

THE MAGAZINE OF PROPHETIC FICTION

# WONDER Stories

June



HUGO GERNSBACK Editor

"IN THE SPACESPHERE"

By Charles Cloukey



Other Science Stories

In This Issue

"THE MAN WHO CHANGED  
THE FUTURE"

By R. F. Starzl

"THE EXILES OF VENUS"

By Jim Vanny

"UTOPIA ISLAND"

By Offrid von Hanstein



# Get into a Dignified Profession!

Become a full-fledged chemist!

**Unlimited Possibilities!  
Fascinating Work!  
Immense Opportunities!**

**Previous Experience  
Not Needed**

ANYONE WHO CAN READ AND WRITE can study Chemistry through our simply prepared course. You don't need a higher education, and you don't need any previous experience or preparation. Chemistry is not harder to understand than electricity or radio. Just plain sense and ordinary observation powers.

**Laboratory Outfit Free**

THE COMPLETE CHEMICAL OUTFIT and APPARATUS supplied to you as part of your Course, without extra charge, makes you the owner of a laboratory, containing all the materials and instruments used by a full-fledged chemist. This working kit, which is shipped to you at the outset of the course becomes your permanent property. It is a sturdy fitted wooden cabinet containing over 100 pieces of laboratory apparatus and chemical supplies. With these materials and equipment you will have in your own home and always at hand, a compact, complete working chemist's laboratory, which you will use constantly not only in your experiments during the course, but also in your after work as a chemist.

**We Can Teach You  
At Home**

Our faculty knows just how to mold you into a skillful laboratory worker.

Chemical Institute of New York, Inc.  
Home Extension Division  
19 Park Place, New York, N. Y.

Please send me at once, without any obligation on my part, your Free Book "Opportunities for Chemists," and full particulars about the Experimental Equipment given to every student.

NAME .....

ADDRESS .....

CITY ..... STATE .....

(W.S.-6)

THE HEAD OF OUR STAFF IS DR. T. O'CONNOR SLOANE, scientist, engineer and author of wide repute. He has had more than fifty years of teaching experience. Our course fits you for an immediate position in a chemical laboratory, and you do not have to give up what you are doing now to learn it. During evenings and week-ends you can work at home on the fascinating experiments and the delightfully simple but comprehensive lessons. A personal tutor is always ready to help you over difficulties and to answer all your questions. Most important of all—the teaching you receive is practical. You can actually use this knowledge to make money, as thousands have done before you.

**More Money in Chemistry  
Than in Any Other Business**

CHEMISTS ARE WELL-PAID MEN. Not only will our training help you to get a better job, but a worth-while start on a new level. You can patent the work of your hands and your brain, and perhaps make millions of dollars on a new chemical discovery.

Every day the newspapers and magazines are full of news items reporting new chemical discoveries—in mining, in electricity, in food-stuffs, in sanitary and medicinal appliances, in paper-making, rubber, steel, iron, dye-stuffs, textiles, in fact in every well known industry—and behind each of these discoveries stands a well-trained chemist who knew how to take advantage of opportunity!



T. O'Connor Sloane  
A.B., A.M., Ph.D.,  
LL.D.

**No Exaggerated Claims**

THE INSTITUTE DOES NOT CLAIM that every chemist makes millions, nor do we guarantee that you will immediately get a job paying \$10,000 a year. But many have done it, and there is no reason why you can not

do it too. Often enough you read or hear about men who have found the road to fame, fortune, position, and the highest recognition, from small, inconspicuous beginnings, and you wonder how they got the "lucky break." Why, you wonder yearningly, couldn't you be such a "lucky" fellow? You can be—but you have to meet luck half way.

**What These Students Have  
Done You Can Do!**

"Since I have been studying with your school I have been appointed chemist for the Scranton Coal Co., testing all the coal and ash by proximate analysis."—Morlais Couzens.

"I also have some news for you. I have been made assistant chemist for the concern I am working for."—A. G. Deiwarte.

"I am now cleaner and dyer for the above named company. My salary is almost double what it was when I started the course."—E. H. Lasater.

"If it weren't for your course I wouldn't have the job I've got now."—George Daynes.

"Since beginning your course of study I have received an increase in my pay check, and as I progress my work becomes lighter through a better understanding."—M. G. Cole.

**Get Started Today!**

IF YOU WOULD LIKE TO KNOW MORE ABOUT CHEMISTRY, and if you are sincere in your desire to get out of the treadmill of job anxiety and wage dependence, if you have ambition enough to want to become a chemist, and perhaps a famous one some day, you will not wait until tomorrow to find out how to go about it.

MAIL the coupon at your left today. There is no charge and no further obligation. You will be simply asking us to write you about something that you want to know of.

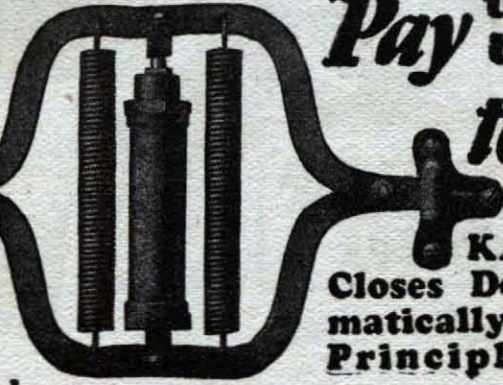
CHEMICAL INSTITUTE OF NEW YORK, INC.

19 Park Place Dept. W.S.-6 New York, N. Y.

# Now SLAMMING DOORS

## Pay <sup>up to</sup> \$15 a Day to Salesmen!

Fully Patented Fully Guaranteed



**Amazing New Invention**  
**KANT-SLAM DOOR CHECK**  
**Closes Doors Silently and Automatically—Operates on New Oil Principle—Everlasting—Low Priced—NEW**

Here is the greatest door silencer ever invented! Here is a fortune for men who act quick and grab the agency for this new patented invention. The Kant-Slam Door Check closes doors easily, quickly and noiselessly, with a touch of the finger. The Kant-Slam can easily be adjusted to close any door at any speed by turning the handy little screw at the top of the check. It is the only low priced

door check in the world that keeps a door open when you want it that way. It is built on new oil principle which assures a lifetime of perfect service. Works as well in cold weather as in hot weather. Takes only two minutes to install with a screw driver. Any boy can do it. It is the lowest priced practical door check on the market, and pays a big commission!

**"Sold 6 in 2 Hours"**  
 This enthusiastic report comes from R. F. Culver, of Michigan.  
 "One installation sold 6 more," says J. C. Adams, Ohio.  
 "Fourteen orders in 1 day," Outcalt, Ohio.  
 J. C. Woodruff, Minn., sold 7 in one afternoon.  
 "Four calls—three orders," F. E. McDaniel, Indiana.

### Full Sized Sample on Miniature Door Furnished

Kant-Slam salesmen work with an actual sample of this amazing invention mounted on a light weight miniature door. You walk into any home, office, store, or factory building. In five minutes you convince the man by actual demonstration that the Kant-Slam will close his doors quietly. You explain that millions of dollars are lost every year by slamming doors which break the glass. You point out that tons of coal are wasted every winter by doors standing open. Show him that he can easily afford a Kant-Slam for every door. In a few minutes the man will order, one, two, three or more.

### At Last — A Specialty That Sells in Quantity

Usually you can take only one order from a customer for a specialty. But with the Kant-Slam you can take orders for as many doors as there are in any home, office, store or factory. Prospects everywhere! Four and five profits on every call where you otherwise make only one! Think that over! Slamming, banging, noisy doors are everywhere. Banish them, and banish the danger of broken glass by demonstrating this remarkable invention. No wonder you can make up to \$15 a day easily!

### Mail Coupon for Trial Offer

This proposition is new. You can easily get in on the ground floor and reserve a choice territory. Rush your name on the coupon below for complete details and FREE TRIAL OFFER. Or wire us for action.

