in a tub of marble inlaid with gold and precious stones, sighing occasionally for a freer bath in his beloved and native Nile. Music, ever and anon, floated upon the incensed air from unseen instruments, filling the place with melody and voluptuous languor.

Sophina listened to the recital of the gallants of her father's court and the peasants of the highways, amid this scene of inspiration, but none could win a smile of credulity from her roseate lips. Like the image of Silence and Thought, the Sphynx of the Sand, she heard, but she answered not.

—Olfactus was all on fire. He wandered about his palace, and he visited his pyramid; but only broke its sacred seal to find some other treasure gone—more money lost. By the yellow snakes of Egypt! what was to be done?

A figure wrapped in a flowing robe stood before the princess. Two dark and glaring

eyes gazed upon her beauty; two eyes that seemed endowed with the expression of inextinguishable suspicion flashed into her soul.

Those eyes read her heart, read her brain, read her diplomacy. For one instant they wandered toward the shrubbery, and a smile played from the mouth to the eyebrow of the mantle-covered stranger. The princess was seated in a regal chair; the visitor stood directly in front of her. They were alone, for he had waited until all had departed, baffled and disappointed.

"Speak," said the princess, impatient at his silence.

"I know all, and did all!" replied the stranger.

"Ah! Then tell me."

She listened to the slow and deliberate narrative, wondering how so simple a thing could have baffled the wisdom of her father. The narrator had just finished, when she, too anxious to obey the secret orders of the king, hurried forth her hand to seize him, her fair mouth opening to call the guards hidden behind the convenient shrubbery. He, too, extended his willing and unsuspicious hand to receive hers. She seized it with a cry of joy—and William C. Bentak fled.

He fled the palace, he fled the court, he threw his coat aside, he showed both his hands as he crossed the street. He sought his mother's humble house, and again was safe.

The princess gazed on her suitor's hand. She looked at its withered flesh, its shrunken arm, its almost rotting bones. The guards gathered around her. They gazed in wonder at the new demonstration from the land of mysticism. They pursued not the demon that had just fled upon his wings of gloom. The king tottered into the chamber and demanded the person, who was to be given over to torture.

"That hand! That arm!" cried the king.

"Is his—the fiend's!" exclaimed the daughter; and the skeleton arm fell from her grasp to the floor. William C. Bentak had had the right arm of his brother concealed under his cloak.

"In vain! In vain! Oh, crocodile! Oh, ibis! Oh, bull!" cried the thwarted king. "Witchcraft and priest-jugglery are against me! By the dome of the eternal catacombs, let me die! let me die! Oh, crocodile, take me to thy home! Oh, ibis, take me to thy dominion! Oh, bull—"

The king fell in a swoon.

Two nights afterward he visited his pyramid. More and more of his jewels had gone. The third night, as he was approaching the treasury, a pale green light effused from the secret entrance. Quietly he entered the pyramid by that aperture, and caught William C. Bentak in the act of locking a chest.

On the following day his majesty's head was mysteriously placed on the gibbet in the public square. Beneath it was a card bearing this inscription: "He robbed his own treasury."

AN INTERURBAN SLEEPER.

A SLEEPING-CAR on an interurban line is not an entirely new thing in this country, but such cars as are now being operated daily between Peoria, Illinois, and St. Louis, Missouri, are proving a boon to the traveler as well as something of a curiosity.

Upon entering a compartment to prepare for the night's rest, one finds that the bed to be occupied is folded snugly into the wall and that a chair, placed in a comfortable space, is waiting for the passenger.

If the upper berth is not sold it is not let down, which permits of standing upright if desired. When ready to retire the cot is drawn out from the wall, and if tall, you will find to your great relief that it is six inches longer than any berth you have over occupied, and permits of stretching out to full length.

In the wall at the head of the bed is an electric light, which obtains its current from a storage battery and not from the trolley. With this arrangement the light burns with the same uniformity at all times, and makes it possible for one to read after retiring if wishing to do so.

A small wall safe is also provided in each compartment, for the protection of money or other valuables. This in itself is a unique and a valuable addition to the sleeping-car. Upon arising in the morning the cot is again folded into the wall, and the small camp-chair is again used while dressing.

The toilet-rooms at each end of the car are roomy and well equipped, and after the preparations for the day are over you return to your berth, when the thoughtfulness of the company surprises one still more, for you are served by a porter with hot coffee and rolls with butter, free of charge. We are told that he is amply paid, and the company does not permit him to accept any tips.—*Scientific American.*

Holding Up the "Cannon Ball."

BY SAM HENRY.

THE TRUE STORY SERIES. To think coolly and act quickly while looking down the barrel of a revolver in the hands of a desperate outlaw, requires a nerve one seldom meets in the day's run. With the long list of railroaders who have been killed by train-robbers in mind, the engineer who keeps his mouth shut and does as he is told under such circumstances can justly feel that he has done all that could be expected of him. Engineer Converse did not believe in carrying firearms. He did his part and did it well, pitting his wits against the train-robbers' pistols and winning a fight which might never have been won with bullets.

TRUE STORY, NUMBER FIFTY-TWO.

A Train Robbery That Missed Fire and Ended in a Bloodless Victory for the Train Crew Through the Quick Wits of a Plucky Throttle-Handler.

"COLONEL, your soldier comrade certainly displayed wonderful presence of mind. Your story about him reminds me of an incident, in my railroad experience, in which the main actor was also a soldier, having taken part in our family row of the early sixties, though at the time of the exhibition of courage and presence of mind of which I shall tell you, he was an engineer on a train called the 'Cannon Ball,' which the Gould system, in the early eighties, was running, solid, from Galveston, Texas, to St. Louis, Missouri.

"I was sorting mail on this train for 'Uncle Samuel' between Houston and Texarkana. Leaving Houston at 5 P. M., we arrived at Texarkana at 9 A. M., making the three hundred and sixty-five miles in sixteen hours. Stopping only at county seats and junctions, this train was the fastest in Texas, at that time.

"Well I remember the engine-boys who had the honor of pulling us! One of them was William Converse. He won the respect of all his fellow railroad men, as he used the choicest language, was always retiring, and never given to swagger. If you saw him arriving from his run, his overalls would still be neat, and the tips of his white collar always showed above a well-fitting jumper.

EDITOR'S NOTE: All the stories published in this TRUE STORY SERIES have been carefully verified by application to officers or employees of the roads or companies concerned who are in a position to be acquainted with the facts. Contributors should give us the names of responsible persons to whom we may apply for such verification, in order that fruitless inquiries may be avoided. This condition does not imply any lack of confidence in the veracity of our contributors, but is imposed merely to give greater weight and authenticity to the stories.

Series began in the October, 1906, Railroad Man's Magazine. Single copies, 10 cents.

"Pulling the throttle of engines since 1866, and an engineer on the I. and G. N., between Longview and Galveston, since 1875, he is, to-day, pulling No. 5 and No. 6 between Longview and Palestine, still making schedule time on these fast trains.

"But now to our story of the part this man played in an attempted train-robbery which occurred the latter part of September, 1885.

"Ours was a fast through train, and we were always believed to have lots of money aboard, particularly in the fall or cotton season, when the banks of Houston and Galveston shipped currency daily to the country banks to move the cotton crop. The government must have realized that we ran some risk in consequence, because they supplied us mail clerks with old army pistols, as long as your arm, with the warning, however, that if they disappeared we should have them to pay for.

Didn't Tote a Gun.

"Mr. Converse was in my car at Houston one day, getting a drink of water, while I happened to be hiding my old army blunderbuss under some sacks, and, seeing what I was doing, he remarked that I evidently did not intend to use it if held up. 'No, sir,' I replied. 'It is my opinion that when men get sufficiently desperate to hold up a train they value human life very little, and I am not going to do anything that will give them an excuse to use me as a target.'

"He said that he, also, looked at the matter as I did, and therefore never carried a gun on his engine.

"At our first station out, Spring, twenty-three miles from Houston, where we had exchanged these remarks, I heard the porter, on the opposite side from the station, shouting at some tramp, as I thought, to get off. Then I heard him say, 'All right, boss,' and I looked out to see him trotting along ahead of a man with a pistol in his hand.

"The train was moving off very slowly, and they had no trouble climbing aboard the front end of my car. Then two more fellows came from behind lumber-piles alongside of the track, and boarded the engine, with pistols in their hands, which they pointed at the engineer and fireman.

"They ordered them to pull down to the San Jacinto River bridge, five miles away, and stop with all the coaches on the bridge except the mail and baggage cars. Five of their pals, they said, were waiting there, who, if tricked, would kill Mr. Converse, should it take twenty years to do so.

Too Much for the Fireman.

"After we got under good headway, the fellow who had the porter in tow on the end of my car, knocked him on the head and pushed him off. He then started to climb up over the tender to join his pals in the cab, but coming over the tank he slipped, and fell headlong into the gangway of the engine, accidentally discharging his pistol. The fireman, covered by another one of the robbers, who had been trying to frighten him by sticking his gun into his face and telling him he didn't care whether it went off or not, had been pressing up into the cab window, and was now so startled that he went out backwards.

"Mr. Converse was also badly startled. He jammed on the air, almost stopping the train, but the man covering him shoved his pistol along his ear and commanded him to go ahead. Mr. Converse asked if the fireman had been killed, and was informed that he had caught the last sleeper.

"'I am sorry, for your sake, if that's the case,' said Mr. Converse, 'because, you know, captain, the State penitentiaries are both on this road, Huntsville being only a short distance away, and the convict guards are constantly traveling back and forth.

The Train Was a Fort.

"'They carried a hundred or more convicts to the State farm, near Houston, yesterday, to pick cotton, and I saw eight of these guards, returning to-day, get on our train at Houston. All had shotguns and side-arms, and if that fireman caught the train, as you say he did, the mail and baggage cars are regular arsenals by this time, and some one will certainly be killed if you attempt to carry this job through.'

"The robber lost his nerve, pleaded with him to save them, and threatened that if they were hurt his pals would, sooner or later, kill Converse.

"'Captain, I have a plan,' said the engineer. "I will stop the train on the bridge, allowing only the pilot to reach the bank. You can then shout to your comrades in the brush to run for their lives,

and then join them by climbing out over the running-board and going down the track, keeping the engine between you and the train, so that the guards cannot get a shot at you.'

"This plan evidently met with the robbers' approval, for, arriving at the bridge, their leader called to his pals in the brush to run—that the train was a veritable fort.

"They then took off down the track at a speed which would have done credit to a Texas bronco, firing back at the engine to intimidate Mr. Converse, so that he should not pull up and allow the guards to give chase.

"The truth of the matter is this: with the exception of the messenger's old sawed-off, my army pistol, and a .32 belonging to a passenger, there wasn't a thing on the train that could have made powder smoke.

"And the best of it is, that we never learned the story of how the robbers were frightened away from Mr. Converse at all. We got it from one of the robbers—from the leader himself, in fact—who was captured about five years later, after doing a similar job farther west. In giving an account of the hold-up, he said that he had since learned how he had been tricked, but that Mr. Converse's story was so logical and coolly told that, at the time, he had not doubted a word.

"If you knew Mr. Converse as I do, you would agree with the robber, who said of him: 'That engineer was the nerviest fellow I ever saw!'"

BALLOON-POWER RAILROAD.

A RAILROAD on which the motive power is supplied by a balloon, is certainly a novelty. Such a railroad has been constructed in Austria under government supervision. Its object is to carry passengers up and down Hochstaufen Mountain at Bad Reichenhall.

The top of this mountain affords a splendid view; but the climb to the summit is tedious and uninteresting. Accordingly, it was decided that the tourists who visit the place would appreciate the labors of the captive balloon devised to convey them to the summit.

The balloon was made to run along a track built at the side of the road-bed. A trailer with many wheels clasps this wooden rail, or track, and the passenger-car is fastened to the trailer.

The operator sits in the car, with a cord swinging between him and the balloon by which he can regulate the supply of gas. Safety devices are at hand in case of accident.

Before the car starts up the mountain the balloon is charged with sufficient gas to enable it to ascend to the summit, and when the top is reached and all is ready for the return journey, some of the gas is permitted to escape, whereupon the car starts down hill, its speed being checked by the retarding effect of the gas still left in the balloon.

It was not until the most rigorous investigations had been made and the comparative safety of this method of journeying demonstrated, that permission was given to build the railroad. There are many novel safety devices to prevent accident.

The tank and generator from which the gas is drawn answer the double purpose of supplying power for the railway and furnishing gas for illuminating the town.—*Chicago Record-Herald.*

PIGEON ACTS AS PILOT.

A BLUE pigeon with a peculiar fondness for railroading, for several months past has been flying with the Iron Mountain trains between Walco and Gurdon, Arkansas, a distance of thirty-four miles. The bird is known as the "Royal Blue Flier," and it generally keeps just ahead of the engine on a level with the headlight, stopping to rest when a station is reached.

For a long time the pigeon was regarded as a bird of mystery, for its origin was unknown, and it eluded all attempts to capture it. Not long ago, however, it was finally made a prisoner by Special Agent J. M. Lambert while it was perched on the headlight of engine 28, which had stopped at Witherspoon. He succeeded in getting up to the front of the locomotive, and, reaching around the smokestack, grabbed the bird.

Lambert shortly afterward discovered that its owner was J. W. Hall, a resident of Malvern, who took the pigeon home with him, but lets it loose that it may make its trips with the train.

On one trip, Engineer Golleher, who was in the cab, tried to overtake it, but it was no use—the pigeon always stayed just ahead. When the train stopped at Arkadelphia for water, the bird flew out to one side and rested in a tree until the fireman rang his bell for the start, when it resumed its place just in front of the headlight, flying at a suitable speed to remain about the same distance ahead, whether the train was going slow or fast.

Some of the trainmen are said to regard it as a hoodoo, and fear that its presence portends some disaster to them, but as yet no accident has happened to a crew while the bird was along. Others look upon the pigeon as a pet, and are always glad to have it join them on a trip.

HERREN'S FINGERS CLOSED UPON THE MAN'S THROAT.

Ten Thousand Miles by Rail.

BY GILSON WILLETS,
Special Traveling Correspondent of "The Railroad Man's Magazine."

No. 8.—STORIES OF THE ST. LOUIS UNION STATION.

The Con, the Burglar, and the Actor—The Peace-Making of Tom Mooney—"Lucky" Herren and His Quarry—The Millions for Which Charlie Gilpin Is Still Waiting.

PULLMAN CONDUCTOR FROMEYER was sitting in section 10, car 3, outside of stateroom A. This stateroom was occupied by a passenger whom Conductor Fromeyer at first regarded as exclusive, then as mysterious. All the way down from Chicago this passenger had kept his door locked, having opened it only once an inch or so to hand out his ticket, just after the train had left the Windy City.

Whenever the train stopped at a station Fromeyer noted that the window curtains of stateroom A were drawn tight, notwithstanding the fact that it was on the shady side of the car.

It was a Chicago and Alton train. Toward sunset it was within an hour of St. Louis. Conductor Fromeyer was thinking about the occupant of stateroom A.

There were seven or eight passengers in the car. In section 9, opposite the one in which Fromeyer was taking his ease, sat a young man, fashionably dressed. Fromeyer watched the young man intently as

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he took a suit-case from under his seat, opened it, rummaged among its contents, and finally took out a clean handkerchief.

The young man then closed the suit-case and put it back under his seat. Meantime, Fromeyer noticed that the stenciled initials on the suit-case were "J. J. W."

"Guess I'll go to the diner and get a bite while we run into St. Louis," said J. J. W. to Conductor Fromeyer. "I open there to-night—and I'll save time by eating now."

"One of the profession?" asked Fromeyer.

"Yes. We're playing at the Olympic Theater." He hastened forward to the diner.

No sooner had the actor left the car than something happened that greatly excited Fromeyer's curiosity. The door of stateroom A opened and the mysterious passenger stepped out, carrying a suit-case. He went directly to section 9, just vacated by the actor, and sat down, placing his suit-case on the seat in front of him.

Not a Regular Occupant.

The man was unshaved, his hair unkempt, his clothes slouchy—not at all the sort of person who usually occupied expensive stateroom A.

Looking across at the Pullman conductor, the man threw open his coat, revealing a badge.

"I'm Captain McNaughton, chief of police of Hot Springs, Arkansas," he said to Fromeyer. "So kindly pay no attention to what I am about to do. I'm after a certain man. You must neither see nor hear."

The man with the badge pulled from under the seat the suit-case marked "J. J. W." He opened it, took out a bath-robe, bath-slippers, two shirts, a bag of collars, and a tin box labeled "make-up." Then he opened his own suit-case and dumped its contents in their entirety into the bag marked "J. J. W.," which he then restored to its place under the seat. Next, he placed in his own bag all the things he had removed from the actor's suit-case, closed it, arose and carried it back to his stateroom, pausing on the way only long enough to say to Fromeyer:

"Mum's the word, conductor."

When the train pulled into the Union Station at St. Louis the actor returned to car 3 from the diner and said to the porter:

"Take my suit-case to the platform, please."

The porter did as requested; then said to the actor:

"That bag o' your'n is some hefty, boss. Seems like you was carryin' a line o' hardware."

It Was Some Heavy.

"No; merely neckwear," answered J. J. W. with a smile. "Here," hailing a station-porter, "put this bag on a cab."

After the station-porter had placed the suit-case at the driver's feet on the cab he turned to the actor and exclaimed:

"Gee, but that bag's got weight into it, mister!"

"What's the matter with all you porters?" said J. J. W., again smiling. "You must be weaklings. That bag is not heavy at all." Then he called to the driver:

"Southern Hotel!"

When the cab pulled up at the Southern the bell-boy who came out and carried the suit-case of the arriving guest to the desk wiped the perspiration from his brow, though it was a cool day in November.

"Your bag is sure loaded with ore," the boy said to the actor, after the latter had registered himself as "J. J. Wilson, New York."

"You're all crazy in St. Louis," answered Wilson. "Here's my key. Number 424. Carry that bag up for me."

In his room, Wilson hurriedly opened his bag with the intention of putting on some clean linen before going to the theater. As he lifted the cover he stared in dumb amazement.

Only men of certain professions would have recognized the contents of that bag. A newspaper man would have known, in a general way, the nature of the implements.

He Had Played Burglar.

A detective or a policeman would have been able to give each tool its name. One actor in ten might have been able to define the uses of those heavy objects.

J. J. Wilson was the one actor in ten.

"A burglar's kit!" he exclaimed.

Wilson had twice played the part of a burglar in melodramas, and he knew the uses of the folding jimmy, the rubber gloves, the electric lamp, the "squeezer,"

and the "pitch" drills that were now revealed to his astonished eyes as part of the contents of his bag.

"Some one's playing a joke on me," he muttered. "Maybe I'm cast to play burglar again—and this is the work of some manager who loves a practical joke. And yet—no, it can't be. What's the mystery, anyway? Supposing I'm caught with these things in my possession? It's against the law. I'll take them to the police right away."

He emptied the bag of all else save the burglar's outfit, then hurried with it to the elevator. As the elevator reached the lower floor it jounced up and down a moment,

"KINDLY PAY NO ATTENTION TO WHAT I'M ABOUT TO DO."

as elevators will in unskilled hands—and the bag flew open.

"Jiminy!" cried the elevator-boy, his eyes bulging. He winked at himself in the elevator mirror as the actor hastily closed the bag and stepped out of the car. Just then, too, a bell-boy stepped up to Wilson, saying:

"You're wanted at the telephone, sir."

The Journey Interrupted.

Wilson hurried with his bag to the telephone-booth, where some one on the wire invited him to come to a certain club after the show that night to do a professional "stunt."

As he came out of the booth Wilson looked at his watch. It was a quarter to eight.

"Hang the bag!" he exclaimed. "There's no time just now to take it to the police. Here, boy, take this bag up to 424."

Hastening across the street to the Olympic Theater, which is directly opposite the Southern Hotel, Wilson entered his dressing-room; then suddenly cried:

"By Jove! I've forgotten my make-up. Dresser—oh, dresser!" he called.

A tired, seedy man thrust his head in at the door.

"Go across the street to the Southern, quick!" commanded Wilson. "Here's my key. Go up to 424 and get my make-up box. Hurry! Make believe you're going to a fire!"

Five minutes later the dresser reappeared. The first thing he did was to wink significantly at Wilson.

"Well, where's the make-up?" cried the actor. "I'll be called in less than twenty minutes. Hand the box over, quick!"

"I ransacked your room, Mr. Wilson. But I couldn't find your make-up box. I opened your suit-case during the search, and—"

Caught with the Goods.

"Great guns, man! You found those tools?"

"Yes, sir. That's all right. I understand. You're cast to rehearse a burglar's part here in St. Louis."

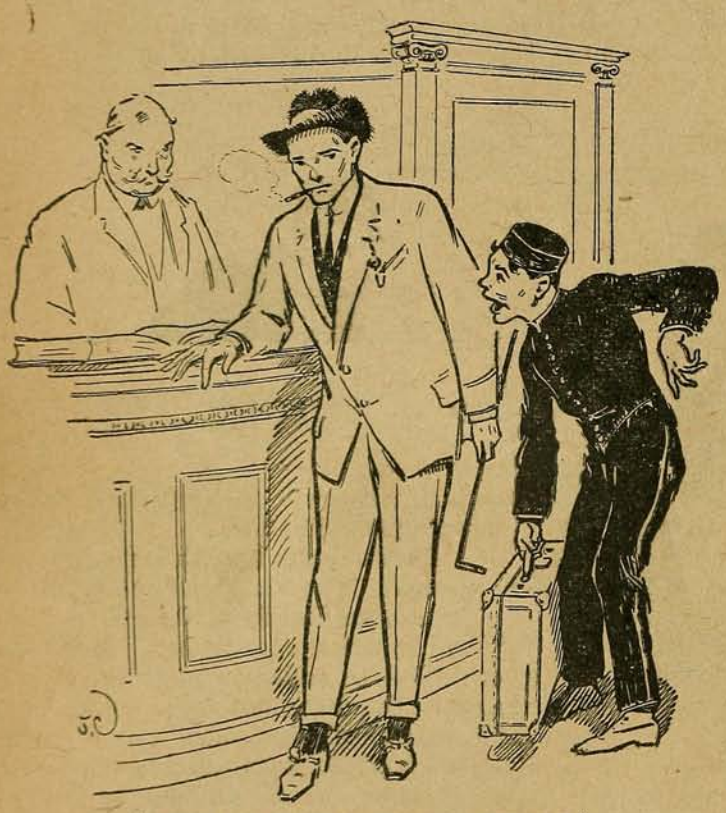
"Never mind. Borrow make-up from somebody. Be quick!"

After the play, Wilson went direct to the club, where he performed his professional "stunt," and then returned to the Southern.

"The clerk would like to speak to you, Mr. Wilson," said the bell-boy.

"I'm to be pinched for having that kit," the actor thought.

"Mr. Wilson," said the clerk when the actor reached the desk, "a strange thing has happened in your absence. Captain McNaughton, chief of police of Hot Springs—he's well known to us—called and went up to your room and took possession of certain tools"—here the clerk winked—"that happened to be in your suit-case. He left word that if you want the personal belongings missing from your bag, you're to come down to the Union Station



"YOUR BAG IS SURE LOADED WITH ORE."

before the Rock Island train pulls out for Hot Springs at eight o'clock in the morning."

More mystified than ever, Wilson went up to his room and found, surely enough, that some one had taken the burglar's kit.

He was awake all night, trying to make a guess as to the meaning of the tools and of the visit of the chief of police of Hot Springs.

He Meets the Detective.

The next morning Wilson arrived at the Union Station and hastened through one of the gates to the Rock Island train that was about to pull out for the Southwest.

"Well, here I am," he told himself. "But how the old Harry am I to know Captain McNaughton when I see him?"

Just then a Pullman conductor stepped up to him, saying:

"You rode down with me from Chicago yesterday, sir. You occupied section 9, and you carried a suit-case marked 'J. J. W.' All right, chief," turning to a third man, "this is the actor."

"Hope this thing hasn't caused you any inconvenience, Mr. Wilson," said the stranger. "A burglar called 'Big Joe' Finlay took liberties with your suit-case yesterday in the Pullman. He's wanted for robbing the Second National Bank of Hot Springs."

Mr. McNaughton then introduced himself.

"I don't understand," said Wilson. "What's the game?"

"Just this: Finlay knew I was after him. His pals passed him word through the car window at one of the stations on the way down from Chicago that I was waiting to nab him at St. Louis. Now, Finlay knew that I could arrest him only on suspicion. He knew, further, that to be caught with that burglar's kit would form most damaging evidence against him. So he contrived to get rid of the tools by dumping them into your bag."

"But how and when did he do the trick?" asked Wilson.

In the Trap.

"It was while you were in the diner. Finlay came out of his stateroom, showed a fake badge to the Pullman conductor here—"

"Fromeyer's my name," put in the Pullman conductor, shaking hands with Wilson.

"Yes, I've Fromeyer to thank for the fact that I nabbed Finlay, and also his suit-case containing your property," said

Captain McNaughton. "When I showed up on the arrival of your train last evening, and told Fromeyer that I was after a certain crook and described him, Fromeyer cried:

"'Why, that's the man in stateroom A! It's all right, cap. He's in that room now. He hasn't come out yet. You've got him in a trap. So he isn't a chief of police at all, but just a bank-robber!'

"We then tried to open the stateroom door, but it was locked on the inside. Fromeyer produced a key and we opened the door, but the prisoner had flown. He had crawled out of the window. He left his suit-case behind, however—and here it is, Mr. Wilson. Take out what belongs to you."

The Lynx-Eyed Explains.

"But how were you able to trace me to the Southern?" asked Wilson.

"Easy enough," replied Captain McNaughton. "Mr. Fromeyer remembered that the initials on your suit-case were 'J. J. W.' We called up the various hotels, asking if any one with your initials had registered, and so found you."

"But you say the bank-robber, Finlay, escaped by way of the window," said Wilson. "Yet you tell me you nabbed him. How's that?"

"Yes; we got him, all right. Fromeyer and I rushed into the station in the forlorn hope that perhaps we'd catch him passing through. We got as far as the cab-stand, when Fromeyer suddenly cried:

"'There he is, captain—the man getting into that cab!'

"A minute later I had my man. Good-by, Mr. Wilson. Thank Fromeyer for the fact that you got rid of those burglar's tools so easily and that you recovered your property. I'm taking Big Joe Finlay to Hot Springs on this train, tools and all."

The Would-Be Peacemaker.

A Chicago and Alton conductor, out of St. Louis, related this story:

If ever a railroad man loved peace, it was Thomas Mooney, the Chicago and Alton station-agent at Jerseyville, Illinois, just north of St. Louis. Tom Mooney hated anything resembling a row. When the railroad assigned him to Jerseyville he was overjoyed. He had heard that Jerseyville simply reeked with tranquillity. Tom Mooney liked to air his views on international peace. One day he said to a conductor, Ham Stone, of the St. Louis local:

"Yes, sir, the day will come when the profession of arms, now regarded as honorable, will be deemed the most disgraceful of callings."

Declaring War.

That same evening, at ten o'clock, while Tom Mooney was sitting in his office smoking his pipe of peace, four young men entered excitedly.

Peering out through his ticket-window, the station-agent recognized four young men of Jerseyville, headed by Charlie Skates.

"We'll get 'em here," said one of the quartet.

"Yes; they'll come here to take the train for their punk town, Alton," said another.

Just then Tom Mooney stepped out of his office, saying:

"Sounds like you are declaring war against some one."

"Bet yer!" was the reply. "Those four Alton fellers, with Curley Maretta leadin' 'em to the bad, have insulted us and the town of Jerseyville. They say that Jerseyville isn't on the map, because we're some short of the fifteen thousand population of Alton, and because we're on a branch line of the railroad, while Alton's on the main. Yes, Mooney, they insulted us, and somebody started something, and we're not through with 'em yet. We're layin' for 'em here."

"You can't use this station for a battle-field," announced Mooney authoritatively. "Besides," he added, "why not settle your row peacefully? Instead of punching those fellows' heads, why not meet 'em like gents and frame up a treaty of peace?"

Just then the four Altonites entered, and one of the Jerseyville men cried:

"Mooney, you stay out of this."

The Altonites certainly heard this warning, yet one of them shouted:

"So you Jerseyvillians have got a reenforcement, have you? Well, you bet he'll stay out of this!"

The Fight Is On.

With that, one of the Altonites seized a framed time-table from the wall and smashed it on the agent's head.

This, of course, started the worst row

ever known in tranquil Jerseyville. The eight young warriors closed in, and a terrific hand-to-hand fight ensued.

"No, no!" cried the station-agent as he wiped the blood from his face. "Don't fight, boys!"

He hurled himself into the mêlée to separate the combatants, and received a blow that sent him staggering across the room.

Not content with hands for weapons, the warriors now grabbed various implements of war, such as the poker, the coal-scuttle, the stove-shaker, and a lantern. One even lifted off the door from the red-hot stove and let it fly at the nearest of the foe. Another produced a Bowie, and two of the enemy were badly cut.

While using these weapons on one another, the battling champions of Alton and Jerseyville herded against the stove. They knocked it over, and the live coals set fire to the building.

Tom Mooney, wounded in a dozen places, found himself lying flat under a heavy overturned table, which, in the wrecking of the station, had been used as a battering-ram to fell him.

One unkind warrior now proceeded to jump on the table with both feet, threatening to crush the life out of the man underneath.

At that critical moment two constables burst into the room, armed with pistols and clubs. All the combatants were immediately made prisoners of war.

Mooney Was Well-Creased.

When they lifted the table from Mooney, however, they heard the well-pressed and well-creased station-agent saying in a weak voice:

"You can't take me a prisoner of war—no, sir! I'm a non-combatant, that's what I am. I was merely trying to restore peace when those fellers set upon me. I'm the flag of truce. I'm the red cross."

"In that case, Mooney," said one of the constables, "you can stay by the wreck, while we tote these prisoners off to the calaboose."

"Fire!" shouted one of the prisoners, reminding all that it would be a good thing to get to work and save what little of the station there was left.

All hands, even the eight prisoners, began fetching water, and soon the flames were extinguished. Having finished the exciting work of acting as a fire department, however, some of the prisoners began edging away.

"Stand still!" commanded the constables. "The first man who tries to escape gets shot."

The prisoners were marched off to jail.

The next morning Mooney arrived at the wrecked depot, a mass of bandages and court plaster.

A Real Fighter, Now!

"Why, Mooney!" exclaimed Ham Stone, the conductor of the morning local from St. Louis, as he entered the station to get his orders, "you look like you'd been in a fight. Thought you were a rooter for international peace."

"I was, Mr. Stone," replied Mooney wearily, "but I ain't no more. Why, umpires at ball-games get better treatment than peacemakers.

"Look at this station! Not a stick of furniture left intact. Not even the cast-iron stove! And it's colder to-day than the coast of Labrador. And then—gaze on me. I say, look at me!

"Ain't I a sight? No, sir! I won't be an advocate of international peace any longer. I'm going to resign my job and enlist in the United States army. Soldiering is far more peaceful than railroading."

"But you can't enlist in the army," protested Ham Stone. "They won't have you."

"Why?"

"Because, Tom Mooney, this here business of acting as peacemaker has caused you to be disqualified physically now and forever as a soldier in any army in the world. A soldier is a fighting-machine. Do you think Uncle Sam wants a fighting-machine that's been tinkered up in a repair-shop? Not for a minute! No!"

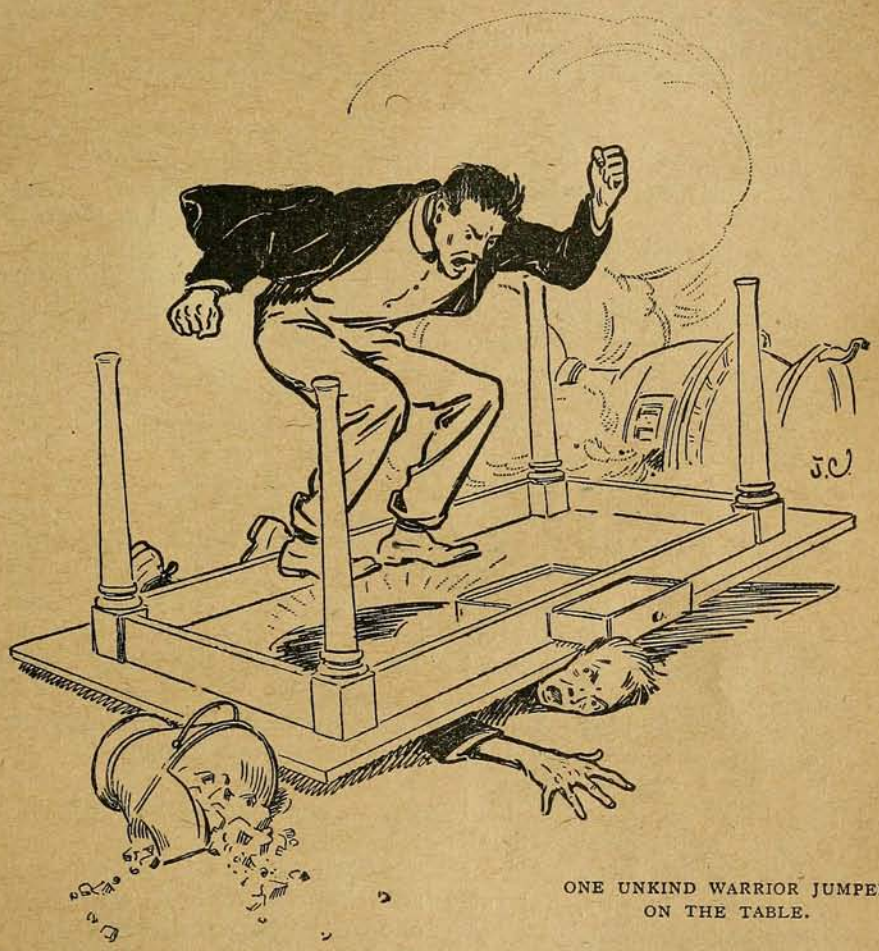
In a Barber-Shop.

A buxom *Juliet* sat in the waiting-room of the Union Station, St. Louis, idling her time until her *Romeo* returned from the barber-shop.

The rise of the curtain shows the barber-shop with three men sprawled in three chairs in the act of being shaved. Enter a fourth customer, keen of eye, alert yet deliberate, who in a single glance round the shop seems to take in everything and everybody.

Noticing that he will have to wait, he sits down, and, while pretending to read a newspaper, makes mental inventory of the facial and physical features and the apparel of the man in the chair nearest the door.

This observant man was one of the cleverest railroad detectives in St. Louis—Bill Herren. He had never failed "to get his man." He had caught so many train-robbers through sheer luck that he was called "Lucky" Herren.



ONE UNKIND WARRIOR JUMPED ON THE TABLE.

What Herren Saw.

Herren noted that the man in the chair nearest the door had just had his red hair cropped close, and that the barber was at present separating him from his red beard. Herren noted further that the man wore new shoes.

"That man is gradually getting cleaned up like one who has suddenly found money," Herren told himself.

Meantime he observed that the man's trousers were ragged at the bottom, and that below the knee they were stained either by blood or by chemicals.

When the man arose from the chair, Herren took his place, sitting in such a position that in the mirror he could see every move made by the red-headed man. He noted that the man's coat was faded. As the man took his hat from a peg the detective saw that it was badly battered.

"Never mind the brush," Herren heard the man say to the boy.

"That man is now going to buy a new suit, after which he will patronize a hatter," mused Herren.

The red-headed man, having searched his pockets for coin, produced a few nickels —not sufficient, however, to liquidate the barber's bill.

Suddenly, after a swift look round the shop, he turned toward the wall, shoved his hand deep into his trousers-pocket,

turned back, and proffered a bill of large denomination to the barber.

Couldn't Change It.

The tonsorial boss said he would have to go to the cigar-stand on the concourse to get the bill changed, and, during the barber's absence, Herren noticed that the red-headed man acted nervously.

The barber returned, and began counting out the change; but the customer stopped the process, saying:

"Oh, that's all right."

At the same time, he seized the bunch of bills, rammed them into his pocket, and started for the door.

Herren, his face covered with lather, jumped out of a chair.

"Just a moment, my friend," he said, stepping between the red head and the door. "If you haven't urgent business elsewhere, I'd like a little chat with you."

Without making any answer, the man turned and rushed to the rear door—only to find it locked. In a flash then he turned, drew a six-shooter, and let fly at Herren.

The shot went wild, and the detective bounded at his man, grasped the pistol with one hand, and began slowly choking his prey with the other hand. Relentlessly Herren's fingers closed upon the man's throat until he collapsed.

Herren disarmed him, handcuffed him, and, when the man was again able to breathe, led him away to the Four Courts.

"Hanged if I know what he's wanted for," Herren declared to the prison official. "But I'm reasonably certain he's wanted for something. Hold him, anyway, for attempted manslaughter."

Just Knew He Was Wanted.

Herren went to the office of the chief of the Wabash secret service in St. Louis, and said:

"Do you happen to want a man with red hair, a red beard, a scar on the right cheek, the tip of his left trigger-finger missing, and a roll of bank-bills of big denomination on his person?"

"The secret-service chief thought a moment, then exclaimed:

"Chi St. Lou!"

Herren sprang up, saying: "I thought so! It's Chi St. Lou—wanted for that hold-up of the express messenger on a train two nights ago, and for killing the messenger! I've got him—he's over in the Four Courts now!"

"What's he to say for himself?"

"Nothing—except to ask me to take a message to that girl that's waiting for him in the Union Station waiting-room. He described her, named her as Nora Tully, and asked me to give her his message."

"Well, what's the message?"

The Interrupted Wedding.

"Merely this: 'Nora Tully, the wedding is interrupted temporary.'"

Some days later Herren again appeared at the office of the chief of the Wabash secret service.

"You can close that Chi St. Lou case on your books. He's dead," said Herren.

"Warden have to kill him?" asked the chief.

"No. Suicide. Cyanid of potassium."

"Herren," said the chief, "you're the luckiest man on the force. You first capture this train-robber by sheer accident; then your prisoner, by poisoning himself, saves us the trouble of trying him. Did he make any statement before shuffling off?"

"Yes. He asked us to search the cheap hotels near the Union Station for Nora Tully, and give her his last message."

"Well, what's that message?"

"Merely this: 'Nora Tully, the wedding is interrupted permanent.'"

Gilpin's Lost Mine.

Charlie Gilpin is not on the pay-roll of any railroad, yet he is a railroad man, and one of the most interesting of the boys at the Union Station, St. Louis. Charlie has been manager of the Union Station Cigar Company for nearly sixteen years. If you want to know about anything that has happened in the station at any time in all the sixteen years, ask Charlie.

Gilpin is the hero of my tale—the tale of a lost mine.

Some lost mines exist only in a legendary sense—but Charlie Gilpin's is a sure-enough, really-truly lost mine. It's somewhere in the Sierra Madres, in the State of Chihuahua, Mexico, and some day Gilpin may suddenly cry, like *Monte Cristo*, "The world is mine!"

Gilpin put up real money to outfit an expedition to find that lost mine, and the

way he came to let the cash loose was something like this:

A negro named Rastus Warren, in the employ of a certain county official in St. Louis, lay at death's door with smallpox. Calling in his employer, Rastus made this death-bed confession.

He said that some years before, while in Batopilas, Mexico, two greasers offered him a job at their mine. Rastus accepted, and made a two days' journey with a burro outfit, over a trail so rocky and precipitous that the Mexicans called it El Camino Diablo—the devil's road.

Rastus found the mine itself way down in a deep gorge, where it was so dark that they had to work by the light of torches. Gold simply exuded and oozed from the walls of the chambers of that mine, and the three men merely had to pick it off with their bare hands by day and hoard it in their shack by night.

The Fortune Vanishes.

Once every three weeks Rastus was sent to Batopilas for supplies. On his return from the last journey of the kind he found the two Mexicans murdered and their shack burned. Their hoarded gold had vanished.

Fearing that he would be held for the double murder—if an investigation was made and the bodies found—Rastus started for the Rio Grande, carefully avoiding Batopilas on the way. After terrible hardships, he crossed the Rio Grande and found himself in Brownsville, Texas. He proceeded to St. Louis, and secured work with a county official, to whom, after five years' service, he made the death-bed confession here given.

After making the confession, however, Rastus recovered his health in full, much to the delight of his employer, who suggested that the negro lead an expedition into the Sierra Madres to find the lost mine.

What Gilpin Says.

Capital was needed. The county official went down to the Union Station, found Charlie Gilpin sitting on his dais at his cigar-stand, and told him all about the golden millions that were out of sight in the lost mine.

The result of this confab was that Gilpin agreed to put up part of the money for an expedition to Mexico.

With Gilpin's cash, plus the coin of sundry other St. Louisans, six men, with Rastus as guide, left St. Louis to cross the Rio Grande and make a dash for the treasure at the bottom of the gorge.

"GOLD SIMPLY EXUDES FROM THE WALL OF THAT MINE."

Weeks passed, and Charlie Gilpin had made all sorts of preparations for starting life anew as a millionaire, when suddenly he received a telegram from Rastus Warren reading:

> The five men deserted me the moment we struck El Camino Diablo, leaving me without cash. Am stranded in Chihuahua. Please send money for transportation and expenses home.

I had heard part of the story of Charlie Gilpin's lost mine on a previous visit to St. Louis, but did not learn all the details until I arrived at the Union Station on the present trip. When I went to his cigar-stand and asked his clerk if the boss was about, the clerk called up to a round, robust and rubicund gentleman sitting aloft:

"Mr. Gilpin, some one to see you."

Charlie Gilpin descended from his eery.

I introduced myself, then said:

"Mr. Gilpin, what's the present market quotation on shares in the Lost Mine of the Sierra Madres, in the State of Chihuahua, Mexico, on El Camino Diablo?"

Now, up to this time Gilpin had looked as pleasant as any photographer could wish. But now an expression of unutterable disgust o'erspread his countenance as he said:

"Have a cigar?"

Mr. Willets, next month, will tell a number of stories of hold-ups in the Missouri River Country.

FROM THE LETTER FILE OF THE SANTA FE.

APPLICATION for a pump job recently received by General Foreman Williams at Las Vegas:

My dear Sir:—I beg to state that I will ask you for permitt to write you a line or two. Regarding job pumping, if you would be so kind to favor me with it. I have wrote you about a year ago about a job asking you for the pump in Bernalillo, as I was told by Mr. L. Garcia, that hi will retire from the job. So I have an answer from you that you will gave me the first chance you will have, so I am waiting yet. And the old men Garcia is not able to work as hi is blind, I am writing you another letter about that if you would so kind to let me have the job. I have bin working for A. T. & S. F. for many years as car men, My Dear Sir: let me hear from, regarding pumping job, if not here would go some where else if desire, thanking you in advance for the favor I ask for, I hope to hear from you at an early date and hear that my fortune is ripe waiting on a pump. I wish my letter will find you in best yumor to keep you from turn me down. These pump here I would like to have better than any other as here is my home, but if is already given away would take some one else. I will promise you a steady hand.

Yours truly,

—— ——.

Cashier Skaggs, at Kingman, Arizona, makes a guess that the writer of this letter was either a Chinaman or a Jap:

To Baggage office Kingman Ariz.

Gentlemen. I promise you that you'll send down my trunk to here on last fly-day. But they did not express yet. I wish you that you will send down to here in rigd away. If you want charge to send for I will pay at here. Yours truly

MON

The "lawyer" club which this woman held over the head of the agent at Miltonvale, is not infrequently used by persons with fancied grievances against the company:

to agt of miltonvale Depot say what is the matter with my baggage you better start that on I seen a Layier last night he said when I took the trunks to the Depot they was in your care: and enother thing he said they couldent hold your baggage for an account of that kind and: he said if you didnt send it to let him no he would send in complaint to the rail road for damages: as I need my clothes so bad: now he says he will see that you pay the damages for keeping my clothes if you dont send them right away; now you better send them and save yourself trouble if I dont get them this week I will let him have it to collect same: I will send a stamp for you to send my checks in now please to attend to this at once or I will let some one else see to it. MRS. W——.

An inquiry received at La Junta as to whether or not we feed the cars:

mr. rail road agent sir i am going to ship som horses to east st louis and i wish you would give me the rates on cars and if they run them clear through without feeding them and if they feed where do they feed at.

Kenton okla write write JOHN L——.

—*Santa Fe Employee's Magazine.*

There's many an honest heart beats on the front end of the blind baggage,—but it's against the rules just the same.

—Soliloquies of the Sympathetic Shack.

REDDY FLAGG'S REGRETS.

BY PETER MULLIGAN.

A Few Leaves from the Biography of a Boomer, by His Admiring Friends.

"GOIN' to church to-morrow, Bill?" inquired Jack as Larry Carr's crew settled down in the old switch shanty in the north yard to wait for sixteen to show up. Pop Hickenlooper was on sixteen that night, and Pop was a man of too much spirit to allow his movements to be dictated by an old time-card.

"No, I don't have to; I'm immune. I've associated with railroad men for so long I've got so tough that brimstone wouldn't freeze me. I'm going to stay at home and pound my ear."