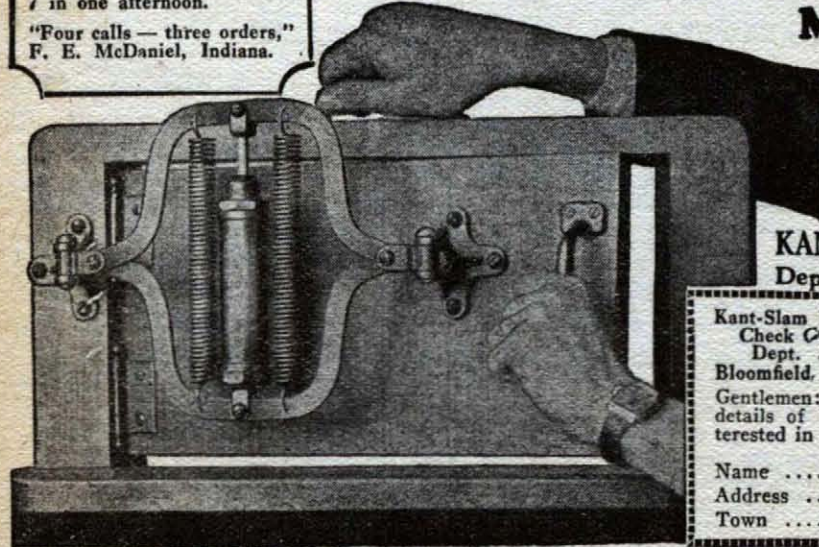
**KANT-SLAM DOOR CHECK CO.**  
 Dept. J-38 Bloomfield, Ind.

Kant-Slam Door Check Co.  
 Dept. J-38  
 Bloomfield, Ind.



Gentlemen: Please rush details of FREE TRIAL OFFER—I am interested in agency for Kant-Slam Door Check.

Name .....  
 Address .....  
 Town ..... State .....





Vol. 3, No. 1

TABLE OF CONTENTS

June, 1931

<b>IN THE SPACESHIP</b> by Charles Cloukey	10
<i>Through three planets the mysterious intrigue continued aboard the space ship, death and destruction lurking everywhere . . . .</i>	
<b>THE LIGHT BENDER</b> by Frank K. Kelly	34
<i>The earth was gripped in the throes of despair . . . . the Universe ready to burst asunder as two men labored . . . .</i>	
<b>THE EYE OF TWO WORLDS</b> by Arthur G. Stangland	44
<i>Across the void of space, the winking eye carried the dread message of the vandals' coup . . . .</i>	
<b>THE MAN WHO CHANGED THE FUTURE</b> by R. F. Starzl	54
<i>Helpless he watched this tragedy of another age, while the hands of the clock moved quickly to the fatal hour . . . .</i>	
<b>THE EXILES OF VENUS</b> by Jim Vanny	64
<i>Homeless, two girls sought aid for the release of a race from an eternal fate . . . .</i>	
<b>UTOPIA ISLAND (In Two Parts) (Part Two)</b> by Otfried von Hanstein	76
<i>Like a tidal wave, the world swept down upon the island to feel the impact of its marvels and wonders . . . .</i>	
<b>SCIENCE QUESTIONS AND ANSWERS</b>	130
<b>THE READER SPEAKS—Letters From Readers</b>	132
<b>ON THE COVER</b> this month, from Charles Cloukey's "In the Spaceship," we see the fearless young earthman with the slug-gun boldly capturing from the navigator the spaceship on which the Planetchief of Mars is held captive.	

WONDER STORIES—Monthly—Entered as second class matter in the Post Office at New York, N. Y., under act of March 3, 1879. Title registered U. S. Patent Office. Trademarks and copyrights by permission of Gernsback Publications, Inc., 98 Park Place, New York City, owner of all trademark rights. Copyright, 1931, by Gernsback Publications, Inc. Text and illustrations of this magazine are copyright and must not be reproduced without permission of the copyright owners. WONDER STORIES is published on the 3rd of the preceding month. 12 numbers per year, subscription price is \$2.50 a year

in United States and its possessions. In Canada and foreign countries, \$3.00 a year. Single copies 25c. Address all contributions for publication to Editor, WONDER STORIES, 96-98 Park Place, New York. Publishers are not responsible for lost MSS. Contributions cannot be returned unless authors remit full postage. WONDER STORIES is for sale at principal newsstands in the United States and Canada. CHANGE OF ADDRESS. Always give us old as well as new address and notify us as far in advance as possible.

**STELLAR PUBLISHING CORPORATION**

H. GERNSBACK, Pres.

S. GERNSBACK, Treas.

I. S. MANHEIMER, Sec'y.

Editorial, Publication and General Offices, 96-98 Park Place, New York City.

Chicago Advertising Representative—L. F. McClure, 737 North Michigan Ave.

Los Angeles Advertising Representative—Lloyd B. Chappell, 611 South Coronado St.

London Agent: Hachette & Cie.,

Paris Agent: Hachette & Cie.,

Australian Agents: McGill's Agency,

3 La Belle Sauvage, Ludgate Hill, E. C. 4

111 Rue Beaumur

179 Elizabeth St., Melbourne

# "How can I get into Aviation?"



Read this Answer from

## A World Famous Trans-Atlantic Pilot

AVIATION is waiting for no one! Too many millions of capital are already invested—the demand for air service of every kind is increasing too fast. Aviation demands men who KNOW. Men who can DO. Men who can step into the real jobs and command the real salaries. Landing fields, municipal airports, plane and equipment factories, air mail and passenger lines, service and sales organizations—all are leaping ahead in the fastest, most amazing development that any industry has ever known. In such racing, feverish activity, where is there any room for a man who has nothing to offer? An empty pocketbook is no drawback—but Aviation has no place, no patience, no time for empty hands or empty heads! Aviation is taking off for the greatest non-stop flight in history—and the men who will go along and climb to the top are the men with a foundation of FACTS under them.

**You Don't Have to Fly;**

**40 Different Jobs on the Ground PAY BIG too!**

To succeed in Aviation—make BIG MONEY—you need not necessarily be a pilot. There must be many thousands of pilots, certainly. But for every plane that flies, there's an immediate need for trained men in more than forty different important jobs on the ground. Construction, motor and instrument experts—airport managers, service foremen, salesmen—all make real money. Some of them even bigger pay than pilots earn. But every last one of them must have the FACTS. Today's problem — YOUR problem — is to LEARN Aviation quick. And right there is where Walter Hinton is achieving the biggest success of his career.

**Get Your Ground Work NOW**

**Right at Home—Hinton**

**Is Ready to Train You**

YOU can train at home in spare-time for the best paid jobs in the Industry. Hinton's proved course starts you at the beginning, trains you fast. You get all the facts about construction, rigging, motors, repairs, instruments, theory of flight, navigation, commercial Aviation—facts that every man must have to intelligently and profitably fill ANY job in the Industry. With this Institute's training you'll have your foundation, your start, for real accomplishment. Serious-minded — air-minded—men are reading and acting on the Free Book shown below. We want YOU to have a copy too. Send the coupon NOW.

**Aviation Institute of U.S.A., Inc.**  
 Walter Hinton, President  
 1115 Connecticut Ave., Washington, D. C.

**Rush back to Washington Quick!**

### Walter Hinton

Walter Hinton was pilot of the famous NC 4, first plane to fly the Atlantic; he piloted the first plane from North to South America; he was first to fly to the headwaters of the Amazon. During the War he was a crack flying instructor for the Navy. Today—with a course that experts agree is the most complete and practical ever produced — Hinton is training keen-sighted men for the Big Pay jobs in Aviation.

**Tells YOU How to Start You Must be 16 or Over**

To take an active part in Aviation you must at least be 16 years of age. If you are under 16, please do not ask for Lieut. Hinton's Book because it will not interest you.

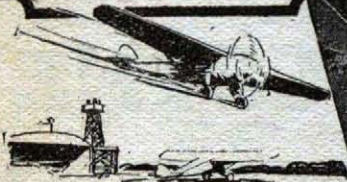
Get his  
**FREE Book**



Walter Hinton, Pres.  
 Aviation Institute of U. S. A., Inc.  
 1115 Connecticut Ave., Washington, D. C. 437V

Please send me at once your FREE Book "Wings of Opportunity" showing how I can get into this tremendous field.