"I haven't been to church since I was first set up on the Consolidated Combination," ruminated Jack, half to himself. "They gave me a corn-field sailor for head man on my first trip. His first crack out of the box was a straddling switch which blocked the main line and laid out the limited three hours. Since expressin' my opinion of Mr. Sailor's qualifications as a railroad man, I've been ashamed to look a preacher in the face."

"Speaking of language," said Bill, "reminds me of the winter I was firing for Jim Fannum on the Rebate Route. There had been a blizzard that had tied up the road for three days. As soon as they got a snow-plow through, nothing would do but they must ship a lot of hogs from Jaytown, although a high wind was still blowing and it was cold enough to freeze the hair off a brass monkey.

"We were sent up light to get the hogs. By the time we were ready to start back it was night, and the wind was coming up every minute. Some clever railroad man had thoughtfully forgotten to set a brake on a box car that had been left standing on the house track at Reubenville.

"The air was so full of fine, gritty snow we couldn't see that the wind had blown this car down close enough to the main line to sidewipe our engine. Among other little trifles we busted a valve-stem.

"There we were in a young blizzard with a lame engine and a trainload of hogs on our hands. Fourteen loads was a full train on a good rail up the Reubenville hill. Our conundrum was how to get eleven loads up with an engine working one side and the coal so full of snow that it was like turning a hose into the fire-box to shovel it in.

"But I managed to get her warmed up finally, and then we backed up and made a run for the hill. Of course we stuck.

"'Double,' says Jim to the head man.

"Aleck Kupelo had picked up an old-time rock off the Q for head man that night. He was humped up over the boiler-head trying to thaw out and shivering to think of what was coming when she laid down.

"He made some shocking remark or other when Jim spoke, picked up his glim, floundered out, and cut off behind six. How we ever got up the hill, even with six cars, through the snow with an engine working one side, I'll never tell you, but we did it.

"The switch on the Summit Siding was half a dozen car-lengths beyond the top of the hill on a pretty stiff little down-grade, and, being under the lee of the hill, the snow was drifting badly. Of course, under such circumstances, nothing would do but she must stop on the center.

"The new brakey got out the pinch-bar and grunted and clattered and slipped and swore until he got her off the center. When Jim gave her steam, the wheels spun around

in the snow without taking hold; and when Jim eased her, she stopped on the center again.

"Brakey pinched her over a second time with exactly the same result as before. By this time he was getting speechless, but he went at it once more.

"By this time he was getting so mad he didn't know what he was doing. First thing he knew, he grabbed the frosty pinch-bar with his bare, wet hand. It stuck to the bar instantly as if it had been glued.

"Well, sir, that man let out a howl such as I've never heard come from a human throat before or since, and followed it up with a reg'lar cloudburst of such outrageous language that the hogs in the head car squealed and surged madly toward the back end to get out of hearing."

"That sounds like Reddy Flagg you're describing."

"Sure! That was his name. D'you know him?"

"Know him! Everybody knew Reddy Flagg. He braked on every division from New York to San Francisco, and switched in every yard from St. Paul to Galveston."

"Reddy certainly did have the itching foot. Always rode in the varnished cars, too."

"Yes, he was an insinuating cuss, and I never heard of a conductor refusing him a ride."

"Down on the Indian Valley Road, he was known as 'The-Man-With-the-Velvet-Touch.' A new man couldn't consider himself initiated until Reddy had borrowed a dollar of him. Permanent loan, of course."

"Wonder what he ever did with his money?"

"Spent it for dictionaries and bronchial troches, I guess. Give Reddy an excuse to say a word and you'd get an artesian flow of language in a voice that—well, say—when Reddy was conversing in Denver you could hear him in Omaha."

"Well, you'd have thought so if you could have heard him that night. We kept pinching her off the center and twirling the wheels around in the snow for half an hour. Every time we didn't move 'em, Reddy would hook his voice up another notch and touch off a new cuss word.

"When we tried shoveling the snow away from the wheels, it blew back just a little faster than we could paw it out. We couldn't back them cars up that rise to save our immortal souls; so we did the next best and went on down the hill to Weed Center, which was an all-night telegraph station.

"When we stopped at the station while Aleck went in to report, instead of settin' his cars in on the side track or going inside to get warm or otherwise conducting himself like a civilized being, Reddy began promenading up and down the platform cussin' everybody who ever had anything to do with the Rebate Route, from the aboriginal owners of the right-of-way to the trainmaster who had ordered us out.

"There was a little runt of a deputy marshal, or night watchman, or whatever you call 'em, who had just been put on the job. He imagined his nice new tin star was a special license to butt in on all occasions. So up he trots to Reddy and says, says he:

"'Say, mister, you ought to try to control your feelin's. If you was to get a piece of that language cross-wise in your throat it might choke you to death.'

"Reddy let out a whoop and lunged at the deputy, who broke for tall timber with Reddy a close second. I guess Reddy's chasing him yet, for he didn't show up again that night, and I've never seen him since."

"Of course, you didn't see him again such a night as that. The deputy marshal was an interposition of Providence to lead Reddy out of the way of hard work. No fear of him sticking to the chase. He never stuck to nothing."

"I was holding down the hind end for Billy Train on local on the Receiver's Snap, one fall, when Reddy floated into town, and I got him on ahead with Billy," said Bill. "One day we were rawhiding at Water Lake. Reddy was walking sidewise ahead of a string of cars that was backing up trying to get a crooked link into position to make a coupling.

"Remember when no two cars with drawbars of the same make or the same height from the ground were ever on the same road at the same time? Every engine and caboose had to carry half a car-load of assorted links and crooked links and flat pins and round pins and just pins, and it took a specialist to make a coupling.

"The road was new, the siding wasn't ballasted, Reddy got reckless, and down he went. Before you could bat your eye, the first car was upon him, of course.

"Billy, who was standing on the main line watching him, yelled at the engineer and thrashed his arms around like a windmill with the jim-jams, signaling him to

stop. Then he flopped down on the end of a tie and covered his face with his hands to shut out the ghastly sight.

"Old Tom Quadrant plugged his engine, but couldn't hold 'em quick enough to do any good. I was letting off brakes on the cars we were getting hold of. When I heard Billy yell and saw him flop down on the end of the tie that way it made me feel kind o' sick, for I guessed what was up, but I hoofed it back at my best gait.

"When I reached the scene the cars had come together and stopped. I could see the body lying between the rails. When I tried to speak, my tongue was so numb I had to make several efforts before I could utter a sound.

"'Reddy, old boy,' says I, 'are you done for?'

"At that he rolled his head slowly till I could see his face. His eyes glittered like a snake's when you have been poking it with a stick—but he didn't say a word. He had fallen between the rails and had had sense enough to lay down till they stopped.

"He crawled out and felt himself over with great deliberation.

"There wasn't a scratch on him, but his coat-tail had been cut off about half-way up his back. He reached under the car and drew out the amputated cloth, still without uttering a sound or even appearing to hear the anxious questions of Billy and myself.

"He spread the coat-tail over his two palms like a woman holding a pie-crust, and marched solemnly toward old Tom Quadrant, who was leaning out of his cab window still looking blue around the gills from the effect of thinking he had killed a man.

"Reddy kept filling his lungs with air and his mind with indignation, and swelling out his chest at every step until he got his face up within two feet of old Tom's. Then he held up the coat-tail in his palms and bellowed with all his force:

"'You infernal old wooden-headed, leather-jointed, wind-broken misfit of a plug-puller! Do you see what you've done? That coat was too short already! Now I'll have to stand with my back to the sun all winter to keep from freezing to death.'"

"Remember the Cactus and Sagebrush line that sticks out into Wyoming like a sore thumb?" asked Larry.

"Sure; they started to build a road somewhere, but forgot where it was."

"Wrong. Reddy stopped the construction. They were doing a land-office business in track-laying on that line in 1886. There were two trains at the front, a steel train and a tie train, and they were laying about two miles of track a day. Half the men were Republicans and half Democrats, and there was bad blood between them, owing to the fact that there it was close to an election.

"Reddy was braking for Tom Higbee on the tie train. The country was full of antelope. Every once in a while a herd of the little rascals would come up on the crest of a hill within a quarter of a mile of the works and gaze at us until their curiosity was satisfied; then they would stick up their heads and their stubby white tails and go bouncing, stiff-legged, out of sight. It was enough to fire any man's sporting blood, and Reddy decided, one Sunday, that he simply must go antelope-hunting.

"Reddy was the sort of marksman who couldn't hit a barn if he was locked up inside of it. In fact, he had to stop and ponder to make sure which end of his gun he ought to point at the game.

"Nobody would go with him, for they were all on to the quality of his sportsmanship. So he borrowed a rifle from the engineer of the steel train and started out alone.

"He kept to the tops of the ridges, where he could have a good view of the country, and whistled his loudest to keep from feeling lonesome. For about four hours he paraded the prairies in this style without bagging any antelopes.

"Then his whistle gave out, and he began to walk down-hill because it was easier, until he found himself in a coulee which hid him from view. Thus he inadvertently approached so near a herd of antelope that he caught a glimpse of a bunch of white tails just tipping over a hill a mile away.

"Reddy sat down to lay out a plan of campaign. He was too tired to stand, anyway. After harboring a suspicion for a few minutes that something was wrong with his antelope-stalking tactics, he had an inspiration.

"He had heard that hunters on the plains stuck up a little red flag on a stick and then laid down near by and waited for the antelope, which are more curious than a woman, to come up to investigate, when they could be picked off at leisure. He had no red rag and no stick; but he did have on a suit of red underclothes. Now, if an antelope could work up a profound interest in a red

rag, it stood to reason that the animal would be simply entranced with a whole suit of red.

"Reddy peeled off his outer duds, cached them in a cozy nook in the coulee, and marched off in his flaming undergarments like the pillar of fire that led the Israelites out of bondage, with his rifle at full cock. He was so lost in admiration of his own clever scheme that he didn't notice that the coulee opened into a little flat with a rank growth of grass, and that he was walking straight into a herd of cattle which was feeding there.

"But a big bull did notice it, and was very properly shocked to see Reddy appear in the presence of the ladies of the herd in such attire. As soon as he could recover from his astonishment, Mr. Bull said something which was the bovine equivalent for 'Skiddoo!' and then, for fear the intruder wouldn't beat it fast enough, he put down his head and stepped forward to see that he went.

"Reddy forgot all about being tired. He threw the rifle as far as he could send it, and set out for camp as if he were going somewhere for something and was afraid it would all be gone before he got there.

"Fortunately for him, he had been traveling in a circle, aad was not more than a mile from camp. The angels, who are always around to take care of those who are incapable of attending to the job themselves, turned his face in the right direction.

"Reddy didn't take time to side-step cactus-beds or anything like that. He took a header or two, got scratched and bruised, and every step he took the more scared he grew. In fact, the more he thought of it the more certain he became that he could feel the maddened animal's hot breath fanning his neck as it strained to gain the one step more that would enable it to plunge its sharp horns into his gizzard.

"But he didn't feel anything of the sort; for the bull and a bunch of steers, which had followed to see what the row was, had only kept up the chase to the top of the hill, where they all stopped and stood there gazing after Reddy, and wondering what in thunder the fellow was in such a hurry about.

"Reddy was pretty far gone when he reached the front end of the boarding train. His breathing sounded like the exhaust of an engine that needed her packing-rings set out.

"He laid a course for Higbee's caboose along the track beside the boarding cars right through groups of Republicans who were lolling about in the shade, smoking, sleeping, sewing, and jabbering; ran through a card-game, upset a couple of men, scared another into fits, and plowed on toward the Irish end of the boarding train.

"Naturally, Reddy's headlong career caused some excitement. The Republicans shouted and jabbered, and all jumped up, while some ran after Reddy to find out what on earth was the matter with him. The Democrats heard the tumult, and seeing a man who looked as if he had just passed through a hard winter running for his life with a lot of Republican sympathizers following him, they jumped at the conclusion that the Republicans were trying to murder a Democrat. That was enough.

"The Democrats raised a war-whoop and, seizing picks, shovels, spike-mauls, crowbars, and whatever else was handy, fell upon the Republicans who were chasing Reddy, and drove them back to their own end of the train. In another moment there was one grand mix-up, without any one knowing what it was about.

"Reddy couldn't speak for five minutes after he reached Higbee's caboose, and by that time there wasn't any one to listen to him, for all hands had turned out to try to stop the fracas—or to get into it. There were too many old scores to even up, though; and, once they were at it, those fellows didn't care what started the rumpus. They just swatted one another all around over the landscape until the whole outfit was knocked out or tired out.

"Next day there weren't men enough fit for duty to make up the gangs, and the survivors were so hostile it wasn't safe to get 'em together, anyway. The contractor fired a few as a warning to the rest. That made some more mad, and they quit; and others went back down the line to get their heads sewed up and forgot to come back. The first thing the contractor knew he didn't have men enough to run a hand-car.

"After Reddy had paid for the gun he threw away, and had bought clothes to replace the ones he cached in the coulee and couldn't find again, he concluded that the air at that altitude didn't agree with him, so he pulled his freight. That was the last I ever saw of him."

"There's sixteen whistling in! Head him in on four, Bill!"

THE STEELED CONSCIENCE.

BY GEORGE ALLAN ENGLAND.

The Degree of Master Cracksman Is Sealed With Graham's Own Blood.

CHAPTER XVI *(Continued)*.

Progress and a Piece of News.

PIANO and Graham had many more talks, in periods of idleness between crushes. From his former cell-mate and from the others Graham learned to the uttermost detail all the minutiæ of yegg lore, the language of the trade, its history, and its stringent moral code. The ordinary box-man, he found out, is usually an ex-mechanic or artisan.

He learned that yeggs always operate in gangs, for the most part known by the leader's name, as "Chi Jack's mob," or "Pitts Whitey's mob." Their true names are never asked or given, but are replaced by "monicas" derived from some personal peculiarity or from the place of origin. He grew wise in reading their records on stations or water-tanks; such marks as "Long Ed, 4|19|08, E," or "B.B., 2|12|09, S," came to convey much information to him.

He learned that the highest yegg virtue is fidelity; its basest crime, treason. A "bawl-out" or a "leak," he found, was always punished by death. Sometimes, they told him, a mob would have to wait years to get a "beefer" who turned them up; but eventually the traitor always got a leaden pill that sent him up the escape for keeps.

The elaborate system of "giving up" or "greasing" for protection by the police he came to understand. He discovered where the proceeds of breaks almost invariably went—to the race-track or the roulette-wheel, on the principle of easy come, easy go. Very many yeggs, he found out, were addicted to "coffin varnish," "white-line" and "Doctor Hall," that is to say, bad liquor, which usually finished them.

From their conversation he learned of the ferocious sentences dealt out to yeggs, when caught, and of how the policy reacted by making yeggs never hesitate about killing, if cornered. He learned all about "moochers" and "punk-kids" and "town plugs" who spy out the land in advance of a raid; about the use of "phoney" union cards to insure freedom from molestation on freight-trains or elsewhere; and about endless apparatus used in different circumstances—endless methods, too, about which a fair-sized book could be written. He heard many tales of fights resulting from the division of the spoils, and, by way of contrast, came to know all about the collection of "fall-money" and the liberality of yeggs when asked to chip in for the hiring of a "mouthpiece" to "spring" a friend in trouble.

Ciphers of a score of kinds he learned to read and write. The art of disguises became for him an open secret. Wise he became in methods for distracting the attention of the bulls and misleading them; wise in lampblacking a key and by the scratches on it reading the nature of the lock; wise in using the jimmy and in entering tight places. He learned that a man can always get into a place which will let his head and extended arm pass; and that, before going in, it is always necessary to be sure one can come out again.

Under Piano's careful tuition he learned to read the inner structure of a combination by the different sounds produced in turning the dial. So acute and sensitive did his

ear become, that he could tell at what numbers the tumblers dropped into place. He grew to love their fine metallic sounds. His keen senses and delicate fingers attuned themselves tc the work.

No Wagner could thrill him, no Beethoven set him dreaming so potently as that slight and all but imperceptible click-chink-tink, that his instructor taught him to understand and to divine the meaning of. Once or twice he had the chance of actually opening, while out on a "hike," a safe-door by this species of manipulation. It fascinated and enthralled him.

The others were delighted. Adam prophesied great things for him, and Piano was frankly radiant. Not even the jealousy which, deep down in his heart, the teacher already had begun to feel, could stifle his pride in having brought into the mob so splendid an intelligence, so deft a hand.

The crushes were only incidents, after all, in a rather leisurely and luxurious existence. Much of the time, Graham read and studied. All his former friends and acquaintances he carefully avoided; where he had vanished to, none of them knew—or seemed to care. Sometimes, of an evening, he walked abroad with Piano in strange parts of the city. He visited the "ink-pots" of low-class members of his own trade, filthy dives usually run by an ex-yegg and patronized by unkempt petermen.

On Park Row, Pell and Doyer Streets he found a number of such places. Sometimes he dropped in to a "drum" where stale beer and vitriolic whisky were sold at two and three cents a glass. Again, he went the rounds of some of the "doss-houses"—bare and cheerless dens, with a whitewashed, pot-bellied stove in the center of the room, recruiting signs and three-cent lunch-room ads on the walls, and discouraging wrecks of men lolling on the hard wooden benches, reading last week's paper.

He came to know dozens and scores of curious types, the existence of which he had never even suspected when a member of the upper-world. Whole strata of society opened out before his eyes, strata with their own conventions and standards of conduct, their traditions, laws, virtues and vices, as real, complex, and binding as those of so-called respectability. Through and through he came to learn the under-world, from "gorillas" to "scratchmen," and from "super-twisters" to "mission stiffs."

Some of the braver and cleverer ones he respected; some who sneaked and defrauded, who, as political heelers, were "in right," or who acted as "fixers" and professional go-betweens, "lamasters" or professional straw-bail men, he despised. There were all sorts, he saw, in the world below, as in the world above.

One of the favorite diversions of his mob was to see in the different papers, the morning after a break, the varying accounts given by imaginative reporters and sensational headline-writers. To read that a dozen desperadoes had swooped down upon a town, held it up at the point of automatic revolvers, blown the safe to atoms and decamped with crackling volleys, pleased them immensely; for the truth usually was as quiet and unobtrusive as they could possibly make it. There was a little pepper in the work, once in a while, to be sure; but not once that summer did any of the gang take any bodily harm. Graham came to believe that the fine old-time epics of crushing were things irrevocably of the past.

Next morning at breakfast, while reading an account of the "Desperate Pitched Battle Between Townspeople and Masked Banditti," Piano came across an item that made him start and frown.

He marked the place with his nail and handed it across the table to Graham.

Graham, his heart beginning to thump, read as at a glance:

PROMINENT PHILANTHROPIST RETURNS.

GENOA, Sept. 19.—Among the passengers sailing to-day on the Koenig Albert is the well-known lawyer and philanthropist Simon Dill. Mr. Dill has been for the past four years living at Cannes, Nice, and other resorts on the Riviera, in search of health. It is reported, however, that this search has been only partly successful. Retirement from active life seems to have failed to restore him.

He intends, it is said, to settle some business affairs in New York and then return to his practise in Boston. He is accompanied by his daughter and only child, Miss Agnes Dill.

CHAPTER XVII.

Discovery!

CONTROLLING, by a mighty effort of his giant will, the strong emotion that possessed him, Graham laid the paper down, carelessly enough, shoved back his chair, got up and walked into the smoking-room at the

front of the flat. The look he gave Piano bade him follow.

When they were together, and the door quietly closed, Graham seized the other's arm. He thought a singular light was playing in his companion's eyes, an odd smile lurking about his mouth; but this was now no time for close analysis.

"So, then?" said Graham with keen excitement.

Piano laughed easily. "I guess you know what that means," said he.

"Means?" repeated Graham. "Why, it—it means that the old man's conscience has been troubling him. No, not that—he hasn't got any. His bump of caution, rather. He must have known, for some time now, that my bit's done and ended, and that I'm at liberty. I don't doubt my disappearance from the ranks of respectability has been duly communicated to him. So, then—"

"Oh, he's worried, all right enough. Worried, sure as guns! But it isn't that I was thinking about. It's nothing to us, or to you, what's bothering him. You've got something of a bother, yourself, seems to me. He'll be here, now, inside of fourteen days. Yes, two weeks from now things will be settled, one way or another. How's your nerve, bo?"

Graham laughed uneasily.

"I guess it's all right. It's got to be! I wish it was only a question of nerve, down there on Spring Street. But from what you've told me, it'll take more than just that."

"Right you are. Fact is, the nearer we come to this thing, the worse it looks. Give me a tool-steel mountain and let me get at it, and I'll guarantee to crack it plumb in two; but that crib there, fixed as it is—well—"

He drew a pencil from his pocket, and on the fly-leaf of a "History of the Italian Renaissance" that Adam had been reading, rapidly sketched out a plan.

"Here, you see," he explained, "is Spring Street. There's the courtyard, in back. Every window has electric alarms, so that if a single bar is cut, a whole drove of bulls will come stampeding. No use trying to get in that way. Absolutely out of the question.

"The big door is worse." He tapped with his pencil on the plan. "Electric-light post right in front of it, you remember. Hopeless, even in the dark. A three-hours' job, even without the alarms. Nothing doing."

"How about the roof?" asked Graham eagerly.

"Two skylights. Barred. Alarm attachments. Fact is, my boy, it looks infernally awkward all round. I've been sort of putting it off, putting it off, thinking that maybe something would suggest itself to me, or to you. It didn't look so ugly three months ago. Just the general idea was fine and dandy; but now, coming right bang up against the immediate necessity of doing it, why—" He ended with a shake of his head.

"How about it, inside?" asked Graham. "You've already told me about the armor-plate and concrete. But just where is the—the room, you know?"

"Sixth floor," answered Piano. "Toward the back—so."

He drew a floor-plan, with square marks for the elevator-wells, a long corridor leading from side to side of the building, and several transverse ones opening out toward the courtyard.

"Here," said he, touching a certain spot with his pencil. "I feel that, if we could only get a few moments' interview with that door, right there, we'd be going some. The safe, inside—that's a mere detail. It's getting at it that bothers me! That, and the knowledge that it's got to be done C. Q. D. Not an altogether lovely layout, now, is it?"

Graham did not answer, but, leaving Piano still looking at the plan, put on his hat and went out. They did not see him again till late that afternoon.

His objective-point was the Public Library, at Fifth Avenue and Forty-Second Street. All the way down-town, as he sat in a corner of the clattering "L" car, absorbed in thought, his mind was a tumult of hopes, fears, plans, speculations, intricate and seemingly unanswerable questions. First rose to his consideration the fact that Dill was coming back, was even now on the steamer, plowing up the Mediterranean toward Gibraltar and New York.

That, once landed, the old man's probable first act would be to withdraw the packet from its hiding-place, even though he might leave his other goods or valuables at the warehouse, and put it—where? Graham knew not. All that he knew was that, before Dill should have time to carry out what was undoubtedly his plan, the final coup must be put through; all must be risked on this one cast of the dice; the success or failure of his whole life must be staked; his liberty, his happiness, perhaps his very

existence, must be pitted against this one supreme effort which, he knew, baffled even Piano himself, with years of training back of him.

He thought of Agnes. Had she, he wondered, changed much in those four years which had so altered him? Did she still think of him, remember him? Believe in him? Or had Dill been able quite to poison her against him? That, too, remained unsolved in his mind. He must wait, he knew; and only on condition of success in this imminent undertaking could he ever hope to approach her again with the proofs of his first innocence, the justification of all that had taken place since his unspeakably iniquitous sentence.

The warehouse came into his thoughts. He despaired at memory of that massive, stern, gray solidity, the type and picture of property entrenched and defiant—property, however got, however heaped together. Something new, he understood, would have to come into play; some ruse, some subterfuge, some fresh principle, if he were ever to penetrate that fortress and take back the thing which was his.

"But what shall it be? What? How?" he feverishly asked himself, pressing a hand over his eyes.

The forcing of that door, supposing the possibility of ever reaching it, would have to be done quite silently, he knew. In a place of that sort, where doubtless half a dozen watchmen were perpetually on guard, and where quick escape would be out of the question, the work could never be undertaken with nitroglycerin. There was no way of bringing electricity into play, as at Reading. Yet — if there were only some method of developing an equal heat, some noiseless way, by chemical means, then part of the puzzle, at least, would become clearer.

The question he had asked himself before recurred to him. Vaguely he recalled having once read—just where he could not say — a dry, theoretical discussion of the properties of a certain iron compound which, when mixed with some other metal, might, under certain circumstances, produce a very great heat.

"What was it, now? What was it?" he fiercely asked himself, cudgeling his brains in vain for the exact formula. So intense was his thought that his face became set in a savage scowl. He noticed that two or three people were looking at him, and over him came the guilty feeling that his true occupation must be known to others—a feeling which he never could quite rid himself of, even though reason told him he was safer and more perfectly hidden in New York than he could have been in the most remote village. With an effort he looked out of the window at the dingy second stories, the balconies and clothes-lines of Manhattan.

"No use getting a hot box over it, just yet," he assured himself. "Once I lay hands on a good, up-to-date chemistry manual, perhaps I'll get on the track of the infernal thing. But that, even that, won't solve the other riddle of how to get into the place at all!"

On and on racketed the train. It stopped, started, swung round curves, and sped its way. At Forty-Second Street, Graham got out.

"Now for the library!" said he.

An hour later found him at a broad table, half-buried with books on chemistry, practical and impractical, analytical, synthetical, commercial, Heaven knows what not. One after another he searched them through, while an attendant brought more and still more books, and, wondering, stacked them in front of this singularly earnest young scientist with the mobile, nervous hands, the pointed beard, and the keen, clear eyes.

At last, after more than two hours' patient hunting, he ran his quarry to earth. He gasped with exultation as a paragraph leaped from the page of a French brochure at him.

"Found it, by Jove!" he cried, slapping the table with his palm so forcibly that the attendant frowned and coughed his disapproval.

Again he read the paragraph, translating half aloud as he did so:

> This substance, known as *thermit*, possesses very peculiar properties. It is a simple, grayish-blue compound of powdered aluminum and sesqui-oxid of iron. When ignited with magnesium tape, it burns quickly, producing a temperature almost if not quite as high as that of electric arc itself.

For a moment he sat there as though half dazed, trying to let the possibilities of this discovery filter through his brain. Then, as its full portent dawned on him, his eyes sparkled, his chest expanded with a deep breath, his head came up defiantly. He closed the brochure, thanked the attendant, and took his departure, leaving the dry-as-dusty fellow in as great astonishment as it was possible for him to feel.

Piano, too, was astonished when Graham reached the flat, burst into the smoking-room, flung his hat on the table and cried: "I've got it!"

"Got it, have you?" queried the other, looking up from his paper. "Got what? Measles?"

"No, no, don't you understand?" answered Graham, too excited even to notice the jest. "Got the solution of the secret! Got the whole thing planned, from A to Z! Where's Adam?" he added, lowering his voice.

"Where are the others?"

"Out. Go on, let's have it. Nobody here but us."

"Good! I—I hardly like to let them in on any part of this until I know how it's going to work. See here! I got it made up for me at the Hooper-Jordan laboratories."

He drew from his pocket a small pasteboard box, set it on the table (which he cleared by the very simple expedient of shoving half the papers onto the floor) and removed the cover with nervous fingers. Inside, a fine blue-gray powder appeared.

"There it is!" cried he, while Piano stared in amazement.

"There *what* is?"

"Why—don't you see? The stuff I was looking for! Thermit!"

"Oh come, come!" ejaculated Piano. "How do you expect me to understand you? Think I'm a mind-reader? What's the—"

"That's not all," interrupted Graham. "Coming up on the train the whole thing dawned on me—not in its details, you know; those can be worked out later. But the idea, the main idea came to me in a flash, so!" He snapped his fingers. "Now, then—"

"You see here," commanded Piano. "Calm down! Count out the pill-prattle and get down to first principles! If I didn't know what a well-balanced head you've really got, I'd think you'd gone suddenly pipes above the ears. Now, take off your collar and shoes, get into slippers, like me, light the long pipe and let's have things straight. You hear me? No, no, I won't listen to a word till you get ready to do this thing right!"

Graham found Piano inexorable, so had to obey.

"This stuff, you say, is what?" queried Piano. "And what will it do?"

"It's thermit," explained Graham, naming its chemical constituents in a few words. "As for what it'll do—well—I'll show you in a minute."

He reached over onto the table, took up a large flat paper-weight which Dave had made out of a piece of some long-since shattered safe and set it in front of Piano. Then he spilled from the box about a tablespoonful of the metallic powder onto the middle of the piece of steel. He took from his pocket a bit of tape such as photographers use for igniting flashlights, and poked one end of it into the little pile.

"Now we'll see if the scientists are right or wrong," said he, fishing for a match. "Of course, even if it works right, it won't help us get into the Security. No; it's for use inside. But we'll get in, all right enough. It all came to me—"

"Hold on!" cried Piano. "One thing at a time. Match, eh? Here." He struck one. "Shall I light it?"

"Go on, go on!" exclaimed Graham, more and more agitated. "Let her go!"

Piano calmly touched the flame to the end of the tape. The magnesium flared; then, suddenly, the powder took fire.

Dazzlingly it burned; with a slight crackling sound, yet almost without smoke. The heat that glared out at them made both men shrink back and shield their eyes. They saw the steel redden, whiten, then go soft and liquid, boil up and disappear. The powder suddenly went out; where it had been, their scorched sight beheld a clean-edged opening down through the plate. But they had little time to stare at it, for a smell of scorching wood came to their nostrils. Then little tongues of flame began to flicker up from around the edges of the steel.

"Quick! Water!" cried Piano. "These papers—they'll all be going in a minute!"

He beat at the fire with his naked hands, while Graham rushed water in a pitcher. With a tremendous hissing and smoking the fire was put out and the piece of steel cooled down. But the table was an ugly sight, its varnish ruined, a deep charred patch burned deep down into the wood.

"Oi! Oi! Vat vill Hixer Adam say?" exclaimed Piano with mock grief. Then, in his own voice: "No matter! What's a table, what are ten hundred tables, 'side of this?"

He whacked Graham enthusiastically on the back. Graham coughed and blinked.

"All right, eh?" cried he. "She'll do business?"

"Will she?" jubilated Piano. "Oh my! —Switch, you're one genius, no mistake!" He seized the younger man by the hand and wrung it till he winced. "Sure as guns!" he ejaculated. "Sure as guns—Krupps! Siege guns! Mortars!"

Graham laughed.

"Who's excited now?" he jibed maliciously. "My dear fellow, sit down, will you? Light your pipe, and listen. If I didn't know what a well-balanced head—"

"There, now, that's enough!" said Piano, quieting down. "Here, just let me brush some of this dirt off and lay a paper over it, so Adam won't see it all at once, and I'm with you. Now then?"

He sat down. Graham pocketed the remainder of the thermit and sat down too.

"My idea," he began, "in its main general outlines, is like this—"

Piano leaned forward, listening intently, from time to time putting in a word or a suggestion, but for the most part letting Graham do all the talking.

For an hour they held council. Dave's arrival put an end to it; but already the plan was well matured.

Nothing remained now, they both felt, but to undertake the practical carrying out of Graham's ingenious inspiration.

CHAPTER XVIII.

Preparation.

GRAHAM went down-town to Spring Street next morning, and dropped in at the office of the warehouse. He asked the clerk to quote him rates on the storage of two large crates of porcelain.

"Not in a vault, you understand of course," he said. "Merely in one of your storage rooms. One dollar a month, you say? For both?"

"Per crate," answered the clerk, shoving his pen behind his ear and looking out with mild, colorless eyes through the grating.

"Too high," objected Graham. "I can get a rate of half that in the United Safety."

"Yes, but we guarantee against fire, water, burglars, and breakage. That amounts, you see, to insurance as well as storage."

"Oh, in that case," Graham returned, "it's quite satisfactory. It'll do. The goods will be sent in some time next Thursday."

The clerk nodded, took down a large flat book interleaved with carbon paper, and, asking a few questions, filled out the necessary contract.

He passed it out to Graham, original and copy. Graham read it over carefully, then signed in a bold, firm hand: "H. K. Everett."

"Payable in advance," suggested the clerk. "One month, at least."

"Here's for three," said Graham. He shoved in six dollars and the copy, folded up and pocketed the original, and took his leave. The clerk, suspecting nothing, went back to his ledger, and thought no more of the incident, which was like a dozen or a score of others in his daily experience.

Piano, meanwhile, had been hiring a small, disused carpenter shop on East Eighty-Ninth Street, close to the river. Neither he nor Graham dared trust the making of the packing-cases to any hands but theirs. The very special manner of construction, they felt, must attract attention and might arouse suspicious interest.

Next day, Tuesday, garbed like workmen, they took possession of the shop—a dingy, cobwebby old place, stored with considerable lumber and sufficient tools for their purpose. They had already told Dave that "something was doing," though just what, they said, could not be for the present divulged, and had enlisted his services. Dave was a good driver, they knew. He could attend to the trucking of the cases, when ready, from Eighty-Ninth Street to Spring Street.

Tuesday afternoon they started making the cases. Tumbler was out of town; Adam was engaged in carrying on some further experiments with the thermit, which had so delighted and astounded him that he had quite forgotten to complain about the scorched table or even his "History of the Renaissance," that had been singed. Everything favored. The two conspirators were jubilant.

"I tell you, Switch," said Piano as he peeled his coat, rolled up his sleeves and began hauling out planks from the pile at the back of the shop. "I tell you, this taste of honest labor does me good. It's been a long time since I've had a saw or a plane in my hands. Quite an agreeable change from a double-purchase wrench, a 'drag' or a 'puffing-rod!' You think four feet by five will be big enough?"

"Maybe for one of them, for yours," answered Graham. "We'd better make

mine about five by six. I'm pretty long, you know."

"Long you are, bo," assented the other, "on brains as well as carcass. Suit yourself." Graham thought a tinge of pique had crept into Piano's voice, but he could not be sure. Piano went on, casually enough: "We'd better have plenty of room to turn around in. Rather too much than too little. We'll have a pretty long while, off and on, to spend inside 'em. I don't know what you're planning, but as for me, I take a little lunch and something wet. It'll be a mighty tedious wait."

Thus talking, planning the last details of the attack, they set to work on the boxes. By mid-afternoon they had constructed two large and solid cases, of ample size. Loosely built, with considerable cracks between the boards, and lined with gunny-sacking, there would be no danger of suffocation. Inside of each case they nailed a soap-box, to serve as a seat and also as a storage place for tools, provisions, and the like.

The lids they made in such a fashion as to give the appearance of being solidly nailed down. This they accomplished by using nails cut off to the length of half an inch, and by fitting hinges to the covers, inside. These could be readily screwed fast or unscrewed from within.

"There," said Graham at last, straightening up and wiping the sweat from his forehead, "I guess they'll do now!"

"Do? Well, rather! Beauties, aren't they? If Ali Baba and his mob had only thought of something like this, instead of their dinky old wine-jars, things might have come out differently for them, eh? Now, you just mark 'em, Switch, and they're done. I'll let you do the brush-work—it's in your line!"

He laughed at the innuendo. Graham smiled, too, as with a brush and a pot of marking-ink he proceeded to give the final air of verisimilitude.

When he had finished his work, each case was lettered in strictly professional style:

BAILEY-THOMPSON CO.,
NEWCASTLE, PA.

This Side Up. Fragile.
USE NO HOOKS!

They both stood back, surveyed the effect and pronounced it good.

"Nothing more to do, now," said Graham with a sigh of satisfaction. "Nothing but to get some more of the powder and a little clay, then turn ourselves into freight and sit steady for results. This thing is on the knees of the gods now, for fair. If—"

"If it doesn't slip off and smash, things will be didding right away quick," Piano took up his speech. "Well, come on, bo. It's getting late. We ought to be getting back home. What do you say if we take in a good show, to-night, by way of celebration? I'm dog-tired. A workingman's life is the life for me—not!"

Graham smiled absent-mindedly. His thoughts were all in the near future, now so heavy with possibilities of utter failure, of capture, of renewed imprisonment and suffering; or of dazzling success, the realization of all his hopes, justification, and perfect happiness—which was it to be?

They padlocked the old shop door, and, like the weary, toil-stained men they were, slowly started through the fading light for home.

Piano talked more than was his wont, all the way; but Graham was unusually silent. The close approach of the supreme trial weighed upon his soul.

"How will this end?" he thought, with alternating hope and fear. "Merciful Heaven, if I only knew—if I could only see!"

CHAPTER XIX.

At the Goal.

SO perfect was Dave's make-up as a teamster, with overalls, rough cap, clay pipe, and all, that the cleverest fly-cop on the Slinkerton force could not have suspected either him or the true nature of the two big crates in the truck which he drove slowly down Second Avenue a little after four o'clock that Thursday afternoon.

Without mishap of any kind he piloted his pair of Percherons along the streams of traffic. Now and then he pulled up for a car, a blockade, or the raised white glove of a "harness-bull." Once or twice he vituperated a careless driver. He smoked, lolled with bent back on the broad leathern strap that served for a seat, and played his whole part to a nicety. Safely he brought his team into Spring Street, to the warehouse, and backed up at the freight-elevator.

It was just before the closing hour when he arrived.

"Aw, come on, come on, you!" growled the elevator-man impatiently. "What d'you t'ink dis is? An all-night bank?"

Dave only removed his cap, took from it a piece of paper, read it slowly—scratching his head the while — and then looked up half stupidly.

"Security Storage," said he. "Two cases of crock'ry, sixth floor. Here." And he extended the contract to the ill-humored employee.

"All right, shove 'em in!" exclaimed the latter. "Gee, but you're the original Bonehead Barry, though!"

Dave grinned.

"Gimme a hand?" he answered, climbing up into the truck. "Easy, now—e-e-easy! Hey, wot you doin'? Can't you read? Naw, you don't! Dey goes in right-side up, or dey don't go at all, see? An' you don't use dat hook, neither!"

The elevator-man swore.

"Hey, Bill!" he shouted into the cavernous dark behind him. "Come git aholt, here; will you?"

Bill appeared. The three men carried first one case, then the other, onto the broad floor of the elevator.

"All right, now," said Bill.

Dave extended the contract to him. Bill scribbled a couple of crude initials. Dave put the paper back in his cap, straddled into his seat, picked up the reins, and with an indifferent cluck-cluck! drove away.

As he did so the elevator vanished slowly upward, and the big, iron-bound doors swung shut.

Toward midnight faint signs of life began to manifest themselves in the larger box. There, in the darkness of the storage-room, a slight sound became audible, hardly more than the nibbling of a mouse. It came from the slow, gentle turning of the screws that held the hinges. The screws did not squeak, for Graham had rubbed them with soap before having driven them home.

One by one he withdrew them. Piano, in the other case, was also now at work. Hardly had Graham finished, and lifted his cover, when the lid of the other box rose also.

"S-s-s-st!" came an all but inaudible signal. It was answered. Then out crawled Graham.

He stood there a minute, listening intently. Not a sign, not a sound to indicate danger. Something clicked, and the bright little beam of the electric flash fell on Piano, half-way out of his hiding-place.

"Douse it!" whispered Piano. The light faded.

By sense of touch alone they took from the cases all the material they would need for the break—the keister with the clay, the sectional jimmy, the package of thermit, the magnesium tape, the revolvers, and the skeleton-key.

"Now let the covers down," said Graham. "So! That's right! If anybody should happen to butt in here, everything must look all right."

"Correct," answered Piano. "With a little luck, we'll be back inside now in less than an hour. Half an hour, maybe. Then nothing to do but wait for morning. Dave won't fail us! He'll come back with his story of a mistake being made—he'll take us out of limbo, all right enough, never you fear!"

As he spoke, Graham was already moving on noiseless, felt-shod feet toward the door, which even by the momentary flicker of the light he had made out. Piano, carrying the satchel, followed him.

Strangely enough, Graham was now cooler than his comrade. Although anticipation of this moment had set his nerves a-tingle and keyed up his pulse, now that the actual time had come, now that he was within the fortress, on the same floor with Dill's storage-vault, he found himself as well at ease as though sitting quietly in the flat, reading a paper. It had been the same at the time of his trial. The verdict had overwhelmed him; the sentence itself had left him unmoved. Calmly he played the light over the door.

"Nothing hard about this," judged he. "Only a simple lock; no combination."

"No need of any for a room like this," added Piano, getting out the skeleton-key. "They aren't wasting 'em on chinaware and such. But just wait till we strike the other place, down the corridor."

He fitted the key to the lock, manipulated it a moment without noise, then turned it. The bolt slid.

"Cinch!" breathed Piano, as he picked up the tool-satchel.

Graham extinguished the light, soundlessly opened the door, stuck his head out into the hallway, and listened.

Nothing. No sounds of any sort came to

him; no echoing footfall, no gleam; nothing save silence absolute, blackness so dense that the hand was utterly invisible six inches from the face.

"Come on!" he indicated by a tug at Piano's sleeve. Together they slipped out into the tiled corridor. Graham shut the door behind them, lest any watchman find it open and investigate.

Though neither of them had ever so much as been inside the vast building before, they both knew the way as accurately as though it had been their home for years. Piano's previous consultation of the architect's plans—a consultation made in the guise of a Chicago contractor—had put them in possession of every detail and every distance.

"Forty-seven feet straight ahead," Graham remembered, as in complete silence they paced down the hallway, "then the turn to the right. Twenty-four feet brings us to the open space in front of the elevators that communicate with the courtyard. Cross that, and go straight on, same corridor, thirty-six feet. Second door to the right. Then another turn, and first door, left."

Almost as quickly as he had thought it, they reached the first turn. Along the branch hall they passed, almost unbreathing, guided by their sense of touch against the reenforced concrete walls. Now they were hard by the elevators. "A pipe!" whispered Piano with jubilation.

All at once he swore, under his breath yet angrily, stooped, and rubbed his shin, which had been "barked" by some hard substance. Came a slide and rattle; a box fell noisily to the floor. Some late consignment had been left by the warehousemen, standing in front of the elevators. Into it Piano had run.

"*Now* for trouble!" he said. "Ought to have used the light more, darn the luck!"

Graham pressed the button. By the faint gleam they saw the elevator-doors and a pile of crates and barrels that more than half filled the hallway.

Suddenly, from somewhere, sounded a footstep. Then, at the juncture of the branch and the main corridors, a very dim light began to show.

"S-h-h-h! Quick! *There!*" Graham breathed, pointing over beyond the pile. An instant later, revolvers in hand, he and Piano were concealed.

None too soon, for now the footsteps sounded nearer; then the light strengthened. It shone out suddenly as a watchman came around the corner. They could see the unsteady lantern-beams dancing along the firebrick ceiling.

Both of them held their breath. The watchman, a keen-looking, gray-haired fellow in jeans, stood still for a long minute, listening. He swung his lantern over the pile of freight. One sound, one slightest movement, would have betrayed them. Graham's finger tautened on the trigger.

For the first time in his life he felt the killing impulse. Not the wrong that Dill had done him, not even the many and grievous provocations given him in the penitentiary, had ever stirred this feeling as now. The watchman's life hung in the balance. Never had he been nearer death than just that moment as he stood there, half suspicious, half angry, surveying the consignment.

Then he saw the box that had fallen. It explained, or seemed to, the noise that he had heard. He set his lantern down, shoved the box back out of the way, grumbled a bit, and swore. Then, with some half-muttered word about "Reportin' that Dugan to the boss in the marnin', sure!" he took a final look and departed. His light faded and died. His footsteps echoed, diminished, ceased. Silence reigned again—silence and the darkness.

Graham and Piano did not move or speak. They crouched there a full five minutes before they so much as dared draw a natural breath. Who could tell but what the watchman might still be listening? But what this might be a ruse on his part to detect the true cause of the trouble? No novices, they, to be so easily entrapped, if trap there were.

But, as the time lengthened and no sound reached them, they gained confidence once more. Piano nudged his comrade, and cautiously stood up. Graham followed. They pocketed their "smoking-irons." Presently they were sliding like wraiths down the corridor beyond the elevators.

As they went, Graham kept his hand trailing along the wall to the right. He counted the doors: "One! Two!" His pace slackened even more. They reached the corner and turned again.

"Here!" said he, taking Piano by the coat.

Both stopped. Piano set down the satchel, knelt, and opened it. Graham threw the light on the iron door that was all which now separated him from Dill's place of fan-

cied security. He saw the combination; then, above it, a second lock.

Like many another vault, it had two fastenings, one which could be opened only by an employee, one by the tenant, thus absolutely shutting out any unauthorized opening of the door—"Or so they think!" reflected Graham, smiling satirically. "Well, maybe we'll show them a new wrinkle, eh?"

Already he was at work. Piano handed him the clay. He took a lump of it, stuck it against the door immediately below the combination, and fashioned it quickly into a sort of shallow trough. The same operation he repeated for the upper lock. The rest of the clay he dropped back into the bag.

Taking the package of thermit, he poured into both cups of clay a quantity of the marvelous compound. He inserted the bits of tape, which had already been cut to the right length.