Name \_\_\_\_\_  
 Street \_\_\_\_\_ Age \_\_\_\_\_  
 (Must be over 16)  
 State \_\_\_\_\_



# LEARN ELECTRICITY

Without Lessons In  
90 Days

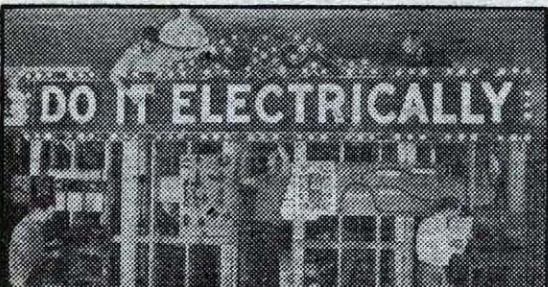
BY ACTUAL WORK  
**GREAT COYNE**



*Students working in our Alternating Current Dept.*



*Instructor explaining operation of modern airplane motor*



*Students getting actual experience on modern electric sign*

Don't spend your life in a dull, hopeless job! Don't be satisfied with a mere \$30.00 or \$40.00 a week! You don't have to. Electricity pays salaries of \$60, \$70 and even \$200 a week to thousands of fellows no smarter than you. And you can learn Electricity at Coyne in 90 days—NOT BY CORRESPONDENCE, but by actual electrical work.

## Golden Opportunities

### Paying \$60 a Week and Up!

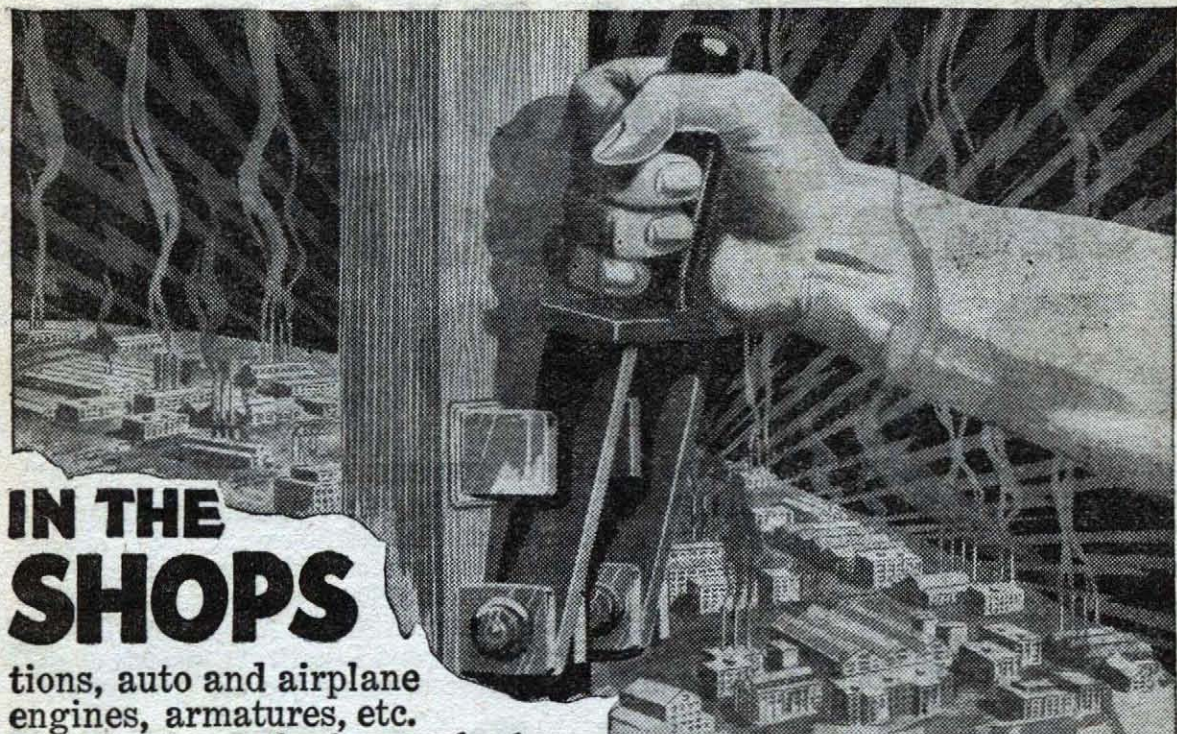
In Power Plant work, Armature Winding, Auto Ignition, House Wiring, Radio Service, Refrigeration, Welding, Aviation Electricity, Illumination, etc. Thousands of Big Pay Opportunities for the Trained Man. And you can prepare for one of them in 90 days at Coyne!

## No Books—No Lessons

Coyne is not a Correspondence School. We train you by actual electrical work—on huge motors and generators, switchboards, power plants, substa-

**H.C. LEWIS COYNE**  
PRESIDENT  
500 SOUTH PAULINA STREET,

**MAIL COUPON FOR**



# IN THE SHOPS

tions, auto and airplane engines, armatures, etc. You don't need advanced education or previous experience. Coyne has been placing men in Electrical Jobs since 1899. Let Coyne help you to a good electrical position!

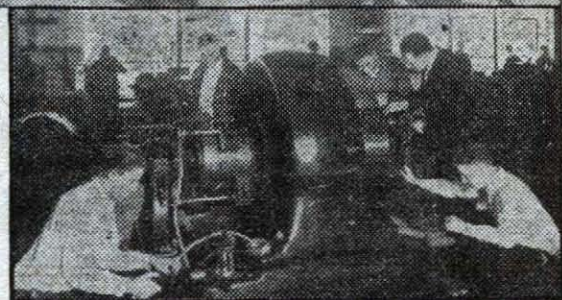
## Free Employment Service EARN AS YOU LEARN

My Employment Department gives you a FREE lifetime service. And if you need part-time work while at school to help pay expenses, we'll gladly help you get it.

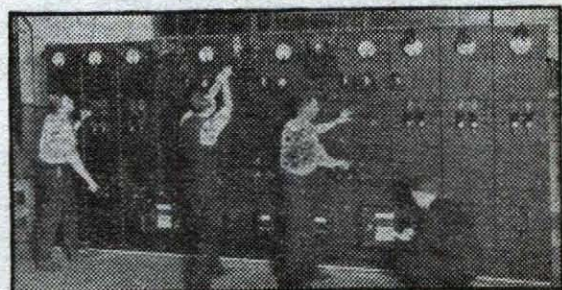
## GET MY BIG FREE BOOK

But get the PROOF! Mail the coupon below for my BIG FREE BOOK—telling all about jobs, salaries, opportunities. Find out about my Free Radio Service, Auto and Aviation Electricity offers. This costs you nothing and does not obligate you in any way. **Just Mail the Coupon!**

**ELECTRICAL SCHOOL**  
FOUNDED 1899  
Dept. A1-81 CHICAGO, ILLINOIS



Students working on a large synchronous Converter



Students learning switchboard work by actual practice

H. C. LEWIS, PRESIDENT  
**COYNE ELECTRICAL SCHOOL, Dept. A1-81**  
500 S. Paulina St., Chicago, Ill.

Gentlemen: Please send me your big Free Electrical Book with 151 illustrations. This does not obligate me.

Name .....

Address .....

City.....State.....

**MY FREE BOOK →**

# THERE'S A BIG PAY For the Trained Man in RADIO

Dissatisfied with your job? Not making enough money? Then let me show you how to get into Radio, the liveliest, biggest money-making game on earth. Thousands of opportunities for jobs leading to salaries of \$60 a week and up! Jobs as Designer,

Inspector and Tester paying \$3,000 to \$10,000 a year; as Salesman and in Service and Installation work at \$45 to \$100 a week; as Operator or Manager of Broadcasting Station at \$1800 to \$5000 a year; as Wireless Operator on Ship or Airplane; as Talking Picture or Sound Expert. Thousands of Big Pay opportunities for you to choose from!