"Stand back, now!" he whispered to Piano.

Both men waited a moment, looking, listening.

"Go on—set her off!" said Piano.

A match flared in the black. By its wavering light their faces became visible, set and eager, with eyes the pupils of which were unnaturally dilated, like a cat's eyes at night. Piano blinked, but Graham's gaze was steady as his hand.

He touched the match to one tape, then the other. There flashed a quick and blinding radiance, followed by the blue and slightly crackling glare of the thermit. Then to the floor dripped, splashing, an ardent rain of molten steel.

Piano looked anxiously over his shoulder. But Graham, merely smiling, stood there and watched the wondrous flame eat into the door. Slight chance, he knew, that the light should be twice or thrice reflected so as to reach the main corridor. With incredible rapidity the combination fused, lost form, ran down, and dribbled along the plates of steel. Graham threw in another handful of the stuff; the metal rain increased. Then, where the lock had been, a tiny hole appeared.

It widened to a white-hot gap. Graham closed his eyes, which felt as though seared. A green light seemed to fill them. He stood there, listening to the coruscating hiss of the thermit. No sweeter music in all his life had ever reached his ears.

"All right—all right!" whispered Piano.

Graham looked again. The stuff had burned itself out. Now nothing was visible but just two glowing apertures, like red-hot windows in the dark.

"When she cools a bit!" said Graham.

Piano tiptoed to the turn, looked and listened, perceived no sign of danger, and came back.

"Oh, but you're the goods, bo!" breathed he in admiration.

"S-h-h-h! The jimmy now!" Graham answered, oblivious to all but the immediate task before them.

A few strong, skilful twists broke down the last barriers of resistance. The door swung inward.

Piano seized the bag. They both entered the room. Graham pushed the door shut behind him.

"At last!" he said coldly.

CHAPTER XX.

The Finding—And After.

HE stood motionless for a second or two, flashing the electric beam here, there, getting his bearings. He sniffed the close and fetid air of the long-closed place as though it had been perfume. His quick glance showed him the situation of things.

The room he saw was very small—hardly six feet by eight. One side was banked up with boxes and packing-cases, probably containing the old man's most valuable books or art treasures. Some large flat objects, wrapped in sacking, stood against the wall directly opposite the door—pictures, no doubt. Graham turned impatiently from these.

"Well?" queried he. "Nothing but junk here, after all!"

"There!" answered Piano, pointing toward the right.

Graham turned the light that way. It flicked spots of brilliance from metal.

Graham saw a safe-door, apparently built solidly into the wall itself.

"There she is, Switch!" said Piano exultantly. "Now for business!"

Graham stepped over to the safe. Together he and Piano quickly inspected it. Graham smiled.

"I guess we sha'n't have to waste any more good ammunition on that!" decided he. "Just you keep watch a minute, and I'll see what I can do with this pretty little gopher."

Piano took the light from him. Graham knelt before the combination. Lovingly he laid his ear against the steel plates. Like a maestro touching a long-familiar instrument, he delicately took hold with his sensitive, artistic fingers upon the knob of the device.

He turned it slowly, carefully, listening all the while. Thrice round he sent it, then thrice back, noting each tiny sound. Forgotten seemed to be the perilous situation, forgotten the presence of his companion, forgotten even the object of his quest. All his attention, keen and absolute, centered upon the minute, fine, hardly perceptible little indications there within the combination.

At last he nodded.

"I've got it," he announced.

He spun the knob, stopped it at 85, drew it back to 40, then whirled it twice round. To 20 he brought it.

"Sixty, now, and—you see?"

The action suited the words. The combination clicked. Graham pulled down the handle, tugged a little at the door, and swung it wide.

Piano said nothing. His eyes narrowed, though, as he stood looking down at Graham's broad back. In them that strange look had appeared once more—the look that Graham had sometimes noticed there, as though the man, Graham's one-time teacher, harbored some secret jealousy or some more poignant feeling. But of this Graham knew nothing; it passed, too, for the moment, in Piano's growing eagerness.

"One more, and we're in," remarked Graham, tapping the smaller inside door.

"Don't waste time figuring on that," said Piano. "It's nothing but an A B C lock. Here!"

He took the light in his left hand. With his right he drew from the satchel the skeleton-key. Graham noticed that the key shook a little as Piano fitted it into the lock. He wondered momentarily at this, but had no time to give it more than passing thought, for already the inner door was giving way.

Piano dropped the key back into the bag and pulled the door. It yielded. Dill's secret hiding-place stood open wide at last before Graham's searching eyes!

For a minute he did not see the thing he sought. In the drawer lay many papers. The sealed packet that Piano had told him about was hard to distinguish. He knelt there, head bent slightly forward, hands eager to grasp, a singular expression on his fine, intelligent face, the color a trifle heightened in his cheeks.

"Eh? Don't see it?" asked Piano breathlessly.

For all answer Graham began taking out the contents of the drawer.

There were deeds, mortgages, bonds, stocks—ah! what was *that?* A bulky package wrapped in manila paper and tied with lawyers' tape, the knots of which lay buried under seals of dark-red wax!

Graham laughed a slight, cynical laugh. If Piano had expected him to taste the copper of excitement, to jump up, to indulge in jubilation, he was disappointed. With hardly more emotion than as if finding a bunch of newspaper clippings, Graham took back his own. Took back his property, the justification of all that he had done; his proof, the thing which was to give him once more all that was to him far more precious, more dear, than life itself.

"Justice!" Piano heard him say. Only that one word, as he slid the bundle into his breast-pocket; then, without rising from his knees, began carefully laying the other papers back into the drawer again.

Piano stared at him, amazed. The yegg's jaw dropped. He frowned with astonished displeasure.

"Say, Switch!" he whispered in an eager, trembling voice.

"Well?"

"What—what the devil—"

"You mean—"

"Those papers! Securities of all kinds! Worth—"

"I don't know that it's any particular concern of mine what they're worth, is it?" answered Graham, closing the drawer and making as though to swing the outer safe-door shut.

Piano laid a hand on his arm, staying it.

"Maybe not. Maybe *you* don't care. *I* do!"

"Why?"

"Why? There's swag to the value of half a million, perhaps, and you—you ask why? What are you handing me?"

Piano could hardly articulate, so great had become his excitement and indignation. Graham only laughed again.

"So that's what you let me think this thing out for, is it?" he questioned. "That's why you let me solve a problem that was too hard for you? Not for the sake of justice—not for the right of the thing—only

for a haul? Took me in, taught me, fraternized with me—" He broke short off.

Piano shoved his face close up to Graham's. The rays of the flash-lamp, reflected from the wall of glazed brick, made only a dim twilight; yet there was light enough for Graham to see how ugly the other's expression had become, how bitter, angry, and covetous.

It was as though all the jealousies, the half-perceived antagonisms of the past months, had suddenly crystallized, had now in a second been made visible.

"Hop-talk!" sneered Piano. "Trying to play the parson all of a sudden, now, are you? Think I risked my skin for nothing but to see you get yours? Where do I fit?"

"Oh, if it's money that's bothering you, I guess I'll have enough before long so that I can pay you for your time!" Graham's tone was so caustic and so stinging that Piano reddened.

"Drop that!" he answered. "It isn't yours I'm after. It's the rest, there, inside. I want it, you understand?"

"Sorry. Because you can't have it—you see."

"Can't, eh?" and Piano thrust Graham's arm aside. "Why can't I?"

"Largely because I say so. Not one dollar of it. Not one cent. You hear. I didn't plan this crush for loot. Planned it for nothing but—"

"I know all about that. But you and I are two different persons. You've got yours; now I'm going to get mine. Stand off!"

"No!"

"Switch," said Piano, holding his rage with an effort, "see here. You'll let me at that gopher, or I think there'll be a muss in just about one minute."

"I think so, too," answered Graham cheerfully. "Half a minute, maybe."

Piano, his anger now wholly out of hand, cursed Graham and struck at him. Graham caught his wrist in a grip like that of a vise, and held it.

"Fool!" he exclaimed. "What kind of a place is this to raise a row in?"

"Thick-walled enough, I guess, so nobody'll butt in!" panted the yegg. "You going to let me at that box?"

"No!"

Piano threw a muscular leg round Graham's, and tried to trip him.

They clenched, staggered, stumbled over the valise, and fell, with Piano on top.

The light went out. In the utter dark, Graham felt the man's hands striving to get a hold on his throat.

But Piano, in attacking him, had reckoned without his host. Graham, though ten or fifteen pounds lighter, was twice the athlete that Piano even in his best days had ever been.

The yegg's fingers could not find a hold. With one arm Graham guarded his throat, and with the other dealt stunning blows upon the man's head and neck. His fist landed savagely.

Piano grunted, trying in vain to guard, and at the same time to inflict some damage. The tide of battle turned.

With a supreme effort Graham broke Piano's grip, flung him aside, and staggered up. Piano clutched at him. Graham, desperate, kicked at him full force—the only time in his whole life that he had been forced by gutter-fighting methods to reply in kind.

He felt his boot strike crushingly, heard a cry, got free, and leaped away.

Half dazed by the sudden attack, the darkness, and the violence of the struggle, he stood there a moment pulling himself together. He heard Piano's labored breath, heard the man groan and swear; then, although he could see nothing, knew by the sounds that his opponent was getting up again.

"Well! Had enough?" Graham gasped.

Piano's only answer was a growl. Inspiration flashed to Graham. He dropped to his knees, felt here and there with his hands gropingly, found the valise, then the electric lamp.

"Curse you!" he heard Piano say. "What are you up to now? Wait till I get a—"

The voice broke off.

Graham heard a sound he knew right well—the click of a revolver-hammer going up.

Even then, singularly enough, he felt no fear, but rather a wild sort of exultation, a keen joy in battle. With no light to guide Piano's aim, the chances, he knew, were good for escape, even should the now maddened man venture to shoot. Guided by Piano's breathing, Graham crawled away, crouching, and on one hand. The other hand clutched to his breast the satchel, into which he had slipped the flash-lamp, and which contained the skeleton-key.

"Stick and slug!" He remembered the motto; but now, when his comrade had bro-

ken the pact, had set upon him, and was even threatening his life, he felt all the bonds of the underworld code were utterly severed.

Answering no word, then, but reaching the safe-door, he pushed it and spun the knob.

As he did so, Piano, wholly out of the bounds of caution with rage, fired.

The report almost deafened Graham in that small and confined space. The stab of flame from the heavy-calibered pistol singed his hair. By its instantaneous light he got a glimpse of Piano, crouched between him and the door leading into the hall.

Before Piano had had time to pull trigger again, Graham had rushed in on him, smitten him furiously upon the head with the heavy tool-bag, and floored him.

Then, waiting for nothing else, he sprang to the exit, seized the still warm door, and pulled it open.

Somewhere in the great dark labyrinth of the warehouse he heard steps echoing; then a bell rang. His heart leaped. The alarm, he knew, had been given.

Yet even then, when every second was more precious than gold, he could not desert his former comrade without a last appeal.

He turned back, and, peering into the gloom, exclaimed:

"They're on! Come, hike! Here—the door's here! I'll wait for you!"

No answer save a snarl and the click of the revolver again.

Graham, realizing at last the futility of trying to reason with the infuriated yegg, said: "Well, good-by then. On your own head be it!"

He drew the iron door shut. Down the corridor he silently ran.

As he crossed the transverse hall where the elevators were, he saw lights at its further end—lights, and three men.

He heard a shout: "*There* he goes!"

Graham knew that he had been seen, that he was trapped there in the dark mazes of a place stronger, more formidable, than a penitentiary itself.

CHAPTER XXI.

The Leap.

ACROSS his mind flashed, clearly as though it had been outlined in flame, the plan of the warehouse which he had so often and so carefully studied.

As he ran along the dark corridor, with the sounds of pursuit growing rapidly louder, nearer, he saw the exact situation. The hall, he knew, extended some forty feet toward the rear of the building; then a turn to the left would bring him to a series of stairways that connected all the floors.

Up these stairs, if he could only throw his pursuers off the trail, he could reach the top story. The skylights, he believed, offered at least the chance of getting out onto the roof. Once there— He did not know. Yet, since that was the only possible avenue of escape, he bent all his energies upon it.

Just before the watchmen debouched at a run into the hallway where he was, he reached the turn.

A barred window, twenty feet away, let in a few filtering rays of light. Graham's eyes, accustomed now to the gloom, vaguely perceived the iron stairway.

As with instinctive knowledge he felt that his pursuers would all but inevitably conclude that he had gone *up*, if they did not see him when they arrived. Therefore, following the dictates of that instinct rather than of his reason, he hastily and noiselessly slipped down the stair beneath the ascending one.

Hardly had he reached the floor below, when he heard excited voices there above him.

"Where is he? Which way? Up, of course, you solid ivory!"

He recognized one of the voices as that of the watchman who had threatened to report Dugan "in the marnin'." In spite of his imminent peril and throbbing heart, he had to smile.

"Guess I sized up your mentality, all right enough, my friends," thought he.

A moment he waited; then, sure enough, feet sounded on the upward stair.

Graham kept utterly still; all his senses seemed as though merged and centered just in the one sense of hearing. To him came disjointed fragments of speech as the men, staying together through an irresistible feeling of dread, searched the corridors above.

They came back to the stairway, puzzled. He heard one of them say: "Well, he can't git out, nohow!" Another answered: "Wait, now, till I ring up th' rest of 'em. We'll have the bunch here in no time. Oh, *he* can't dodge us long!"

Somewhere in the stillness an electric bell

trilled. Then, on the stairs above he heard the men's feet climbing higher still.

A daring ruse occurred to Graham. He issued from the corner where he had taken refuge, and as the men went on up-stairs he followed them.

The windows all up and down the stairway helped him greatly. He neither hesitated nor stumbled; he made no slightest sound. Yet steadily and swiftly he mounted the stairs in the gloom, blessing the thick felt-sole shoes he wore.

On the sixth floor he paused—the floor which but a minute or two past he had quitted, and where the watchmen had so recently stood consulting. To his mind came the idea of seeking refuge among the piles of freight out by the elevators; but this plan he at once abandoned. Those boxes, he knew, could at best give him but very brief respite. If he hid there, he must surely be caught.

In this momentous game of hide-and-seek, upon which all his future, all his life, depended, he must at all hazards keep clear and free of entanglements. Even a dozen watchmen, he felt certain, could not suffice to entrap him in those many, dark, and winding hallways. If he could only outwit them until he could reach the top floor—but after that, who could say? He set his jaw and vowed that once there, nothing should stop him. Forgotten was his scorched head, where Piano's shot had grazed.

Now the watchmen were climbing again. Again he followed. This brought him to the seventh floor, while they were poking about on the eighth. But now he heard sounds below him. Reenforcements were coming! Suddenly a shot cracked. Sounds of a scuffle burst out.

Up from below rose a voice of command: "You big stiffs. Here, you, what you doin'? We got him!" Shouts followed; came another shot, a howl, an oath.

Graham, fully realizing what had happened, shrank back into the hallway corresponding to the one leading down there below, from the vault to the stairs.

He heard feet running rapidly down, clattering heavily in confusion. The watchmen reached the floor where he was concealed. For a moment his heart stopped still. Not five yards from him the searchers were. Suppose they should happen to come through the passage where he stood all open and defenseless? But, no—on they went, on and down the stairs again.

Graham realized with a thrill of exultation that now all the men were below him! Now nothing intervened between him and the top floor. Thanks to the stupidity of the men themselves, and the diversion caused by their finding Piano, his way stood clear!

"Dom funny how we missed 'im—how he got down there ag'in when I seen him wid me own eyes runnin' up!" he heard one of the descending watchmen exclaim. He did not wait for more, but quickly stole away up, ever up, still with the precious packet safely in his keeping, still with the satchel gripped in his right hand. His pistol he did not draw, but kept that for extreme emergencies.

It took him but a few minutes to attain the upper story of the tremendous building. As he went, the light, though still very dim, kept growing a bit stronger; it served him passably well. Inasmuch as he did not yet dare to use the electric flash, he thanked fate that the warehouse windows opening on the courtyard were not shuttered as were those that overlooked the street.

On the top floor he stood still, listening. His heart pounded with the exertion of the long, fast climb, and with the excitement of the chase. Far down below, the sounds of struggle had subsided. Piano, he knew, was either dead or had been made a prisoner. The watchmen by now, he felt positive, must have recognized their mistake; must know that there had been two intruders and that one of these had succeeded in giving them the slip.

As a matter of fact, it seemed to him they were coming up again, some of them; though every sound in that echoing, maze-like place, was so broken, enlarged, and distorted that he found it difficult to tell just what was going on.

"At any rate, out's the word for me!" said he to himself.

He hurried along the hallway skirting the courtyard, looking for one of the skylights that Piano had assured him were there—but all in vain. Cautiously, as he went, he raised the flash-lamp high in air and pressed the button, throwing the little silvery beam up against the ceiling of firebrick. No skylight! No trap-door! No opening of any kind!

"What?" thought Graham. "Penned in, after all I've been through? After all I've done, and suffered—just at the very last of it, just within an ace of going free, shall I be caged up here like a rat and taken by

those idiots? By God, I won't! Not while I have life!"

He reached a turning to the right, took it, and sped silently along the west side of the court.

At his left he vaguely saw a row of doors, with here and there the gaping mouth of a hallway; at his right, windows that looked out into the yard, twelve stories below—windows all heavily barred.

He stopped, peered through into the night, and pondered. Where, thought he, were the skylights that Piano had reported? He did not know, nor could he, that the architects' plan had been changed in that respect. Puzzled and confused, he stood there to breathe, to rest an instant. He pressed a hand to the singed spot on his head.

A light, below him and off to the right, drew his attention. Through the windows on the south side of the court he saw a lantern swinging upward; saw legs moving up a flight of stairs.

"After me, again!" he realized. Far away echoed the sound of footsteps climbing, climbing.

Desperate, he ran forward once more. Then he stopped.

"It's no use," said he. "This game of tag, with me for It, can't last long. They'll get me sure, this way—if not now, then later. It's a losing fight. I've got to make a break!

"If I die, doing it, that's all right, too. That's a thousand times better than to be taken, robbed of everything I've waited and suffered and labored for, and sent back to 'stive!' Better, ten thousand times!"

Again he peered through a window.

Above it, perhaps three feet from the top of its bars, projected a broad cornice. Once there, he hoped, he might be able to swing himself up onto the roof, and from the roof what possibilities of escape might not exist?

He scrutinized the window-pane, vaguely seen by the infiltering dim light that always hangs above a city.

"H-m-m-m! Wire-glass!" said he. "*That's* a job in itself!"

Saying no further word, he opened the satchel, took out the jimmy, the remainder of the powder and tape, and set them on the sill.

With a quick, firm blow he struck the jimmy through the glass, and one by one began twisting the wires off. The glass, held by the wires, fell only in small pieces. Graham shoved these out, so that they fell in the court, a hundred and twenty feet below. The slight noise he made could hardly, he felt certain, reach the ascending watchmen way round on the other side of the great warehouse.

In less than two minutes he had broken the wires all about the pane, had lifted out the glass and laid it noiselessly on the floor beside the satchel.

There remained, then, only the bars.

At the base of two of these he dumped all the remaining thermit and hastily set it off. The stuff, so potent with steel, ate the mere wrought-iron like so much wood. Presently Graham saw that the bars were melted clean through. With the jimmy he pried them aside, then bent them sharply up and out of the way.

"Now!" said he.

He thrust his head far out and looked down. He could see nothing, there below, save a black, fathomless gulf. The courtyard was wholly lost in shadow. Above, the cornice made a dark line across the gray night-sky. A desperate venture indeed, he realized, to try and reach it, to pull himself up and over it; but nothing else remained.

"It's that or—living death!" thought he. "Now, then!"

Hesitating no moment, he pressed his hand to his breast, assuring himself that the sealed package still rested safely in his pocket, then lightly climbed to the sill.

Hark! What was that? A cry, far down the corridor—the flash of a lantern—the crack of a pistol-shot! A bullet snarled past him. "There he goes! Quick, you!" he heard a voice shout.

Graham laughed wildly, then with the agility of an acrobat climbed through the opening he had made.

He turned, clinging to the bars, and quickly scaled the tall window.

Now he was at the top, outside the building, with nothing below him save a sheer drop into the darkness. Twining his legs around the bars, he reached outward for the edge of the cornice. Just a little too far for both hands to reach! Strain as he might, he could not compass it.

"Here! Here! We got him!" cried somebody, inside. Graham heard feet running, full tilt.

Desperate, filled with the strange abnormal strength that comes to men in time of supreme peril, he grappled a bar with one

hand, raised himself, loosened the grip of his legs, and stood there above the chasm, one foot resting on a cross-bar.

With a desperate effort he managed to get his right hand up and over the edge of the eaves.

The fingers clutched and tightened.

Graham let go with his left hand. He swung clear. For a moment he hung there by one hand alone, in mid air.

A dark form appeared at the smashed window.

"Hey! Quick, here!" screamed the pursuer.

Graham kicked at him, striking him full in the face and blinding him, as he flung up the other hand and caught the eaves with that also.

His biceps tightened. The big muscles coiled and swelled. Graham pulled himself, inch by inch, up, up, till now at last he could get one knee, one foot up into the metal gutter.

Summoning his last ounce of strength he held, so, for a second; then with his right hand clamped hold of the graveled edge of the roof itself.

A moment later he had hauled himself, panting, spent and dizzy, up onto the flat roof right at the very lip of the abyss.

The space of ten rapid heart-beats, perhaps, he lay there while below him rapidly swelled the chorus of disappointed execrations, of threats and confused commands. Then away from the cañon-like emptiness he crawled on hands and knees up a slight rise over tar and gravel.

Safe for the instant, he scrambled to his feet and looked around him.

Dimly, at the low crest of the roof, he made out a cluster of chimney-stacks and ventilators. To right, a housing of some sort, possibly containing the wheels and top framework of an elevator. To left, a dull upthrow of light from Spring Street at the front of the warehouse.

Not that way, he knew, lay escape. He turned to the right, ran rapidly along the pebbles, reached the corner of the court and turned again to eastward.

Ahead of him he vaguely saw more chimneys. For a moment he thought of crouching behind them, of hiding there like a hunted animal at bay; but that idea he instantly put from him. It could not serve. The pursuers knew now where he was. Up some stair or ladder he felt certain they would immediately be after him again—half a dozen of them, maybe more—armed, ready for battle, ready to kill.

"I've got to get down off of here—down—some way!" panted Graham as he ran.

His heart leaped painfully; his breath seemed to choke and stifle him. Like a horrible dream, a nightmare, the whole thing seemed—a nightmare from which he knew he could not wake. On his forehead he felt the sweat starting copiously. A sudden weakness came over him, and he began to tremble. He pulled up short.

"Come, come, boy!" he exclaimed. "This won't ever do!" He tried to get himself in hand, to think a moment, to plan.

A noise on the other side of the building, on the roof across the gaping black square of the courtyard, came to his ears. He turned.

By the vague light of a lantern, that seemed to be shooting its rays upward through an opening of some sort in a long, inverted cone, he made out the head and shoulders of a man.

"Come on, youse!" he heard a cry. "All we got to do now is keep him busy till the cops come!"

Graham fell on hand and knees again. Away behind the chimneys he crept, soundlessly. Beyond them he passed. In front of him, now, he perceived the edge of the roof, running at right angles with the street.

"It's there or nowhere!" thought he. "If nowhere, then I fight!"

He reached the edge, crouched there and peered down.

By the half light that filtered up from the street he saw at a glance the situation that confronted him.

An old-fashioned building joined the warehouse, its peaked roof, slate covered, twenty-five or thirty feet below.

A man, leaping to it—even though he could endure the shock—must land directly at the ridge, else he would skid down the slates either to back or front, and shoot off into the alley or into Spring Street. The drop from the eaves, Graham knew, could not be less than seventy feet. Sure death, to miss the ridge!

He groaned involuntarily, and looked back.

Already the lantern bearer had climbed up the scuttle on the roof of the warehouse. Graham could see him, and two others, cautiously treading along, casting fantastic ghostly shadows up against the chimney stacks.

"In three minutes they'll be on me! In two!" realized the fugitive. "I've got to do it!"

Summoning all his nerve and powers of cool calculation, he peered down again. The slate roof, he saw, was broken by a row of dormer windows. It terminated sharply, fifty or sixty feet away. Beyond it, was another flat roof, somewhat lower. *There,* he felt positive, must be a skylight or some means of getting down to the street.

"Well, here goes," said Graham. "If I pull through, all right. If I don't, that's all right, too. I've done all a man could do. Now, it's up to Fate!"

Erect on the very edge of the warehouse roof he stood. Right on the eaves he balanced. A shout, behind him, and feet that struck out a tattoo over the gravel, told him he had been seen. He only smiled.

"Too late, now, for you to take a hand in this!" he cried.

Coolly he judged the distance, as so often he had done in the University gym. Then he clenched his fists, crouched, paused a second—and launched out, down, into empty space.

Despite his careful judgment and his skill, the shock all but stunned him. The breath was driven from his body. He lay there, dazed and gasping, conscious only of one thing—that he had struck the ridge, that he was not sliding down the roof, that he must hold on.

Then came the realization that he could not stay where he was. Painfully dragging himself along the slippery peak, he crept away. A sharp pain in his right leg told him he had injured it, though how badly he could not tell. In his tense excitement he put the pain out of mind, and kept on, on, with the steep, slippery precipice yawning for him at either hand.

He reached the farther end of the old roof.

From behind him he heard shouts. A fusillade crackled. He felt a dull twinge in his shoulder, as though it had been hit by a hard snowball.

Before him he dimly saw the next roof, only a few feet lower. To it he fell, rather than jumped. He hobbled grotesquely off along it. A housing loomed in front of him.

Round it he dodged, out of range of the revolvers.

He saw a door. All but exhausted he tried it. The door resisted.

Maddened then, as though by the long, savage succession of pursuit and suffering, he flung his whole strength against it.

Something broke. The door swung open. Graham staggered in, holding the latch. Vaguely he heard the disappointed shouts and oaths from the warehouse; they seemed very far, very strange.

He stood there an instant, swaying in the gloom, still clinging to the door.

"Where am I?" thought he. Everything seemed to whirl and spin. A roaring filled his ears.

"Buck up!" he said aloud. "Why, fool, you aren't going to cave in now, are you?"

As though the reproof had been spoken in scorn by some one else, he pulled together. He looked about him.

It was, he saw, an ordinary roof house that he stood in. Before him, stairs descended. At the bottom, a low-burning gas flame fluttered in the draft from the open door.

Quickly he closed it. He squared his shoulders, hastily brushed the gravel and soot from his knees, dusted his hands on his trousers, and with only a slight limp—despite the growing pain in his ankle, started confidently down-stairs.

Two minutes later, before any of the cautious tenement dwellers had had time to awaken to the situation or molest him, he issued into the street below.

Another minute, and he was round the corner. On the opposite sidewalk he saw two patrolmen running, full drive, toward the warehouse. His nerve was good enough to let him stop, turn, and watch them with an interest which would have disarmed the suspicions of keener brains than theirs.

A car came by. He signaled it, swung aboard, went inside and sat down calmly. He picked up a newspaper lying on the seat; behind it he hid his face, easily enough, from the sleepy and indifferent glance of the conductor and the two fagged passengers.

Before the warehousemen had reached the street and had incoherently explained things to the officers, he was a dozen blocks away.

Only then did he realize fully that he had been shot in the left shoulder. Despite that fact and a sprained ankle, he gamely boarded an "L" train. By standing outside on the platform, he concealed that fact from the guard and also managed to keep from fainting from loss of blood.

At One Hundred and Fourth Street he left the train. A few minutes later he had reached the flat, and was safe.

The danger was all past, and the prize won. His degree of Master Cracksman had been signed with his own blood, sealed and delivered. The way toward justice had been made free and open. His last, his greatest "crush" was at an end.

CHAPTER XXII.

Fiat Justitia.

FAR up toward the headwaters of the San Luis Rey, on a pine-grown plateau overlooking the fertile valley to westward with its orange groves and dotted towns, stands the bungalow of John Graham.

Away and away behind it the snow silver of the San Jacinto peaks, and to north of them the San Bernardino ranges, stand boldly out against the untroubled blue of the California sky. On clear days the flash and sparkle of Santa Catalina Gulf can be seen very far on the horizon, from the broad veranda that circles the broad, low dwelling place.

As you come up the road from the river, pass through the grove of piñons and by a graveled walk approach the bungalow, you can hardly fail to see a little spade and hoe in the pathway, a toy wheelbarrow or a sand pail. A miniature iron locomotive lies on its side at the end of a long furrow where childish hands have dragged and left it for some other play. Perhaps you may catch a glimpse of the little boy himself, off down the slope among the rough-barked, odorous trees. His mother, too—"Munner Agnes" he calls her—you may happen to see as she walks among her garden beds, watchful always of him; her white dress gleams among the greenery.

There is an old man, bald and feeble and much broken, whom the boy calls grandpa. Very spent and wasted he seems as he potters around, unmolested, in the flower beds. He never looks at you with level eyes, but always with a curious, blinking, sidelong glance. You might think him a trifle in his dotage. He creeps about, here, there, in the sun, lingering out the little fag end of life that still remains. Agnes sees how rapidly he is failing. In her heart of hearts—what does she think? Not even you can tell.

(The end.)

ANOTHER RAILROAD DOG.

His Name Was Jack and What He Didn't Know About Traveling Wasn't Worth While.

THE following interesting dog story was sent to us by one of the old-time readers of THE RAILROAD MAN'S MAGAZINE:

Jack was only a pup, a black-and-white fox-terrier, when I first saw him dodging around the roundhouse at Lexington, some ten or eleven years ago. It took about two years to get Jack to board an engine, but when he once got acquainted with the cab the strides that he took in his education were startling.

He soon learned to sit on the fireman's seat-box and hang his head out of the window with his paws on the arm-rest. He gradually got up sufficient courage to keep this position while the engine was under headway. My father, who was on the road at the time, taught him to start the bell by pulling the cord with his teeth.

Jack had his favorite engineers and among them were Uncle Dallas Pulliam and James Wiltshire. One of the most thrilling rides that Jack ever had was with Wiltshire on the 1182.

Train No. 14, a passenger, was leaving Lexington at 4.40 A.M., one cold, snowy morning when the hostler, W. O. Vaughan, climbed on to the pilot to ride from the depot to the crossover to throw the switch. Jack got aboard with him, but did not get off when he should have, and was carried on out of town. Wiltshire did not know that the dog was on his engine until Jack crossed over the steam-chest, made the trip along the running-board and scratched at the cab door for admittance. How he ever got from the pilot to the steam-chest has always been a mystery.

I have seen this dog on three different divisions of the L. and N., and on a number of trains between Louisville and Cincinnati. He would strike a freight out of Lexington and would not be seen in that city for months, but would be heard of now and then from one of the other divisions where he could be seen riding in the engines.

Jack knew his friends, and never forgot a kind word. Likewise he never forgot a harsh one.

ON THE EDITORIAL CARPET.

Where We Let Some of Our Superheated Steam Escape, and Listen for a Pound in the Air Cylinder.

OUR first section of the 1911 special will make the run in schedule time, unless some of you flag it along the line. Every car is newly painted, the brasses are all polished, and the big Atlantic is steaming and ready. As we look it all over before it starts on its journey, we cannot find one flaw, but we want our readers to be in their respective towers of criticism ready to send word ahead to give us the arm, should they find anything that does not please them.

That is the only way in which we can make a magazine to give satisfaction to every one.

No train leaves a terminal without some complaining passenger, and, perhaps, no other train carries so many passengers as the one we are proudly starting on its monthly journey. In the little back shop here in New York, where the con, the eagle-eye, the shack, and all the rest of the crew are forever busy, it is a pleasure more than a pain to know that you have found a poem with disconnected joints, a story that reads like a lot of flat wheels on the down grade, or a special article that looms up as sadly as a hogger who, aiming for a record, has got the washout sign.

We think pretty well of this January section. We have tried to start the New Year right. Now let us take a little look at our February way-bill.

There will be some excess pressure on "The A. B. C. of Freight Rates," by John C. Thompson. The second part of this all-important discussion will have a plush seat in the February Pullman.

Robert H. Rogers is another one of our writers who went abroad last summer. While there he secured some red-hot cinders in the shape of articles which are going to be mighty valuable to you boys. They will show you the great differences between American and foreign railroads in all their branches. Both Mr. Rogers and Mr. Carter ran as extra trains while abroad. Mr. Carter's "Europe's Old-Fashioned Railroads" appears in this number. It clearly indicates that some of the railway methods still in vogue in Europe are about as funny as a lead crown-sheet.

Mr. Rogers's first article will tell of the fast run of the French express—how a crack European flier is operated as compared with one of our own. It is worth knowing.

We have a splendid bunch of stories about railroad men and their encounters with animals. All railroad men love animals, and these stories are the kind that hoist the steam in the laugh-injector.

The day of the pass is still a pleasant memory to many politicians and others who found it necessary to travel without paying. We all know how the government put a stop to this form of graft a few years ago. If you will turn to the old letter by Bill Nye which we print on page 616 of this number, you will see what was an unexaggerated form of demand some twenty odd years ago. Though Bill was a humorist, the railroads received demands for passes which were equally as preposterous. We have a special article for February which tells of the old days when the railroads considered passes equal in importance with rolling-stock. How the railroads were annually held up for these special privileges makes one marvel that they stood for it so long.

The Help for Men Department will contain an article of special importance to young men employed in the business side of railroading.

Then there are other articles. One tells of the difficulties encountered by tramps sleeping on trains. We will have the second part of Mr. Walters's splendid article on bridge-building. Walter Gardner Seaver's roundhouse tales will appear again. "Ten Thousand Miles by Rail" will have its customary place, and Mr. Willets will tell of the famous hold-ups in the Missouri River Valley.

And at the front table of the diner will be our friend and philosopher, J. E. Smith, and his "Observations."

In the short-fiction cars you will find a particularly good story by George Allan England entitled "At the Semaphore." Robert Fulkerson Hoffman contributes one in his best style, "Bluffing It Through for Abel." F. H. Richardson writes about Bill, the fireman, at a high-brow lecture. Sumner Lucas, Augustus Wittfeld, and others equally as well known will be aboard.

Suffering feed-valves! We almost forgot! Honk and Horace have the time of their gay young lives breaking into polite society.

Two white flags at the boiler-sides for the February express!

PUSH IT ALONG.

THE letters of praise which have come to us during the past three months from countless of our readers are more than deeply appreciated. We say this with modesty bubbling from all our flues. When one man says, "I would not miss a copy of THE RAILROAD MAN'S MAGAZINE for five dollars;" another, "For my regular monthly laugh

I go to J. E. Smith and Emmet F. Harte," and another, "I read twelve magazines, and yours is the best"—with such words as these coming along we feel as if we had struck a running as easy as a down-grade on a sunny morning.

We want you boys to tell your friends how good the magazine is. We know you like it, and when you meet a friend who finds that his reading is not just up to the mark, ask him to look at THE RAILROAD MAN'S MAGAZINE. We believe it will interest him even if he is not a railroad man, and it is surprising how many readers we have whose only interest in railroading is the wonderful romance, courage, and heroism which we describe in our pages.

You will do us a good turn by pushing a good thing along. We will reciprocate by giving you each month the very best reading matter that we can possibly secure.

RAILROAD EDUCATION.

RAILROAD education in the University of Illinois appears to be assuming unusual proportions. It is planned, we understand, to erect a large transportation building at Champaign, Illinois, where technical railroading will be taught. The idea has been approved by railroad men, and, it is understood, the railroad companies of Illinois will lend substantial support to the originators in their attempt to secure an appropriation from the State Legislature for the new work.

The Santa Fe's shops are crowded with apprentices. The Pennsylvania's schools at Scranton and Bedford have their usual quota of ambitious young men who are looking to the railroads for their future. The International Correspondence Schools, which give an excellent education in all branches of railroading, are receiving their large percentage of students who are destined to become railroad men.

With all this, it looks as if the railroads of the future will have the very best men that the country can produce, educated up to the standard of technical and theoretical expectations in the most approved manner. Wages have increased in railroading at a greater rate, perhaps, than any other calling, but it is a calling for men of determination, courage, and initiative, because its future holds out the greatest possibilities.

MARINE ENGINEERING.

EDITOR, THE RAILROAD MAN'S MAGAZINE:

IN the October issue of THE RAILROAD MAN'S MAGAZINE, I noticed an article in the Light of the Lantern Department asking for information regarding what it is necessary to do to become a marine engineer. My advice on the subject, based on my own experience, is this:

First serve four years in a shop if possible—the time served in a railroad-shop counting the same as any other. Next, spend a year at sea as an oiler and water-tender and you are ready to go up for your examination before the United States inspector of hulls and boilers. If you pass, you receive a third assistant's "ticket."

If the applicant has no shop practise it is much harder. The length of time spent at sea is about six years. Two years in the shop and three at sea, however, will prove satisfactory.

The pay for oilers on the Pacific Coast, is $45 a month and found. A water-tender gets $55, while both oiling and water-tending on small jobs also brings about $55. On the Atlantic Coast, these jobs bring about $5 a month less, according to the regular union schedule.—G. E. M., San Francisco, Cal.

MOMENTS OF EMERGENCY.

EDITOR, THE RAILROAD MAN'S MAGAZINE:

IN your issue of October, 1910, I read of the experience of one Joseph Lutz, engineer, to which I would like to take issue with you. Under the heading of "Moments of Emergency" is the story of how said Lutz got out on top of his engine and shut her off when his side-rod "stripped" her.

In my experience (which has been long and varied, and some of it right on that division, too) such a thing could not possibly be done.

Maybe you can explain how it was done. If you can, you will certainly relieve the minds of a big bunch of railroaders.

If you will publish this in your December issue of 1910, it will prove to all of us that you do not fear criticism.—J. D. HOYLE, Winnemucca, Nev.

We could not grant Mr. Hoyle's request regarding the publication of his letter in our December number, as that number had gone to press when the letter reached our office.

The story of the snapped side-rod told in "Moments of Emergency" in our October number seems impossible to any one not familiar with the type of engine commonly known as the "hog." The side-rods churn along immediately beneath the cab, which is divided into two parts and straddles the boiler at its middle.

In this particular case, as soon as the side-rod broke the engineer was at its mercy. It swung up with terrific force, wrecking his side of the cab and throwing him to the floor badly hurt. Even if he had been able to lift himself at once to his feet, the mechanism was so badly battered that it would not have responded. There was no way to stop the engine from the cab.

As soon as he realized what had happened, he knew that nothing remained but to cut the air, and, working his way through the scalding steam, which was escaping in great clouds, he passed over the boiler, crossed to the tank, and, at the imminent risk to his life, swung down between the pounding cars and opened the valve.

The hero of the accident, Fred Wooley, whose identity was confused in the original reports of the accident on account of his extreme modesty, has since received recognition for his heroic action in bringing the train to a stop and preventing a

wreck. The Central Railroad of New Jersey presented him with a handsome gold watch, on which is inscribed a description of the accident and the brave part he played.

GILSON WILLETS'S NEW BOOK.

GILSON WILLETS, well-known to readers of THE RAILROAD MAN'S MAGAZINE for his stirring stories of life along the right-of-way, has just published his first novel, a thrilling romance of mystery and adventure in Mexico of to-day, entitled "The Double Cross." The story is full of exciting intrigues and hazardous undertakings with an undercurrent of plot and counter-plot, in which a secret insignia plays an important part.

The author's extensive travels in Mexico and Central America have given him a deep insight to mañana land. He has instilled an atmosphere of soft perfumes, radiant moonlight, and flashing black eyes that few could equal.

The book is sure to be a success with railroaders who appreciate a good, lively story. It won't let go of your interest until you've turned over the last page. It is illustrated by J. C. Chase. G. W. Dillingham Company. Price $1.50.

THE BRAIN TEASERS.

YOU will notice that the Brain Teasers are not in their accustomed place this month. We regret this just as much as the mathematical minds who seek recreation in solving these choice twisters from month to month—but the fact of the matter is this: The last crop of teasers was so old that we did not deem them worthy of a place even on the slow freight.

We hereby issue orders to all our readers to send in some new teasers. Scratch your think-domes and see what you can give us. A puzzle for THE RAILROAD MAN'S MAGAZINE need obey only these three rules:

1. It *must* be a railroad puzzle.
2. It *must* be solvable.
3. It *must* be accompanied by its correct answer and solution.

The following are the answers to the teasers published on page 570 of our December number:

(14). Two miles approximately. Explanation: With the temperature at 32 deg., sound travels 1090 feet a second. To travel 2 miles, which is 10,560 feet, it will require 9.69 seconds, which is between 9 and 10 seconds, making the train about two miles distant.

(15). Fifteen cars.

DESPATCHING BY TELEPHONE.

EDITOR, THE RAILROAD MAN'S MAGAZINE:

HAVING read the article on the telephone, which appeared in the December issue of THE RAILROAD MAN'S MAGAZINE, and noting that it sets forth only the advantages, I beg to submit to the readers of your magazine some of the disadvantages of telephone despatching, which are numerous, indeed.

It seems to me, if Morse were living and saw the new arrangement called a telephone system, he would laugh it to scorn and say, "Why, that is no system at all." And we operators would advocate Morse's views too.

On this road, [Cumberland Valley Railroad Company] of 116 miles single track, and, possibly, 50 miles double track, I have not heard of an operator that likes the telephones. I will not say, "telephone system," as it can not be called a system, for various reasons.

First: As the operator cannot be at the phone more than half the time he does not know whether the scheduled trains are running on time or whether they are two hours late.

Second: He does not know whether there are any extras out; and, if there are, whether within one or ten miles of his station.

Consequently, when he hears a train whistling, he rushes out and looks up and down the track, if there are curves near the office, to see which way the train is coming. When he ascertains its direction, he rushes back into the office and gives the train the proper signal, not knowing whether the train is No. 79, 83, or 85, unless he can judge by the make-up of the train. The poor, unprotected operator is working in the dark, no one but the despatcher knowing what is going on.

Third: When the operator wishes to talk to the despatcher, he has not time to stay at the phone for half an hour at a time, consequently he must go to the phone, take down the receiver and ascertain if the line is busy. If he finds it busy, he dare not break in. He goes back to the ticket-window and waits on half a dozen customers, then steals another minute and tries again with the same result. He repeats this operation probably a dozen times, gets disgusted and swears he will go where there are no phones—and do you blame him?

Heretofore, under the telegraph system, when the despatcher called for an order, the operator could answer up and then resume his ticket-selling until the despatcher had raised all the offices he wanted for the order. Now he must stay at the phone until several offices are raised and all have repeated the order, while behind him he hears the muttering of impatient, scolding passengers. Would it be any wonder then that he would get the order wrong, when he divides his attention between what is going over the phone and what the passengers are scolding about?

Fourth: There are so many words sound alike on the phone, and the operator may think he is right and be wrong all the time.

Many people have a mistaken idea that the phone is the faster. I have a "learner's" instrument in this office and have experimented on it with the following result: Order repeated back before the operator on the phone was two-thirds done.

To sum it up in a few words, railroading has lost its charm. Heretofore the op., no matter in what part of the building he happened to be, could listen to the merry hum of the instruments and know as much about the location of the trains as the despatcher himself—and it was music to his ears. Now he must put the harness over his cranium, and, amid the hum of various noises like so many horses going into a barn, endeavor to

pick out what he is supposed to get, while a mob of angry passengers are making a break for the train without tickets.

The leverman, who, heretofore, listened to the instruments and threw levers at the same time, must wait until the despatcher sees fit to allow him to leave the phone. If he fails to get the track lined up properly for the approaching train, it means ninety days in the pie-house for him, or, perhaps, dismissal from the service.

Do you, readers, call that a "system?"

Under the telegraph system, the operator knew when a train was nearing his station and knew what orders he had. If the despatcher's attention was taken up elsewhere, he called the despatcher's attention to the fact that the train would soon be in and want orders.

But how is the situation now? Often a train gets by a station when it was the despatcher's intention to give orders at that point. The only instance I could point out, where a telephone is of any advantage, is where the operator has nothing else to do but listen to the phone. Those places are scarce, very scarce.—CLARENCE B. NAUGLE, Operator, Newville, Pennsylvania.

ANSWERS TO CERTAIN SIGNALS.

"CONSTANT READER," "OLD SWITCHMAN," J. DOTSON AND OTHERS.—The words of the song, "Casey Jones," were printed in our July, 1910, issue. You may secure copies by sending 10 cents to this office.

V. C. W., Chicago.—Gilson Willets is a man and is very much alive. He was born on Long Island, New York, forty-one years ago.

FRANK TOWER, St. Louis.—All of our true stories are absolutely true. We take the greatest pains possible to verify every one.

S. G. F., Buffalo.—We could not print the music of your railroad hymn. Send on the words and let it go at that. Our boys will sing it all right if it contains the proper sentiment.

EDITOR, THE RAILROAD MAN'S MAGAZINE:

I AM not a "rail" or a "snake," but a constant reader of your magazine. I like it very much.