## LEARN RADIO TALKING PICTURES By Actual Work in Great Coyne Shops

Come to Coyne and learn all branches of Radio in ten short, pleasant weeks. NOT BY CORRESPONDENCE, but by actual work on scores of modern Radio Receivers, huge Broadcasting equipment, the very latest Television transmitting and receiving apparatus, Talking Picture equipment, etc. Broadcast yourself in our sound proof studio room!

Put on your own Television program! Learn Radio the practical way—by actual radio work on actual radio equipment! You don't need advanced education or previous experience. I don't care if you are 16 years old or 46. Come to Coyne and I'll prepare YOU for a good paying Radio job in 10 weeks' time!



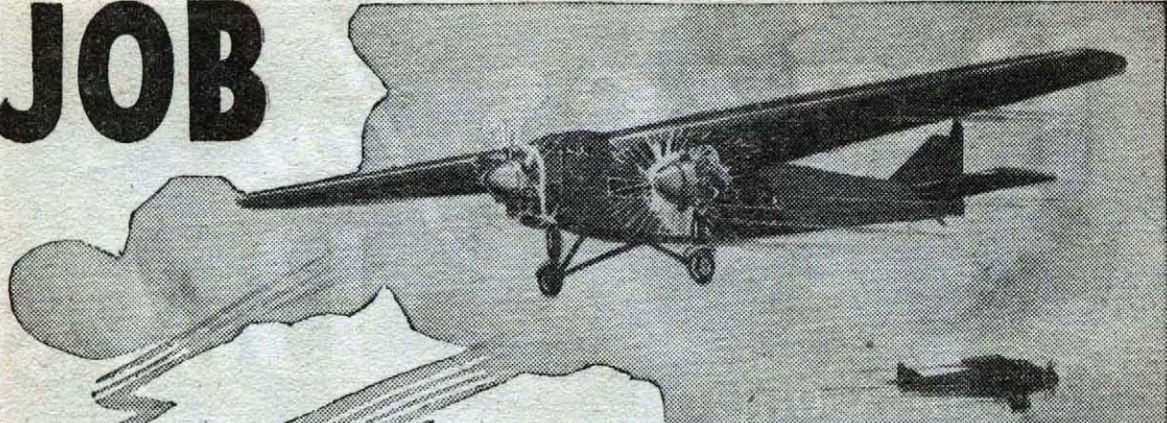
## TELEVISION IS NOW HERE!

And Television is already here! Soon there'll be a demand for thousands of Television experts. The man who learns Television now can make a fortune in this great new field. Get in on the ground-floor of this amazing new development! Mail coupon on the opposite page for full information—absolutely free!

Radio Division **COYNE**  
H. C. LEWIS, President  
500 South Paulina Street,



# JOB



## Free Employment Service EARN AS YOU LEARN

You get free Employment Service as long as you live. And if you'll need part-time work while at school to help pay expenses, we'll gladly help you get it. Many of our students pay nearly all of their living expenses that way. Mail coupon below for full details.

# TELEVISION IN 10 WEEKS

## Not by Correspondence

Don't let anything keep you out of Radio! Start now, and after just ten short weeks of fascinating work in the great Coyne Radio Shops, you'll be all set for the best job and biggest pay you ever had in your life!

## Coyne is 32 Years Old!

Coyne Training is tested, proven beyond all doubt. You can find out everything absolutely free—how you can prepare for a good Radio Job or how you can go into business for yourself and earn \$3,000 to \$15,000 a year. It costs nothing to investigate!

## Mail Coupon for My Big Free Book

Fill in this coupon, tear it out and mail it to me at once. This will not obligate you in any way and positively no salesmen or agents will call on you. It will bring you—ABSOLUTELY FREE—a copy of my big Radio and Television Book, telling all about jobs, salaries, opportunities, etc. MAIL THE COUPON—NOW!

# Electrical School

Dept. A1-8H Chicago, Illinois

H. C. LEWIS, President  
Radio Div. Coyne Electrical School  
500 S. Paulina St., Dept A1-8H Chicago, Ill.

Send me your Big Free Radio Book and all details of your Special Introductory Offer. This does not obligate me in any way.

Name.....

Address.....

City.....State.....



# Prizes for Boys

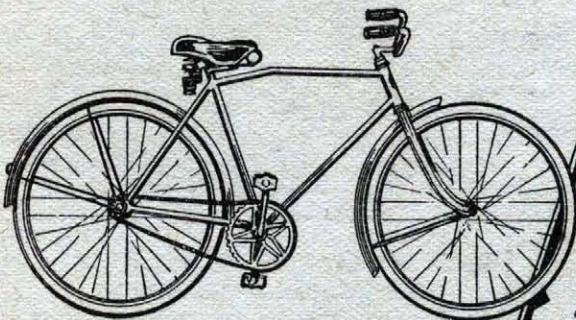
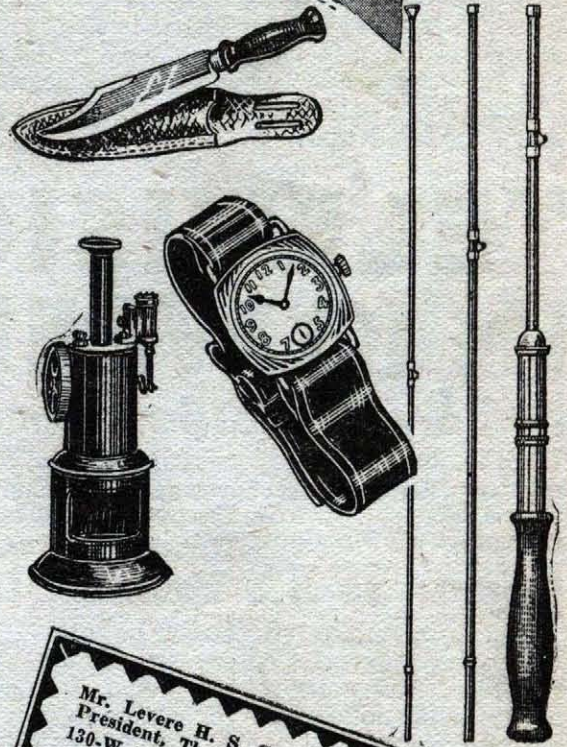
Make Your Selection NOW

Mail the Coupon

How would you like a bicycle, gun, wrist watch, sheath knife, or fishing equipment? These, and scores of other articles, are the kind of prizes Winnit Club members win.

Membership in this great club is **FREE**. It is composed of thirty thousand fellows like yourself, live wires, full of pep and ambition who, when they want something, turn into real go-getters, and crash through to success.

I'll send your membership immediately, handsome badge, big illustrated catalog, with proven plans for getting prizes. Also, sample copy of The Open Road for Boys magazine, 50 pages of thrilling stories, pictures, sports, mystery, and adventure. **ALL FREE**. Mail the coupon **TODAY!**



Your name and address mailed on the coupon will bring you our big book of prizes and tell you how to get them.

Mr. Levere H. S. Gleason,  
President, The Winnit Club,  
130-W Newbury St., Boston, Masa.

Dear Lev:  
Please send me **FREE**, Sample Copy,  
prize catalog, membership in The Winnit  
Club, and Membership Badge.

Name .....

Street .....

Town .....

State .....

. . . . Prophetic Fiction is the Mother of Scientific Fact . . . .

HUGO GERNSBACK, *Editor-in-Chief*

DAVID LASSER, *Managing Editor*

FRANK R. PAUL, *Art Editor*

C. P. MASON, *Associate Editor*

## WONDERS OF THE HUMAN BODY

By HUGO GERNSBACK



WE need not take a trip to another planet to discover some of the most amazing and sometime incredible facts,—many of them can be found right at home. Indeed, we need but examine our own bodies, and here we can find a tremendous wealth of knowledge, some of which is as incredible as it is true.

There are many unusual phenomena connected with the human body that present-day science has not as yet been able to explain; and for that reason it has become a most fertile field of exploitation by all the various fakers such as astrologists, soothsayers, "health" cults and the rest of the clique who exploit an ingenuous public.