In my travels this summer, I came across a queer little railroad here in Illinois—named The Hanover. I thought that the enclosed time-table clipped from the Hanover *Journal* might get a chance in your grand magazine.—C. A. B., Canton, Illinois.

HANOVER RAILWAY TIME-TABLE.

Schedule No. 1, effective March 28, 1910, 7 A. M.

SOUTH BOUND			HANOVER	NORTH BOUND.	
ARRIVE				LEAVE	
No. 4	No. 2	No. 6	No. 7	No. 3	No. 5
6:35 pm	12:35 pm	10:30 am	8:30 am	11:45 am	5:45 pm
LEAVE			N. HANOVER	ARRIVE	
6:20 pm	12:20 pm	10:00 am	9:00 am	12 noon	6:00 pm

No. 7—Way freight—connects with C. G. W. No. 6, eastbound.

No. 3 connects with C. G. W. No. 3, westbound.

No. 5 connects with C. G. W. No. 4, eastbound. Will sell tickets to any part of the United States, handle Wells Fargo Express and have money-orders for sale.

FRANKLIN MILLER, Agent.

The Hanover may not cover the entire State of Illinois, but Superintendent Miller has more work to do than any agent on one of the big roads. He is the whole works—station-agent, passenger-agent, freight-agent, bookkeeper, and conductor. It keeps him hustling both day and night to do all the work in his various offices, as accounts of all transactions must be kept as thoroughly and accurately as on any of the big railways of the country.

EARLY WALSCHAERT GEAR ENGINES.

EDITOR, THE RAILROAD MAN'S MAGAZINE:

THE Walschaert Valve Gear has been in use in this country since 1874, on the Boston, Revere Beach and Lynn Railroad, and on narrow-gage locomotives built by William Mason of Taunton, Massachusetts.

Shortly after Mr. Mason built a standard-gage locomotive called the "William Mason," for the northern division of what was at that time the Old Colony Railroad, running between New Bedford and Fitchburg. The writer was well acquainted with this engine and its engineer, having ridden on it several times.

In 1876, William Mason built a narrow-gage engine named "Onward," fitted with the Walschaert Valve Gear. This engine was on exhibition during the Centennial Exposition at Philadelphia, hauling passenger-trains around the grounds. As the road was composed almost entirely of sharp curves and steep grades, this service was exceedingly hard, but the engine performed the work satisfactorily, and at the end of the season it was in almost as good condition as when it commenced running.

At the close of the Exposition, this engine was sold to the New York and Manhattan Beach Railroad, which resulted in an order for nine more engines of the same pattern. I remember this engine and its engineer—the late William Parks of Taunton, Massachusetts—very well.

Between 1878 and 1883, Mr. Mason built twenty-five engines for the Denver and South Park and Colorado Railroad, fitted with the Walschaert Valve Gear. In 1884 he built a standard-gage locomotive for the Nantasket Beach Railroad; in 1885, one for the Boston and Maine, to run between Boston and Medford.

These engines were also very satisfactory. The writer had an opportunity of riding on both several times. After Mr. Mason stopped building locomotives, the Boston, Revere Beach and Lynn Railroad secured these patterns and had several locomotives built in Manchester, New Hampshire, fitted with the Walschaert Valve Gear. They have now about 25 engines in service.—J. F. DAMON, Milford, Massachusetts.

AND EVEN THE EDITOR.

THE writer is a ham operator, an amateur locomotive fireman and engineer, a street-car motorman for experience, a stenographer and typewriter for emergencies, an organist for

pleasure, and a steady reader of THE RAILROAD MAN'S MAGAZINE for profit and recreation. Agreeable to request for a vote, I attach mine, and you will see I have checked all on the list, even to the editor. What more can a fellow say if the magazine can supply thought and pleasure and profit to a man who can still do all the aforesaid and run a street-railway—be superintendent of a big manufacturing plant and yet values the magazine above all that he can find time to read.

Faithfully and fraternally yours—A HAM.

A WOMAN'S APPRECIATION.

EDITOR, THE RAILROAD MAN'S MAGAZINE:

I HAVE been a constant reader of your magazine ever since the first number, and very few of them have I missed.

I am not one of the railroad boys, but just a wife of one of the engineers of the Southern Pacific Company, Los Angeles division.

However, I take a great deal of interest in all of their work, and enjoy and appreciate THE RAILROAD MAN'S MAGAZINE very much. I like the Editorial Carpet and Honk and Horace, I think, the best; but I do not miss anything except the brain teasers, which, of course, are not intended for wives.

I do want to mention a story in the September number, "Ten Thousand Miles by Rail," where Mr. Willets speaks of Mother Allen. I cried when I read that story.—Mrs. F. T. S., Los Angeles, California.

OLD-TIME POEMS.

FROM one of our readers in Pennsylvania we have received "The Section Boss's Lament." He says in his letter: "I enclose a copy of a 'classic' which I discovered when looking over some old papers recently. From actual experience, in the maintenance of way department, I can vouch for the truth of Danny's remarks." Our friend refers to his road:

THE SECTION BOSS'S LAMENT.

ME father, me brothers, says Danny, the boss,
And all of me kin that Oi iver have known,
Has worked on the road since they laid the first tie,
Revered and renowned is the name of Malone.
For twinty-one years on the siction Oi've toiled,
In the rain and shine, in the summer and fall,
Because Oi was worthy, the roadmaster said,
They put me in here as the boss of them all.

Sure me loife was contint whin Oi worked on the road,
And niver so much as a kick did Oi make;
But now Oi could quit any toime of the day,
When Oi think of me head and the way it does ache.
For it's aisy to do what the siction boss says,
But arragh! when you're bossin' a hundred or two
It's different, sure. It's the truth thot Oi spake,
For it's hell if ye don't and it's hell if ye do.

First the roadmaster comes, and he looks at the job,
"Sure," sez he, "you're not doin' this tracklayin' right."
"But it's Mr. White's blueprint," sez Oi, "Mr. Flynn."
"Damn the blueprint," sez he, "damn the print and damn White;
Faith, ye'll do as Oi tell ye or git off the job."
"Sure Oi will, Mr. Flynn," sez Oi, bowing a few.
And the chafe ingineer raised Nid the next day.
Sure it's hell if ye don't and it's hell if ye do.

The superintendent comes along in his car,
"Phwat the hell is the matter? Look here, Dan Malone!"
"But the chafe ingineer gave the orders," sez Oi.
"Damn the chafe ingineer! Let him lave ye alone!"
That's the way they go on, sure Oi'm spaking the truth;
For the poor siction boss has of troubles a few.
Sure, Oi'd rather be back tampin' ties be the day,
For it's hell if ye don't and hell if ye do.

EDITOR, THE RAILROAD MAN'S MAGAZINE:

THE following poem I found in an old magazine. I take pleasure in forwarding it to you. I feel quite sure that it will be acceptable to the majority of your readers, as it is of slightly higher tenor than the most of railroad poems:

THE BRAKEMAN ON THE FREIGHT.

BY GEORGE E. BOWEN.

By my warm window snugly wrapped
Away from winter's wrath,
I watch the tide of life go by
Along the commerce path.
They hurry on—the young, the old,
The hungry, rich and poor—
A swift procession toward the prize
All struggle to secure.

I may not measure them aright,
Yet through each guise I peer
Into the purpose of the heart
That knows the least of fear.
And though full many a hero may
Among them battle fate,
I hold above his fellows all,
The brakeman on the freight.

No wreath of holly waits for him
Who struggles through the night
To make his sleepless duty whole
And guard with anxious might
The treasures of the rushing train
That thunders on its way
To feed and clothe and shelter men
And help them as it may.

No feast for him is richly spread
Who through the storm's delay,
Brings succor to his starving kind
And drives their fears away—
A royal banqueter, he sat,
With duty long and late,

While polar plenty surfeited
The brakeman on the freight.

Sometimes the heat is pitiless,
Again, the fatal sleet
Spreads death along the narrow way
That offers no retreat.
Yet, be his train a solid one
Or mixed by wretched fate,
One duty calls forever to
The brakeman on the freight.

Always the crashing, mighty jar
Of wheels that shake the earth
Proclaims the hero of the road
And tells his rugged worth.
His constancy is color fast,
And wears through sun or rain,
The same devotion, night or day,
Though long or short the train.

I don't forget the engineer—
His is an honored name,
For all the world has sung his praise
And glorified his fame.
But I propose more than a toast
Wherein to fairly rate
The conscience and the credit of
The brakeman on the freight.

Winter or summer, wet or dry,
On mountain or on plain,
You'll find him loyal to his trust—
The genius of his train.
The language of his lantern cries
Along the blackest night,
Defying death, that men may live
From cars delivered right.

The roughest work, the toughest fare,
Make this grim conqueror
A rugged force of stoic mien
And hard exterior.
But manhood's independent pride
Crowns the subordinate
A ruler of the rail while he's
The brakeman on the freight.

I wave to him my best salute
Whene'er his train goes by—
A brave commander tightly perched
Upon a cartop high—
No field of battle ever knew
Of courage grand or great,
A stouter kind than surely leads
The brakeman on the freight.

Good cheer to you, my steady friend,
Come weather foul or fine,
Long may you live, and ever bright
Your starry signal shine.
Where'er you go, oh, be you safe—
The tempest for your mate—
And all the world a lover of
The brakeman on the freight.

Until another time, good friend,
Oh, let it be—*adieu!*
For, by my train, a braver heart
Than yours I never knew.
Hold fast! and duty give you grace,
On curving track or straight,
To fail nor fall while you shall be
The brakeman on the freight.

Trusting that I am not encroaching upon your time, as I know so many do, I am respectfully yours,—W. E. FIEDLER, Louisville, Kentucky.

Thank you for the poem, Mr. Fiedler. You may "encroach on our time" as soon as you like if you find another old one as good.

ONLY A BRAKEMAN.

BY W. C. HAFLEY.

(Published by permission of the Charlie Tillman Song Book Company, Atlanta, Ga., owners of the copyright.)

'TWAS only a poor dying brakeman,
Simply a hard lab'ring man,
And the smoke and the soot of the engine,
Had covered his face of tan.
'Twas only a mangled being,
Nobody knew "What's his name,"
And they buried him out by the wayside,
In a rustic-like coffin and plain.

CHORUS.

Only a brakeman, only a brakeman,
Out and away from his home;
And the loved ones to-night in their sadness,
Are waiting and watching alone!

'Twas simply the old, olden story,
No one to smooth down his hair;
There was no one to kiss him for loved ones,
No one to offer a prayer.
There was no one to tell him of heaven,
No one to point him to God!
But quickly and deeply they laid him
Away in the cold, cruel sod.

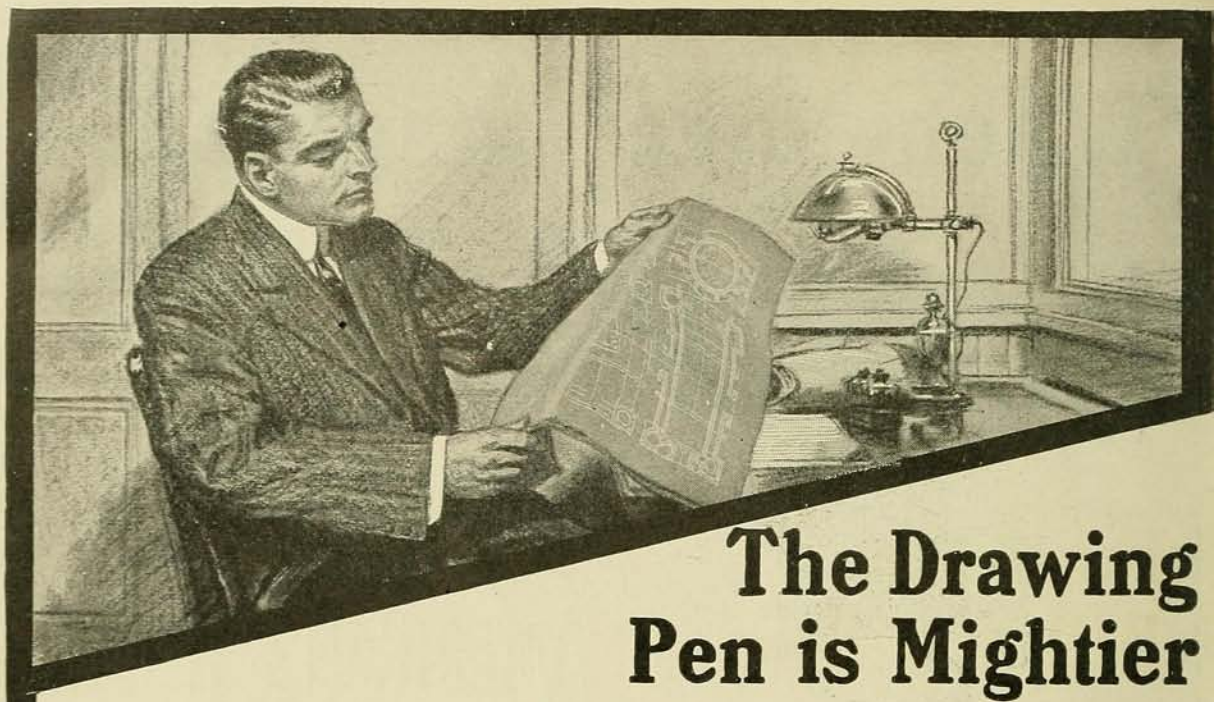
Repeat Chorus.

Oh, roughly they wrote on his head-board,
"One simply killed at the brake,"
But they said not a word of his hardships,
A-working for others' sake.
'Twas only a poor dying father,
Out and away from his home!
And the loved ones, to-night in their sadness,
Are waiting and watching alone!

Repeat Chorus.

'Twas simply a few little children,
Only a heart-broken wife,
Privations for these he had suffered,
And gave up his own precious life.
God pity these poor, struggling brakemen,
Pity each hard lab'ring man,
And make us feel kindly toward them,
God help us to hold up their hand!

Repeat Chorus.



The Drawing Pen is Mightier

IT'S so easy to enjoy yourself. Never were there so many different forms of amusement as there are to-day. But the fact cannot be denied, if you want to fatten your own pay-envelope and succeed in life, you ***must*** draw the line somewhere.

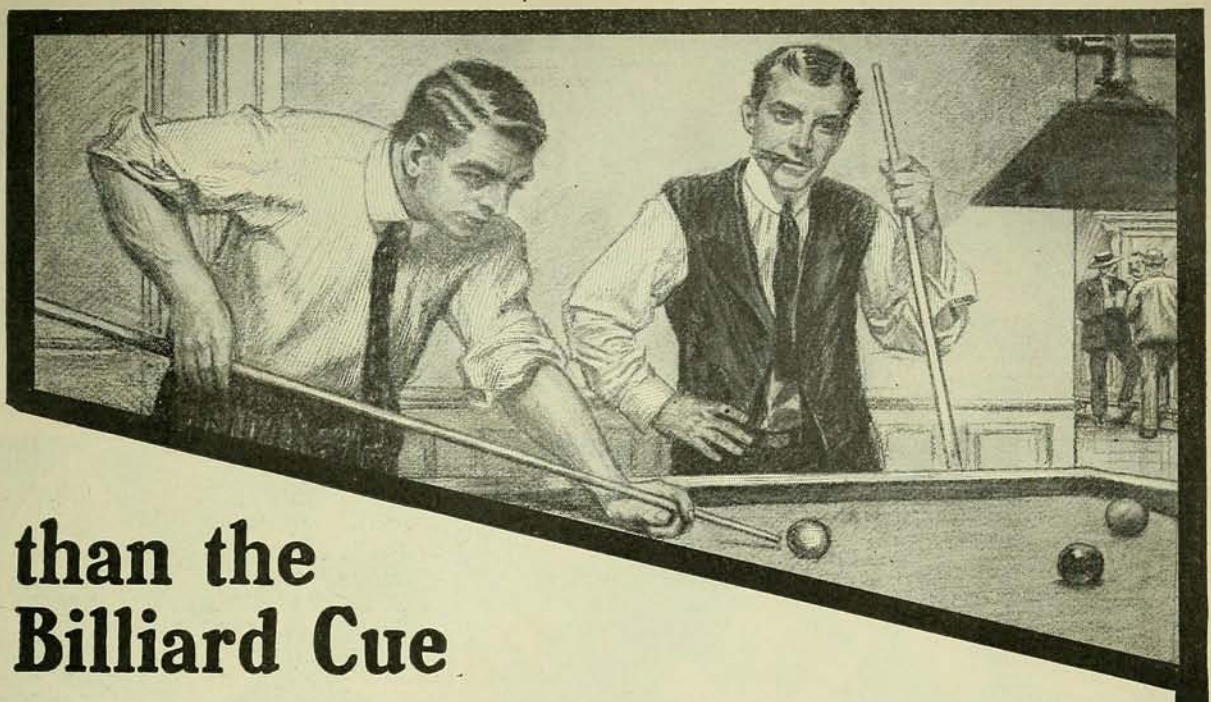
Yes—there ***is*** a way for you— a way that has been blazed and followed by exactly such men as yourself. These men had all the inborn love of a good time, and ***still*** have it. But they came to realize, before it was too late, that much of their pleasure time could be spent to far better advantage.

And this was the result:—

Joe Stieren advanced himself from machine-wood worker to foreman; Jonathan Thomas was promoted from miner to Assistant Mine Inspector; Ralph Davis changed from elevator man to electrician; Charles V. Cosby moved up from paymaster's clerk to superintendent of construction; Tom Walsh from proofreader to draftsman; Bert Spark's salary jumped from $50 a month to $1000 a year. John Wing's salary doubled itself in less than two years—and so on, without end. These names are picked at random from the list of thousands of successful students of the International Correspondence Schools—men who were helped in their spare time to win success in their chosen line of work. Now—

What are you going to do about it?

It's a pretty poor sort of chap who hasn't the ambition to find out how he ***can*** be helped—especially when finding out costs



than the Billiard Cue

nothing. What are ***you*** going to do about it? Have ***you*** enough ambition to mark the attached coupon to learn of the special way by which you can have ***your*** position bettered?

Marking the coupon costs nothing, and is in no way binding. On the contrary, it brings you advice and information telling how you can qualify through I. C. S. help for splendid positions in the ***occupation of your own choice,*** without leaving home or stopping work. So long as you can read and write, it is absolutely immaterial who you are, what you do, where you live, what your salary, where you got your schooling, or what your age—

The I. C. S. has a way for you

Now—Don't you think it well worth your while to get in line for the really good things of life when the way is so easy? Over three hundred I. C. S. students every month VOLUNTARILY report salary increases and promotions won wholly through this I. C. S. help—331 were heard from during October.

So long as you can furnish the ambition, the I. C. S. can furnish the training—and in such an easy way that the cost will not be a burden to you.

You've ***got*** to wake up ***some*** time and look this matter squarely in the face. Wake up NOW—before it is too late.

Mark and mail the coupon to-day. Then the I.C.S. will step in and show you beyond any question of doubt how you can be helped.

Prove your ability by marking the coupon NOW.

INTERNATIONAL CORRESPONDENCE SCHOOLS,
Box 861, SCRANTON, PA.

Please explain, without further obligation on my part, how I can qualify for the position, trade or profession before which I have marked X.

General Foreman	Electrical Engineer
R. R. Shop Foreman	Machine Designer
R. R. Traveling Eng.	Electrician
R. R. Trav'g Fireman	Mining Engineer
Locomotive Engineer	Mine Foreman
Air-Brake Instructor	Foreman Machinist
Air-Brake Inspector	Chemist
Air Brake Repairman	Assayer
Mechanical Engineer	Architect
Mechanical Draftsman	Bookkeeper
R.R. Construction Eng.	Stenographer
Surveyor	Advertising Man
Civil Engineer	Automobile Running
Banking	Concrete Construction

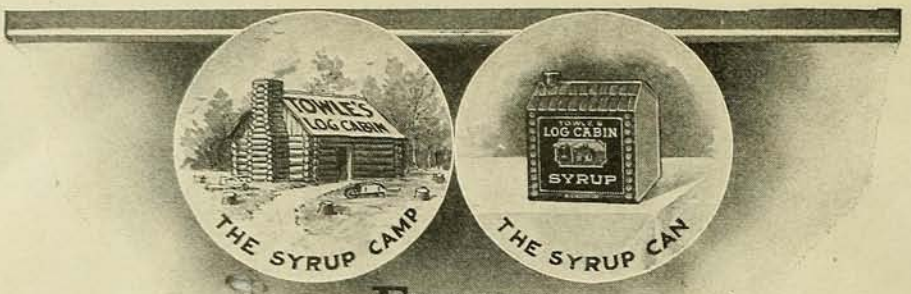
Name _____

Employed by _____ R. R.

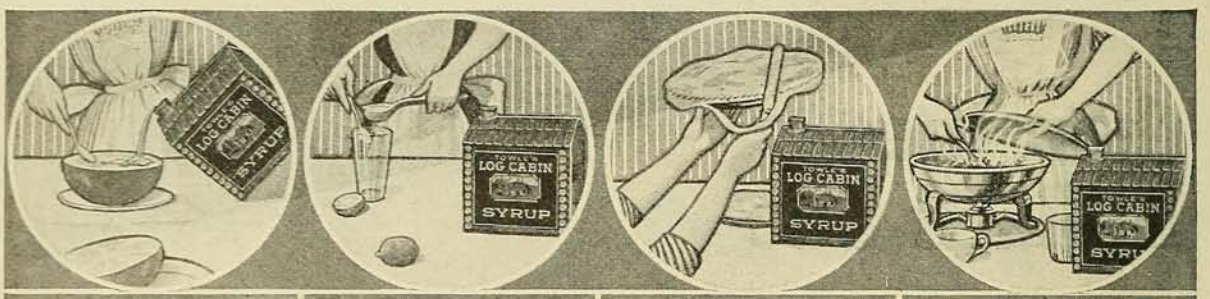
Employed as _____

Street and No. _____

City _____ State _____



From Camp to Table



ON GRAPE FRUIT | IN LEMONADE | IN PIES | IN CANDY

IN JAMS AND PRESERVES

SEE RECIPE BOOK

Syrup in Cooking

Better and More Palatable than Sugar

Towle's Log Cabin Syrup

Full Measure

Aside from being **good** on griddle cakes, waffles, etc., gives a delicious New Flavor to all cooking that is most delightful.

You will be surprised to know of the many ways Towle's Log Cabin can be used. We have prepared an attractive book "From Camp to Table" which tells how to make the dishes illustrated and contains thirty-three prize recipes.