Investigators from time immemorial have believed, for instance, that the human body evolves a sort of effluvium or aura, and the ancients studied this problem from many angles. Over a hundred years ago, an investigator by the name of Reichenbach thought he had discovered a new force by which certain human beings when placed in absolute darkness could be seen to give off very faint luminous emanations. Reichenbach called this new force *od*. Its existence, however, has been more or less discredited by modern investigators.

Some years ago, however, another investigator took up the same study, along more scientific lines, and found that the human aura could indeed be made visible in a dark room; not however, to the naked eye. It was necessary to view the body through a chemical solution in

a glass container. (This chemical dye, a coal-tar product, is called dicyanin.) Experiments, which have been verified many times, have been made whereby the human aura, actually extending from the human body from one to twelve inches, has been observed; and the discoverer of the process, Dr. Walter J. Kilner, B.A., M.B., M.R.C.P. of St. Thomas, London, England, actually can tell the state of health of the individual by merely observing the color and the size of the aura.

What the aura is, no one seems to know; whether it is a heat-emanation, an electrical phenomenon, an odoriferous effluvium or some other unknown force. Later investigators probably will discover more about this.

It is, of course, a common experience to most of us that, for certain people, on first meeting, we acquire a strong attachment or indeed the reverse, a strong antipathy. Whether the aura has anything to do with this, we do not know. Some misguided investigators attribute this phenomena to personal magnetism; but it is, of course, well known today, to the scientific investigator, that there is nothing magnetic about the human body. The term "personal magnetism" is, therefore, a misnomer; but the phenomena may have for its basis some other physical phenomenon which, as yet, we do not know.

These are only a few of the mysteries of the human body; many others of a similar nature will no doubt come to the mind of the reader, and all will be under more and more close examination in the ages to come.

### ✻ A SCOOP ✻

AGAIN WONDER STORIES scoops the science fiction field. In the July issue we shall print a most interesting, as well as technically accurate interplanetary story, by one of the first pioneers of space flying who, in fact, is also the first martyr to interplanetary flying, since he recently lost his life in experimenting with his rocket machine. The name of the story is

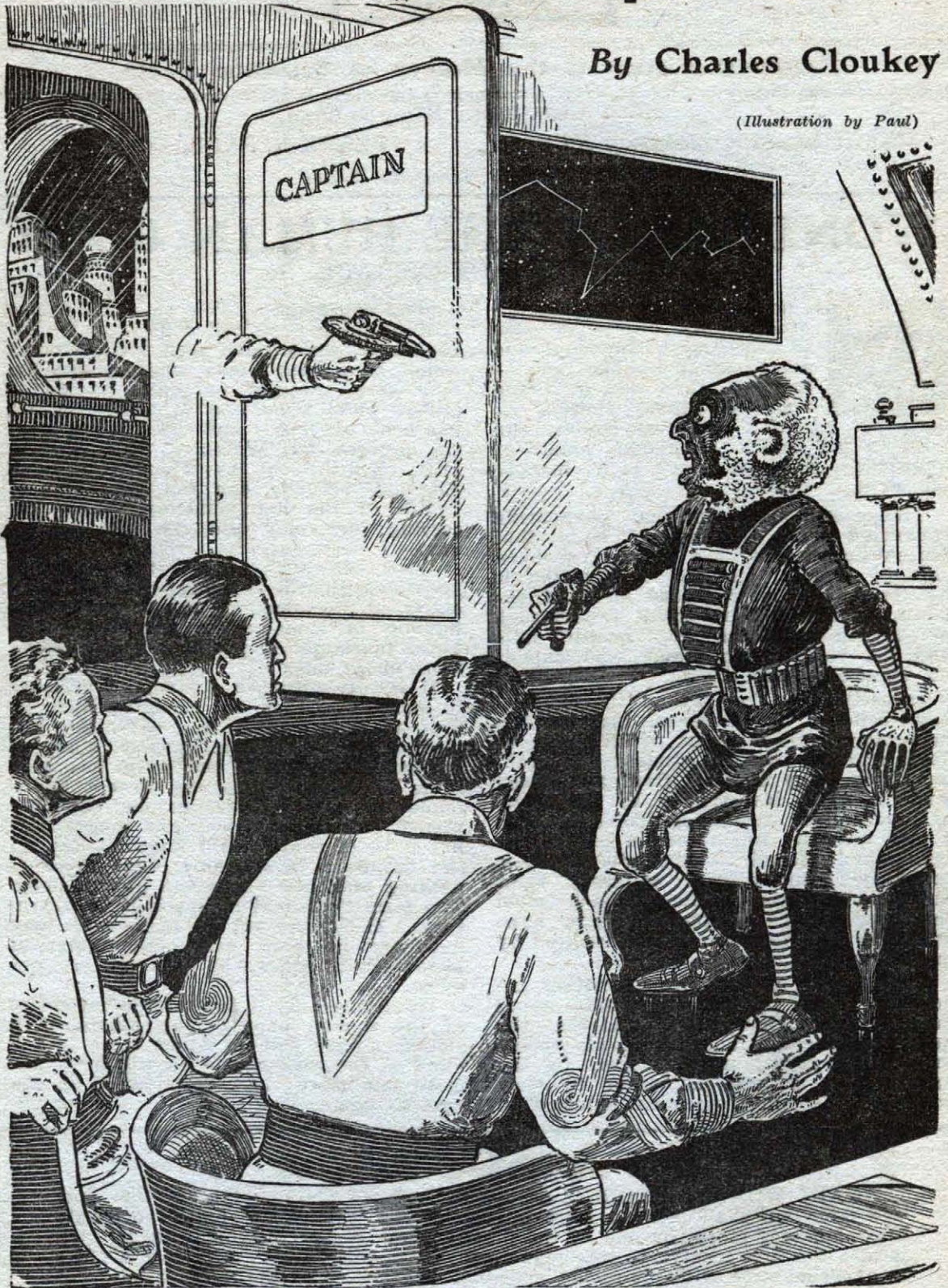
"A Daring Trip to Mars," by Max Valier.

This story was written before Mr. Valier's death, and is now to be published for the first time in America, in WONDER STORIES.

# In the Spacesphere

By Charles Cloukey

(Illustration by Paul)



The three earthmen were rigid in their chairs. A hand and arm suddenly appeared in mid-air . . . an automatic slug-gun clasped in the hand.

VIC VINCENNES' metallic voice tautened. He seemed to stare at the emerald-green Earth through the heavy quartzinite window of the sphereflyer.

"Without seeming to do so," he said, "notice the couple at the next table."

"I have done so." said the solemn Bradley Culbertson. "Kee Scarna, daughter of the present Planetchief of Mars, is with a certain Venusian aristocrat known as Grun Mahu."

"Well?" said the herculean Dick Dubrocq.

"Their waiter just put some Martian vinn in her glass. Looked like ten grains to me, and two grains is enough to kill a Martian who hasn't the habit. He didn't put any in Mahu's glass. Looks like deliberate murder to me."

Dubrocq swung around in his chair. He saw the slender Martian princess lifting a thin glass of a sparkling red synthalcolic wine to her lips. She had not seen the motion the waiter had made as he lifted the glasses from his tray.

The giant Dubrocq, in spite of his six foot six, possessed perfect muscular coordination. Silently he left his

chair, leaped the short distance to the next table, and with the neatest of precision flicked the glass out of the Martian girl's hand. He saw her cool grey eyes, startled for a moment, regain their composure, and he observed that three little Martians were covering him with radium pistols, the most

deadly small arm of the universe. Her bodyguard, of course, was always near her.

The giant Earthman was ill at ease. The little princess, cool in her evening gown of blue and silver, wearing the insignia of her imperial father on the shoulder band of her metallic silver gravity-harness, was waiting for an explanation. Grun Mahu, scowling a little, rose to his feet.

The girl's bodyguards moved closer, waiting for an explanation to kill the giant. Diners at the nearby tables were watching breathlessly. The waiter took advantage of the moment to hurry away. Dick realized a few seconds too late that he should not have escaped. He tried to say something, but the suave voice of Vic Vincennes interrupted.

"You might tell your guards to lower their pistols, Kee Scarna. My friend has just saved your life. He always acts impulsively. Your waiter put at least ten grains of vinn into your wine—"

Grun Mahu interrupted. "Nonsense. Why should anyone want to poison the daughter of—"

His eyes gleamed strangely. The pupils contracted to glittering pinpoints. V e n n !

"Fool that I am," muttered Bradley Culbertson. The Venusian aristocrat crumpled up absurdly on the floor. Brad motioned to another waiter that was near. "Get Doctor Kunzie! Vic, boy, I thought you were wrong. The drug was in his wine, not hers. I was about to correct you, but you

**INTERPLANETARY commerce, when it does arrive, will not be an un-mixed blessing. Communications between peoples or nations or worlds have a habit of spreading the worst things that each possess before the spread of the best things. Thus, our first communication with India and China was based on the very lucrative trade in opium which preceded by far an exchange of art and philosophy.**

**The civilizing of the American Indian meant feeding him with whiskey in order to steal his lands; and our contact with the black races was followed quickly by their enslavement.**

**The greeds of man seem to precede his civilizing powers; and it is unfortunately possible that such will be the case if intelligent beings exist on other planets and communication is established with them.**

**The present story is a thrilling one, not only because it is so packed with action, but because it paints so vividly the interactions of the peoples of three planets on an interplanetary journey.**

seemed so sure. I saw that waiter too."

Kunzie, ship's doctor of the *Cosmonia*, arrived with a pair of orderlies and a stretcher. Efficiently they removed the sprawled body of the Venusian. Doctor Kunzie took one look at his eyes. "An overdose of venn. He'll never live. I wonder how the narcotic was smuggled onto the ship."

Kee Scarna was very cool. She looked Dick Dubrocq frankly in the eyes. "I do appreciate ze good intentions zat you have had," she said, and motioned to her guards, who sheathed their pistols. An orderly approached. "Doctor Kunzie should like to see you three gentlemen at once in the infirmary."

"Right," said Vic Vincennes.

### Intrigue Aboard

CAPTAIN SOUTH, commander of the spacesphere *Cosmonia*, was in earnest conversation with the doctor as Vic and Dick and Brad entered his office. Doctor Kunzie led them into the next room, and Captain South followed. Grun Mahu was conscious, his pupils still unnaturally contracted. He had not seen them enter, but sensed their presence. He spoke, each word a conscious effort.

"The doctor tells me that I'm done—that I'll go into the final stupor before long—you see, I was—what you call—double-crossed. The red dust of Mars! Venn—hellish stuff, but there's money in it—I was going to try to grow some on Venus—the venn-plant, I mean—you can grow anything in the Hot Lands. But if I'm going to blank out—I have something almost like a conscience—I should be stamped out. I'm not afraid to die—not trying to make my peace—not a coward—not afraid to die—but—"

His voice died away, but in a minute he seemed to rouse himself. Grun Mahu was an aristocrat of Venus.

"There's a ring—on this flyer—smugglers. They'll stop at nothing—murder—piracy—you see, there's money in it. I was one of them, but—I started to think what a cad I was—wreck other people's lives—and—they double-crossed me. Wait—I'll tell you—Tja Narro, Martian devil, is one of them—and Harburton Smithers, and the leader is—"

It was seven minutes before he roused himself again, for the last time. "Not—afraid to die—The leader is—is—"

Silence.

"I am absolutely certain," said Captain South, "that every passenger, all luggage, and every bit of cargo was carefully examined with XX-rays before we left the Earth, no trace of venn being found."

"Then, Captain, you must be mistaken," said the solemn Brad Culbertson.

"The inspectors at New York are conscientious and incorruptible. The Council of Planets is more determined than ever to stamp out this murderous drug traffic. Yet it is obvious that that waiter obtained the drug somewhere on board this vessel. There is one possibility, but—"

"What is it?"

An orderly entered. "Well?" said the Captain.

"Sir, one of the waiters has just been found dead. Someone shot him."

"I'll attend to the matter at once," said Doctor Kunzie, and hurried out. Captain South swore softly.

"Quick work," said Vic Vincennes dryly.

"You were saying, sir," continued the imperturbable Brad, "that there was one possibility."

"The imperial Martian party. The Planetchief's person and baggage, and those of his daughter, were not examined. Courtesy to rulers. But it's absurd to think—"

"Their bodyguard and servants?"



CHARLES CLOUKEY

"All carefully examined and totally innocent."

"Well, we should take XX-ray photos of the baggage of the Planetchief and the girl. Not their hand baggage. It would be insulting to them and embarrassing to us to explain why we wanted to search at this late hour. But someone may have tampered with their larger baggage *after* it was packed, knowing that it alone would not be subjected to the XX-ray search. If that's the case whoever did it is clever *and* nifty. If the Planetchief caught him—"

"There would be one less dope smuggler in the universe," said Vic. "A hard man, the Planetchief. Any smuggler would rather face the Earth-laws than the justice of Mars. Zon Scarna commands respect."

"Undoubtedly you have an XX-ray apparatus aboard?" asked Brad Culbertson.

THE Captain hesitated. These three young men were passengers, but they, and particularly Culbertson, seemed to know just what they were doing. He made a decision.

"It's in a cabinet in cargo-room A, but it's dangerous for an unskilled operator. The high tension of the juice it uses, and the character of the rays—"

"I can handle it," said Brad.

Doctor Kunzie returned. "The waiter will never tell us anything now. Someone got him from the rear, through the heart with a silenced slug-gun."

Another orderly entered and spoke to Captain South. "An unidentified spacecraft, bearing no insignia whatever, has been sighted between us and Venus, sir. It will intercept our course, at our present rate of speed, within an hour. The second officer asked me to tell you, sir, that the strange flyer consistently refuses to reply to visual or cosmic-radio signals."

Captain South went to the navigation room, after writing a pass for Culbertson and the others. They descended to the cargo-room and set to work.

The strange stellar craft was drawing near. A mere fifty thousand miles or so

separated it from the *Cosmonia*, and Captain South was watching it through the hypertelelescope with anxiety. The course of the stranger and that of the *Cosmonia* would intersect unless one of them were changed. The other seemed to have come from the growing disk that was Venus, but it showed no planetary insignia whatever. It would meet the *Cosmonia* in fifteen minutes more.

It was a new and racy-looking craft, with the streamlined teardrop shape to make possible better speed within a planet's atmosphere. The *Cosmonia* was perfectly spherical, as were most spaceships. The Captain could see, on the image in the telescope, weapon locks, forbidden by the Council of Planets. The stranger was armed. The *Cosmonia* was defenceless. Piracy? It would take at least three hours, and probably longer for help to arrive from Venus.

Captain South slowed and stopped. He doubled his speed. Five seconds later the stranger did the same. He was thirty-four thousand miles away when the *Cosmonia's* radioman received the first message from him.

"Slow and stop within five minutes or I shall wreck you. I am fully armed."

Captain South slowed and stopped. He had a thousand human lives to be responsible for, and the stranger seemed both able and willing to carry out his threat.

"What do you want?" asked the *Cosmonia's* radioman.

"The Planetchief of Mars is aboard you, is he not?"

"He is."

"He and all his party and baggage must be delivered to me at once."

"Who are you?"

"That is not important. Notify the Planetchief of my demand."

Captain South did so. The alien craft was maneuvering close alongside. Wearing a spacesuit for protection, with the cooperation of the navigators of both ships, an individual could be easily transferred from one ship to another, through the air-locks.

## CHAPTER II.

## An Abduction

THE news was all over the *Cosmonia* and the passengers were requested to keep to their cabins. Brad and Dick and Vic, hearing about it in the cargo-room, made a few last hurried exposures of the Martian party's heavy baggage. Vic took the films to the ship's chemlab. Brad and Dick went to the navigation room, where they had no real right to be.