Every housewife should have it. You will delight your family with the many new delicacies you can make. **Send for it. It's FREE.**

How often have you or the family expressed a desire for something new,—something different? So positive are we that Towle's Log Cabin Syrup will satisfy this craving that if your grocer hasn't got it, it will pay you to go to one who has.

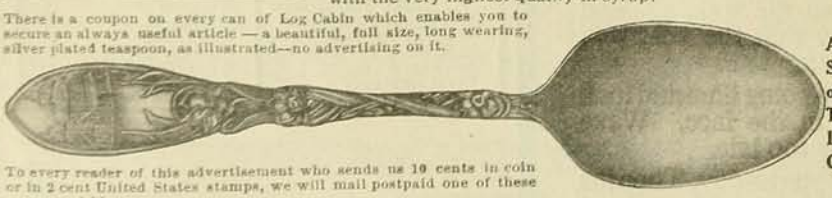
Towle's Log Cabin Syrup

Is the Pioneer Maple Syrup of

Full Measure—Full Quality—Full Flavor

It is the only Maple Syrup used extensively, and known favorably all over the world. Wherever Syrup is used, the names "Towle" and "Log Cabin" are recognized as synonymous with the very highest quality in syrup.

There is a coupon on every can of Log Cabin which enables you to secure an always useful article—a beautiful, full size, long wearing, silver plated teaspoon, as illustrated—no advertising on it.



A Souvenir of Towle's Log Cabin

To every reader of this advertisement who sends us 10 cents in coin or in 2 cent United States stamps, we will mail postpaid one of these spoons. Address—

The Towle Maple Products Co., St. Paul, Minn., U.S.A.

Refineries and Offices:

St. Johnsbury, Vt. In the Virgin Maple Sugar Forests.

St. Paul, Minn. In the Center of North America.

San Francisco, Cal. Pacific Coast Headquarters.

IN HOT FRUIT SALAD

OF COURSE ON CAKES

AND IN ALL COOKING

COLGATE'S SHAVING LATHER

Three Kinds of Best

Stick, Powder and Cream

You now have your choice—whichever you choose, the lather is the best

—the Famous Colgate Quality.

Softening, soothing, sanitary. Best in its lasting abundance. Best in its antiseptic qualities and freedom from uncombined alkali. (See chemist's report below.) And best in the comfort of its skin-refreshing effect.

Do not ill-treat your face and handicap your razor by using an inferior lather.

Colgate's is the lather that can be made in three ways with one unvarying result—perfection.

> *"I have made careful examination of Colgate's Shaving Stick, Rapid-Shave Powder and Shaving Cream. I found that all of these Shaving preparations are notably free from uncombined alkali and in the form of Shaving lather all are germicidal."*
>
> *(Signed) Frank B. Gallivan, Ph.D.*
>
> *Aug. 25, 1910* *Hathaway Bldg., Boston, Mass.*

Colgate's Shaving Stick is the "Magic Wand of Shaving" in the original nickeled box.

Colgate's Rapid-Shave Powder is the "Powder that Shortens the Shave."

Colgate's Shaving Cream is the "*Perfected* Cream."

Trial size of Stick, Powder or Cream for 4 cents.

COLGATE & CO., Dept. 55
199 Fulton St. New York

Makers of the famous Cashmere Bouquet Soap

Here is the way through

OUR **"Deferred Tuition Scholarship"** supplies the way and removes the last barrier between the progressive, ambitious young man and the higher position and salary to which he aspires.

Read every word of this offer. We mean it, and there is a fine chance for you if you improve it.

This country is full of energetic, capable men whose days are spent in work which is not suited to their natural talents. Thousands of these men realize that all that stands between them and good positions with big pay is their lack of special training in some one thing. They lack the time and the means to stop work and take a course of training, and so they go on year after year, always getting farther away from what they most want. We are going to help these men. We are going to lend them the cost of the training they need and let them make their own terms about repaying us.

This is the greatest offer ever made to men who have "got it in them to rise." We have studied the matter very carefully, and are fully prepared to help everyone who comes to us in earnest.

If you are one of these capable, ambitious fellows, willing to study for an hour every evening after working hours, willing to stick to it with the kind of persistence that wins, and without which nothing worth while is ever won; then you are on the right track.

Check the coupon, mail it to us, and we will explain fully our **"Deferred Tuition"** plan, how we will lend you the cost of the tuition, and allow you to pay us back when the increase in your yearly income equals the amount of the loan.

No Promotion—No Pay—that's what our **"Deferred Tuition"** scholarship means.

Ask for the little book, "Profitable Worldly Wisdom." It will be sent to you free and will help you.

AMERICAN SCHOOL of CORRESPONDENCE
CHICAGO. U. S. A.

OPPORTUNITY COUPON

American School of Correspondence, Chicago, U. S. A.
Please send me your Bulletin and advise me how I can qualify for the position marked "X." R. R. Man's, 1-'11

....Book-keeper	....Draftsman
....Stenographer	....Architect
....Accountant	....Civil Engineer
....Cost Accountant	....Automobile Operator
....Systematizer	....Electrical Engineer
....Cert'f'd Public Acc't	....Mechanical Engineer
....Auditor	....Moving Picture Op'r
....Business Manager	....Steam Engineer
....Commercial Law	....Fire Insurance Eng'r
....College Preparatory	....Reclamation Engineer

NAME .....

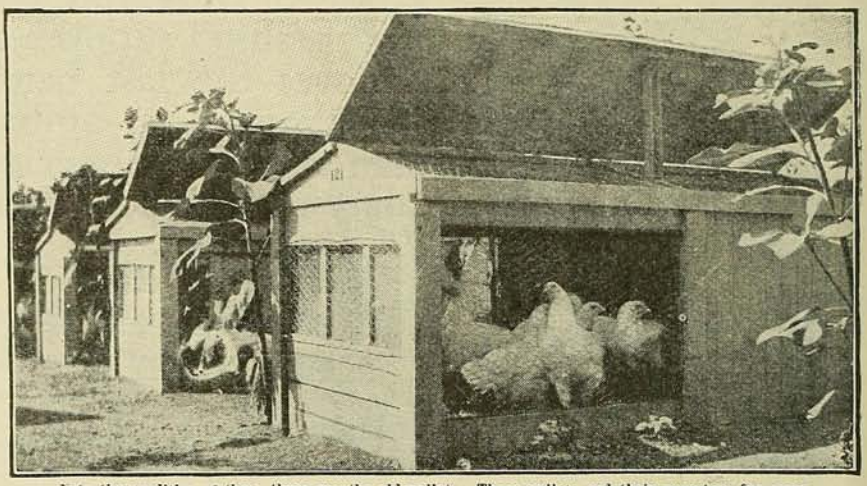
ADDRESS .....

A LIVING FROM POULTRY

$1,500.00 from 60 Hens in Ten Months on a City Lot 40 Feet Square

TO the average poultryman that would seem impossible, and when we tell you that we have actually done a $1500 poultry business with 60 hens on a corner in the city garden 40 feet wide by 40 feet long, we are simply stating facts. It would not be possible to get such returns by any one of the systems of poultry keeping recommended and practiced by the American people, still it can be accomplished by the

PHILO SYSTEM



Note the condition of these three months old pullets. These pullets and their ancestors for seven generations have never been allowed to run outside the coops.

THE PHILO SYSTEM IS UNLIKE ALL OTHER WAYS OF KEEPING POULTRY

and in many respects just the reverse, accomplishing things in poultry work that have always been considered impossible, and getting unheard-of results that are hard to believe without seeing.

THE NEW SYSTEM COVERS ALL BRANCHES OF THE WORK NECESSARY FOR SUCCESS

from selecting the breeders to marketing the product. It tells how to get eggs that will hatch, how to hatch nearly every egg and how to raise nearly all the chicks hatched. It gives complete plans in detail how to make everything necessary to run the business and at less than half the cost required to handle the poultry business in any other manner.

TWO-POUND BROILERS IN EIGHT WEEKS

are raised in a space of less than a square foot to the broiler, and the broilers are of the very best quality, bringing here 3 cents a pound above the highest market price.

OUR SIX-MONTH-OLD PULLETS ARE LAYING AT THE RATE OF 24 EGGS EACH PER MONTH

in a space of two square feet for each bird. No green cut bone of any description is fed, and the food used is inexpensive as compared with food others are using.

Our new book, **THE PHILO SYSTEM OF POULTRY KEEPING**, gives full particulars regarding these wonderful discoveries, with simple, easy-to-understand directions that are right to the point, and 15 pages of illustrations showing all branches of the work from start to finish.

DON'T LET THE CHICKS DIE IN THE SHELL

One of the secrets of success is to save all the chickens that are fully developed at hatching time, whether they can crack the shell or not. It is a simple trick, and believed to be the secret of the ancient Egyptians and Chinese which enabled them to sell the chicks at 10 cents a dozen.

CHICKEN FEED AT FIFTEEN CENTS A BUSHEL

Our book tells how to make the best green food with but little trouble and have a good supply any day in the year, winter or summer. It is just as impossible to get a large egg yield without green food as it is to keep a cow without hay or fodder.

OUR NEW BROODER SAVES 2 CENTS ON EACH CHICKEN

No lamp required. No danger of chilling, over-heating or burning up the chickens as with brooders using lamps or any kind of fire. They also keep the lice off the chickens automatically or kill any that may be on them when placed in the brooder. Our book gives full plans and the right to make and use them. One can easily be made in an hour at a cost of 25 to 50 cents.

TESTIMONIALS

MY DEAR MR. PHILO :— Valley Falls, N. Y., Oct. 1, 1910.

After another year's work with your System of Poultry Keeping (making three years in all) I am thoroughly convinced of its practicability. I raised all my chicks in your Brooder-Coops containing your Fireless Brooders, and kept them there until they were nearly matured, decreasing the number in each coop, however, as they grew in size. Those who have visited my plant have been unanimous in their praise of my birds raised by this System.

Sincerely yours, (Rev.) E. B. Templer.

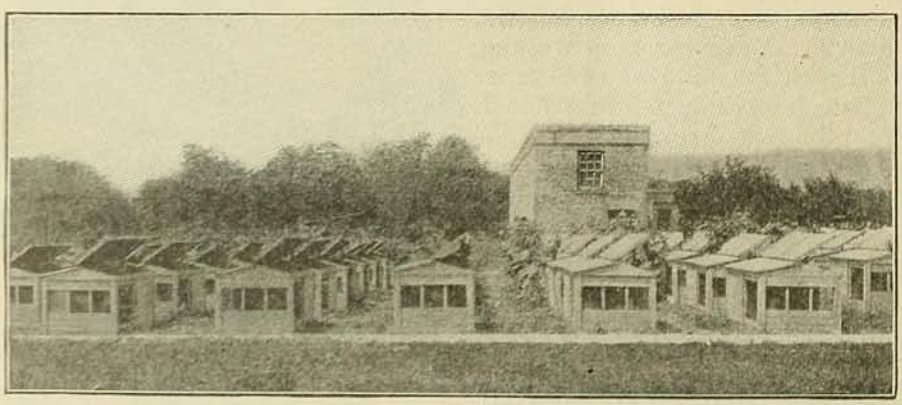
MR. E. R. PHILO, Elmira, N. Y. Elmira, N. Y., Oct. 30, 1909.

Dear Sir :—No doubt you will be interested to learn of our success in keeping poultry by the Philo System. Our first year's work is now nearly completed. It has given us an income of over $500.00 from six pedigree hens and one cockerel. Had we understood the work as well as we now do after a year's experience, we could easily have made over $1000.00 from the six hens. In addition to the profits from the sale of pedigree chicks we have cleared over $960.00, running our Hatchery plant, consisting of 56 Cycle Hatchers. We are pleased with the results, and expect to do better the coming year. With best wishes, we are Very truly yours, (Mrs.) C. P. Goodrich.

MR. E. R. PHILO, Elmira, N. Y. South Britain, Conn., April 19, 1909.

Dear Sir :—I have followed your System as close as I could ; the result is a complete success. If there can be any improvement on nature, your brooder is it. The first experience I had with your System was last December. I hatched 17 chicks under two hens, put them as soon as hatched in one of your brooders out of doors, and at the age of three months I sold them at 35c. a pound. They then averaged 2½ lbs. each, and the man I sold them to said they were the finest he ever saw, and he wants all I can spare this season.

Yours truly, A. E. Nelson.



Photograph Showing a Portion of the Philo National Poultry Institute Poultry Plant, Where There Are Now Over 5,000 Pedigree White Orpingtons on Less Than a Half Acre of Land.

SPECIAL OFFER

Send $1.00 for one year's subscription to the Poultry Review, a monthly magazine devoted to progressive methods of poultry keeping, and we will include, without charge, a copy of the latest revised edition of the Philo System Book.

E. R. PHILO, Publisher

2633 Lake St., Elmira, N. Y.

This year make your Christmas Instrument an

EDISON PHONOGRAPH

Make it an EDISON because—

1st—The Edison Phonograph has just the right volume of sound for the home. It is not loud enough to be heard next door or loud enough to echo to the farthest corner of the dealer's salesroom, but in your home its sweet, modulated tones will entertain you and your family in a way that never grows tiresome.

2d—The Edison Phonograph has a Sapphire Reproducing Point that does not scratch, does not wear out and never needs changing, and which travels in the grooves of the sensitive Edison cylinder Records, bringing out the sweet tone for which the Edison is famous.

3d—The Edison is the instrument that plays Amberol Records —records playing twice as long as ordinary records and giving you all of all the world's best music.

4th—The Edison Phonograph permits of home record making —a most fascinating form of entertainment. It will record what you or your friends say, sing or play and then instantly reproduce it as clearly and accurately as it reproduces the Records of Edison artists.

These are a few of the Edison advantages. You want them in the instrument you buy. So go to a dealer's—there are Edison dealers everywhere —and insist on hearing an Edison—the instrument that has been perfected and is manufactured by Thomas A. Edison.

Edison Standard Records	$ .35
Edison Amberol Records (play twice as long)	.50
Edison Grand Opera Records	$ .75 to 2.00

There is an Edison Phonograph at a price to suit everybody's means, from the Gem at **$15.00** to the Amberola at **$200.00.** Ask your dealer for complete catalogs of Edison Phonographs and Records, or write us.

NATIONAL PHONOGRAPH COMPANY, 92 LAKESIDE AVENUE, ORANGE, N. J.

With the Edison Business Phonograph you don't hold up any one else's work while your dictation is going on.

This (greatly reduced) shows a portion of our famous "Prairie Girl" picture. This handsome portrait is reproduced in 12 colors exactly like the original and is printed without advertising, on fine plate paper ready for framing or hanging. Equal to pictures costing $1.50 or more at art stores.

This beautiful picture will be sent to you postpaid upon receipt of ten cents in stamps or coin and with it we will include free, our big illustrated catalog showing the most complete line of revolvers, rifles and shotguns made.

THE HOPKINS & ALLEN ARMS CO.
58 Chestnut Street **Norwich, Conn.**

$13,245 IN 110 DAYS

$30,000 in 9 Months

R. V. Zimmerman

Amount of orders from R. V. Zimmerman, Ind., *farmer (address upon request)*, for our

NEW INVENTION

First experience as an agent. M. Stoneman, Nebr., *artist (address upon request)*, *spare time* orders total

OVER $15,000.00

One order exceeds $6,000. *"Best thing ever sold.* Not one complaint from 2,000 customers." C. A. Korstad, Minn. *(address upon request)*,

Orders $2,212 Worth in Two Weeks

Sectional View

Hundreds enjoying similar prosperity. Agents breaking all records—actually getting rich. **Let us refer you to 10 more whose total orders exceed $51,000;** to hundreds like O. Schleicher, Ohio **(minister)**, whose first 12 hours work sold 30 outfits (profit $81.90). A. Wilson, Ky., who ordered **$4,000** worth and **sold 102 in 14 days** (profit $278.40). J. Hart, Texas, **$5,000** worth and **sold 16 in 3 hours** (profit $43.68). Reese, Pa. **(carpenter)**, solicited 60 people—sold 55. Reader, these results possible for **you**, at home or travelling, as **exclusive agent for Allen's Wonderful Bath Apparatus.** New, powerful, irresistible. Truly wonderful! **Gives every home a modern bathroom for only $6.50.** Abolishes tubs, bowls, buckets, wash rags, sponges. Supplies hot or cold water in any room. **No plumbing, no water works, self-heating,** makes bathing **5 minute** operation. Easily carried from room to room. Child operates easily. Means no more cold rooms, drudgery, lugging water, filling tubs, emptying, cleaning, putting away. No wonder **agents without previous experience make small fortunes, buy homes, have an automobile, bank account.** Average 8 orders to every 10 families. Fascinating, dignified, exciting work. to active agents. **Don't hesitate—business supplies capital. Investigate by all means.** Address postal today for full details—decide afterwards.

Free Sample, Credit, Liberal Terms

ALLEN MFG. CO., 3161 Allen Bldg., TOLEDO, O.

This Edison

Fireside Model Phonograph

Shipped FREE!

Read This Great NEW Offer

Shipped FREE!

The latest and greatest offer on the Genuine Edison. **This offer is for every one who has** not yet heard our Edison in his own home—for you to hear concerts and entertainments by the world-famous musicians—just such entertainments as the metropolitan theaters are producing.

MY OFFER

I will send you this Genuine Edison Fireside Outfit (newest model) complete with 1 dozen Edison Gold Moulded and Amberol Records, for an absolutely **Free Loan.** I don't ask any money down or in advance. There are no C. O. D. shipments; no leases or mortgages—absolutely nothing but a plain out-and-out offer to ship you this phonograph together with a dozen records of your own selection on a free trial so that you can hear it and play it in your own home.

Why I Want to Lend You This Phonograph

I know that there are thousands of people who have never heard the Genuine Edison Phonograph. Now, there's only one way to convince people that the Edison is superior, and that is to let them actually see and hear this remarkable instrument for themselves. **That is why I am making this offer.** *The only way to make you actually realize these things for yourself is to loan you a Genuine Edison Phonograph free and let you try it.*

All You Need Do

All I ask you to do is to invite as many as possible of your friends to hear this wonderful Fireside Edison. I feel absolutely certain that out of the number of your friends who will hear your machine there will be at least one and probably more who will want an Edison of his own. If there isn't (and this sometimes happens) I won't blame you in the least. You won't be asked to act as our agent or even assist in the sale of a single instrument.

If You Want to Keep the Phonograph

that is if you wish to make the phonograph your own, you may do so. Either remit us the price in full, or if you prefer, we will allow you to pay for it on the easiest kind of payments.

Our Easy Payment Plan

Two dollars a month pays for an outfit. There is absolutely no lease or mortgage of any kind, no guarantee from a third party, no going before a notary, no publicity of any kind, and the payments are so very small, and our terms so liberal you never notice the payments.

FREE

Just sign this coupon now and mail it to us. I will send you our Edison Phonograph Catalog, the very latest list of Edison Gold Moulded and Amberol Records (1500 of them) and our Free Trial Certificate entitling you to this grand offer. Sign this coupon or send postal or letter now. No obligations—get catalog.

F. K. BABSON,
Edison Phonograph Distributers,
Edison Block, Dept. 1101
Chicago, Ill.

Western Office,
65 Post Street,
San Francisco, Cal.

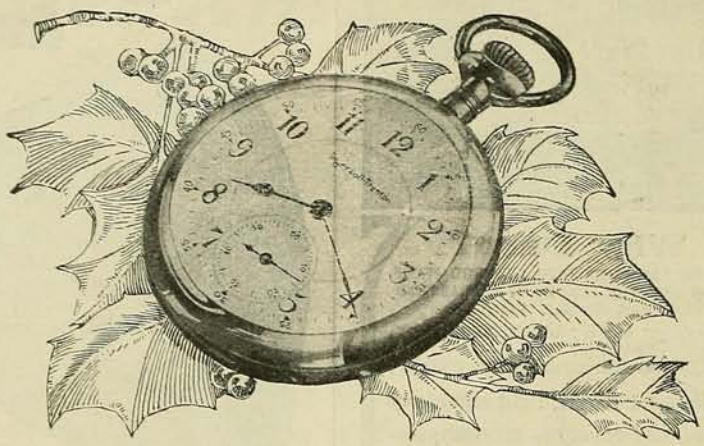
Canadian Office,
355 Portage Ave.,
Winnipeg,
Canada.

F.K.BABSON
EDISON
PHONOGRAPH
DISTRIBUTERS
Dept. 1101
Edison Block, Chicago, Ill.

Please send me, without any obligations, your New Edison Phonograph Catalog, list of Edison Gold Moulded and Amberol Records and Free Trial Certificate entitling me to your grand offer, all free.

Name .....

Address .....



For a Man's Christmas

Is there anything that so delights a man's heart as a fine watch—one that permits him to speak the time with authority? It is refined and beautiful, as a gift should be, and besides is his most personal and useful possession. For years he carries it wherever he goes.

But his satisfaction depends upon its being an exact timer. Among watches there is one, though *moderate* priced, which has come to be conspicuous for its *close timing*—accurate as only high-priced watches have been.

A Superior Watch

Ingersoll-Trenton

7 and 15 Jewel Models

$5 to $15

No handsomer watch has ever been made. It will keep time for a generation. Your home jeweler can sell you an Ingersoll-Trenton and he will stand behind it. It is sold at our advertised prices by all who handle it and our price ticket is on each watch.

The I-T is sold exclusively by *responsible retail Jewelers*, because fine watches should not be bought by mail nor from those who do not understand them and their adjustments. Over 9,000 good jewelers now handle it.

Go to your own jeweler's and examine it before buying any watch. If, by chance, he hasn't the I-T, we will gladly send the name of one nearby who has. Our booklet, "How to Judge a Watch," is the best explanation of a watch ever written, and is free on request. The $5 Ingersoll-Trenton has 7 genuine jewels and is in a solid nickel case.

The $15 Ingersoll-Trenton has 15 jewels and is in an I-T 25 year guaranteed gold-filled case of the highest quality.

Equally accurate models in a variety of I-T cases at $7, $8, $9, $10 and $12.

Robt. H. Ingersoll & Bro. **62 Frankel Bldg., New York**

A Fairy Complexion

Fairy Soap not only agrees with the tenderest skin, but improves any complexion. It is made from edible products — the kind seldom used in soaps. It is white — *undyed* — because it has no impurities or cheap ingredients to hide under the mask of coloring matter. Fairy Soap not only cleans, but *cleanses*.

The handy, floating, oval cake — price but 5c.

THE N. K. FAIRBANK COMPANY
CHICAGO

"Have You a little 'Fairy' in Your Home?"

Every year more people quit coffee and use

1895 **POSTUM** 1911

"There's a Reason"

Postum Cereal Co., Ltd., Battle Creek, Mich., U.S.A.