The stern, hard-faced Zon Scarna, Planetchief of Mars, soon arrived on the bridge with his daughter and their bodyguard. Kee Scarna was schooled not to show her emotions, but she paled a little at the sight of Dick Dubroq. Zon Scarna ignored Brad and Dick, and spoke to the Captain. No slightest sign of emotion was observable in the Martian ruler's calm exterior, but there might have been the merest trace of bitterness in his voice.

"Captain South," he said slowly, "politics on Mars often become very bitter. I am hated by thousands. Just what or who is behind this attack, I cannot tell you, but if it is they whom I suspect, they would not hesitate one second about annihilating the *Cosmonia* merely to kill me. Therefore I shall submit, as it is not just that I imperil thousands of Earthmen and Venusians by refusing. The Martians on this vessel, I believed, would be willing to attempt a fight or a flight in my behalf, but they are comparably few, and you and the others owe me no allegiance whatever. You are responsible for the lives in your charge. I ask only that you keep track of this vessel as long as possible with your instruments, and that at the earliest opportunity you send all available Interplanetary Patrol flyers after it."

"I shall do so."

"Please have spacesuits brought, and prepare to transfer my baggage. Notify my captors that I shall shortly come aboard." The captain nodded to the radioman, who bent over his instruments. "You two men," he said calmly as if speaking to members of the crew, "will supervise the transfer of the

Planetchief's luggage. Have it brought to the main air-lock at once."

Dick was dazed, trembling, looking at Kee Scarna who had turned away her head, but Brad caught the cue. He saluted smartly and turned on his heel, nudging Dubroq. "Yes, sir. At once, sir," said Bradley Culbertson.

When they reached the cargo-room orders from the captain, giving them command of the baggage removal, were recorded on the order tape. The crew cooperated. Five trunks and three sealed crates bearing the imperial Martian insignia were hoisted to the lock-deck, placed on rollers, and rolled to the main air-lock. Strong cables were attached to each.

The Martian servants and guards were donning the spacesuits they would need for protection against the cold while passing from one ship to the other. Spaceships did not dare approach nearer than twenty-five to fifty feet, and cables were attached to anyone or anything being transferred from one to another, in order to prevent loss in mid-space. When the person or object was safe in the airlock of the other craft, the cable could be severed or detached by men waiting there, and drawn back to the first ship. Brad and Dick knew what Captain South had intended. They donned two of the spacesuits hanging on the wall, and joined the party. In the confusion they were unnoticed, and after they were in the suits they were unrecognizable.

KEE SCARNA noticed them. She trembled as her personal maids assisted her into her spacesuit. The Planetchief was the first to be transferred across. He went through the airlock and out into space, attached by a cable to the *Cosmonia*, jumping away from it and sailing toward the other air-lock, of which the outer door was open to receive him. From the *Cosmonia* a man in a spacesuit could be seen in that lock, ready with an atomic hydrogen torch to sever the cable of the Planetchief, who had managed the crossing nicely. When the cable was cut the other door of the lock closed, reopening after a few moments. The man with the torch was still waiting, but



Zon Scarna had disappeared into the interior.

Kee Scarna was transferred, and then the trunks and crates. Finally came the servants and guards, including Brad and Dick, who went last. When they had been passed through the lock the tear-shaped ship took its departure, flying almost tangentially to Venus, apparently neither approaching nor receding from the planet.

In the meantime Vic Vincennes had the developed XX-ray films destroyed as soon as prints had been made, and took the prints to Captain South.

The three crates and four of the trunks of the Martian party were totally innocent. But the other trunk, the shadow-pictures showed, was one-fifth full of pure refined venn, in powder form. The other four-fifths was packed with venn-plants. Grun Mahu had intended to try to grow venn on Venus. This fifth trunk, now, was in the possession of the abductors of the Martian party.

Dick and Brad were the last to remove their spacesuits in the alien craft. A Venusian, armed with a wicked-looking slug-gun, regarded them suspiciously, as all the others in the party had been Martians. Finally this unpleasant individual asked pointedly what connection they had with the Martian group. The two reacted characteristically. Culbertson started to answer smoothly that they were interpreters of the various Earth-languages, but he never finished, for the herculean Dubrocq had knocked the slug-gun out of the guard's hand with one beautifully accurate, instantaneous movement.

Brad got the gun almost before it touched the floor, while Dick took a blow on the jaw that dazed even him. In two seconds more Brad had control of the situation, and Dick's mind had cleared. The Venusian's massive hands were above his head, and his eyes were intent on the gun in Brad's hand.

The three of them were alone in the chamber just inside the air-lock. The members of the Martian party had been taken to some other part of the flyer as fast as they had arrived, to prevent crowding in the smaller chamber. The one remaining guard was supposed to bring the last two.

The lock-door opened, and another man in a spacesuit entered—the individual who had stayed in the lock and had severed the cables. Dick jumped toward him before he understood the situation, wrenched the heavy atomic hydrogen torch from him. With all his tremendous strength the giant Earthman brought the heavy torch down in a crashing blow on the other's head. It had not the slightest apparent effect. Excellent physical protection, spacesuits.

Now the guard made a leap for Brad, trying to imitate the blow by which Dick had deprived him of the gun, but Dubrocq, alert and glorying in physical action, flung the heavy piece of apparatus at the guard's head. The guard went down in a heap. Dubrocq recovered his ponderous weapon. An ordinary man could hardly have lifted it.

### In Command

**B**RAD motioned for the other to take off his spacesuit. The fellow complied, and they saw that he was a little Martian with a hideously deformed body, and yet agile and strong. Dick ripped off the man's gravity harness. The gravity in the flyer was being kept about equal to that of the Earth or Venus; without a gravity-harness to neutralize most of the pull, a Martian was hardly able to move. All of the Planetchief's party were wearing gravity-harnesses.

The deformed Martian, seeing that resistance was useless, lay flat upon the floor to minimize the, to him, dangerous pull upon his body. He could not move except with considerable pain and the expenditure of much energy. The Venusian was unconscious or dead. For a moment the two invaders were unopposed.

They opened a door leading into a long corridor, and cautiously proceeded down it. Brad still had the gun, and Dick the heavy torch.

There seemed to be no one in the corridor, and no trace of any of the Martian party. "They've probably already been confined in staterooms," suggested Brad in a whisper. "He's being treated well. Serv-

ants and baggage all arranged for. What's the purpose of the abduction? Ransom?"

"Shut up," whispered Dick.

They passed closed, numbered doors. Then one that was marked "Elevator", one "Storerooms", and one, further along, that bore the legend "Navigation Room". Brad hesitated. Dick boldly threw open the door and walked in.

There was a long-headed, grim-faced Martian at the control-panel desk. He looked up to gaze down the big bore of the sluggun, and slowly lifted his long-fingered hands.

Brad was puzzled. The men they had encountered so far were from two different planets. Which planet was behind the affair? What was the motive?

"What do you want?" asked the man at the control-panel desk, paling visibly. He seemed to be totally unnerved, trembling in his chair.

"Cooperation," stated Brad harshly, "or—" He glanced for a second at the ugly weapon in his hand. The other said nothing.

"You will start the flyer back in the general direction of the *Cosmonia*", said Dick Dubrocq, "and meanwhile you will start at once to calculate the course that will enable you to meet the *Cosmonia* in the shortest possible time."

The Martian opened some switches and threw some others, adjusting rheostats carefully. He examined the images of the *Cosmonia* that were upon several ground-glass screens. The telescopes which supplied the images were on opposite sides of the flyer, and gave the distance of the *Cosmonia* by electric triangulation. The navigator was busily feeding figures into one end of a calculating machine, and was watching the indicators on the other end of the device. From time to time he made a change on the great electrical panel before him.

Suddenly he tore off his earphones and handed them to Dick, who donned them and understood. Someone in command was cursing the navigator heartily, demanding what was wrong with him, and commanding immediate rectification of the course. The navigator had not dared make a reply in the face of the gun. Dubrocq made no re-

ply either, but went to the door and stood at one side of it, knowing that very soon someone would arrive to investigate conditions.

In a moment the door opened and a figure stepped through. Dick hit him with the atomic torch and stood staring at the man, recumbent on the floor. He had knocked out the Planetchief of Mars!

Kee Scarna came through the door with a startled gasp, recognizing the wielder of the torch. Terror came to her eyes.

"Dick! What is it zat you have done?"

Dubrocq was too startled to act. She had called him involuntarily by his given name.

The third to come through the door had a tiny poison-dart gun in the palm of his hand. He had apparently been urging the Planetchief and his daughter ahead of him, covering them with the weapon. He pointed it at the still-dazed Dick, who dropped the heavy atomic torch and raised his hands. He saw the little Martian princess watching him with wide eyes. She was trying not to sob.

**I**N a very few seconds the Venusian had produced a second dart-gun from a convenient pocket, and was covering Brad.

"Throw the slug-gun on the floor," commanded the Venusian.

Brad tossed it away. One second too late the Venusian realized that Brad had tossed it with the neatest of precision to the upstretched right hand of Dick Dubrocq, who caught it and fired at the Venusian, too hastily. The slug missed its mark and imbedded itself in the opposite wall.

The Venusian fired his dart-guns simultaneously. The dart intended for Culbertson missed but struck the navigator, who slumped forward in his seat. The dart intended for Dubrocq was well-aimed, but the Planetchief's daughter interposed herself between Dick and the Venusian. She fell forward as the dart entered her shoulder. Dick's second shot put an end to the Venusian. He fell with a gasp.

The Planetchief of Mars came to and sat up. He took in the whole situation, but there was no trace of emotion in his voice. "The navigator and the captain, here," he

stated, "are the only two on this undermanned vessel who possessed enough knowledge to navigate a space-ship, and they are both dead. Can either of you men navigate in space?"

"No," said Bradley Culbertson.

### CHAPTER III.

#### Trouble Ahead

DICK DUBROCQ was very calm. He seized the Martian ruler's shoulder and wheeled him around. "Your daughter," he said, "will die in a very few minutes unless she is cared for. Find me some first-aid materials immediately."

Dick bent over the girl, ripped open her dress, and with string fingers removed the tiny dart from her shoulder. There was an ugly blue circle two inches in diameter around the tiny cut the dart had made.

"What is it, Brad?"

The Planetchief had already left the room. For the first time in his life someone had given him an order. He seemed to know something of the vessel, for he returned shortly with a large first-aid kit from the Doctor's office, but there was no doctor aboard that furtive, unlicensed spaceship.

"It looks like Venusian sanzan," said Brad. "There's only one hope. Cut and burn it out."

"God, give me nerve," said Dick Dubrocq. He motioned toward the heavy, undamaged atomic torch. Brad extracted a cigarette lighter from his pocket, and lit the torch. The gauge showed that its limited supply of hydrogen was almost exhausted. Dick selected a keen blade from the kit that the Planetchief had opened. The Martian's hands were trembling, now. He *did* have love and fear behind that stern exterior. And, as he watched Dubrocq, he had hope, too.

For the merest fraction of a second Dick held the blade in the hydrogen flame. The steel would have melted away in almost no time at all. The ugly circle of blue, standing out vividly against the white flesh of the shoulder, had increased an inch in diameter before their eyes. Dick slashed

the blue flesh with the red-hot scalpel, criss-crossing it with cuts. Thick, foul, bluish blood oozed out. Brad wiped it up with sanitary cellulose. The kneeling giant heated the thin blade again and again and cut the merest trifle deeper each time, until clean red blood was all that flowed out. The blue circle, when wiped clean of blood for a second, was paler. It did not increase in diameter. They stanchied the bleeding with compresses and were silent, watching. The hydrogen torch went out.

They watched the faint blue circle for ten minutes. It did not increase or grow darker. It became paler as they watched. The girl's breathing became regular. A choking cry of relief came from the Planetchief's throat, and then he was again the cold and impersonal ruler.

The navigator was beyond relief. His whole body, now, was almost unrecognizable with that horrible bluish color.

Dick Dubrocq collapsed in a heap on the floor.

A jar shook the spaceflyer. It had collided with a large meteor. There was a tiny, faint hiss. Air was leaking out somewhere. Brad lifted Dick to a seat. In a moment he was himself again. "Thanks, old fellow. A nervous reaction, that's all. It's the first time I've ever played the surgeon with a girl I love."

The hint of a smile played across Brad's solemn features. The Planetchief's countenance did not alter in the least. Dick had forgotten his presence. He came forward.

"The leaking air may become dangerous. I suggest you get the *Cosmonia* as soon as you can by radio."

"Yes, sir," said Bradley Culbertson.

THE navigator had done his work well. The *Cosmonia* was a mere fifteen thousand miles away, and careful radio instructions enabled the adept Brad to maneuver alongside the immense spherical flyer, and everyone on the tear-shaped ship was transferred back to safety. A navigator, equipped with a helmet and a liberal supply of oxygen, was sent aboard the alien ship to bring it into Venus safely. Kee Scarna was given excellent care by Doctor Kunzie. Zon

Scarna was as impersonal and as apparently unconcerned by events as usual.

After talking with Captain South, Brad consulted the Martian ruler's secretary about the party's baggage. The secretary consulted a card-index.

"Aside from the cases and trunks in the staterooms of the various members of the party," said the secretary, "there are three crates and four trunks in the cargo-room. The Imperial Planetchief has no use for their contents until he reaches Mars."

"Thanks," said Bradley Culbertson. "Hello, Vic. Where's Dick?"

"Kee Scarna asked to be permitted to see him. Her father could hardly refuse. Dick's preparing a heart-break for himself, Brad. He's learning to care for the kid, but she's a princess. It's impossible. It may make trouble—"

"Well, we've located the source of the vinn. One of the trunks bearing the Planetchief's insignia doesn't belong to the party. Some clever smuggler got the extra one in without inspection. If the Planetchief finds out— If that secretary ever decides to check up, and finds an extra trunk with the imperial insignia actually counterfeited— There's trouble ahead."

"Poor fellow," said Vic dryly. "In love with a princess. Yes, there's trouble ahead."

Three hours later the *Cosmonia* had passed through the layer of thick clouds, and was slowly descending in the yellowish atmosphere toward one of the landing cradles of City Fourteen of the Third Nation of Venus.

The Venusian metropolis lay spread out below with its methodical arrangement of cubic skyscrapers. In spite of the ever-present clouds the sunlight had an intensity that it never had on Earth. The great sphere eased slowly down. Vic and Dick and the solemn Brad were on the air-lock deck, where hundreds of passengers were gathered for disembarking.

As the *Cosmonia* landed gently a bullet grazed Dubrocq's side. It had been intended for his heart. The airlocks had been thrown wide open, and hundreds were crowding to get out into the rich damp air of the Hot Planet. Someone in that crowd,

using some sort of silent bullet-projector, had failed in an attempt at cold-blooded murder.

The quick-eyed Vic had caught sight of a slight figure slinking between a couple of obese Venusian women to get out of sight, and had recognized the Martian named Tja Narro. Vic spoke to Dick, who penetrated into the crowd, and managed to approach Tja Narro, who did not make any unusual motion or vain attempt to break away through the crowd. In fact, Tja Narro didn't appear to notice the approach of the young giant Earthman at all until Dick touched his shoulder.

### The Whip Hand

THE crowd, more orderly now, filing out quickly to be met by Venusian customs officers, paid no attention to Dick and the Martian. Vic and Brad watched alertly.

Dubrocq calmly requested the little Martian to come to the navigation room for a conference with Captain South. Tja Narro expressed annoyance, but agreed to come. Bradley Culbertson joined Dick, and they took the Martian to the navigation room. Captain South looked up in surprise from a celestial chart as they entered, and motioned them to three comfortable chairs that were near.

"This gentleman is—Tja Narro, perhaps?"

"I am," admitted the Martian. "These men brought me here ostensibly for a conference with you. It is obvious that you were not expecting any conference, Captain, so I shall not take up any more of your time." He rose and started to leave.

"Just a moment, Mr. Narro," said Dick. "Please resume your seat."

The Martian hesitated, stared into Dubrocq's eyes, and finally reseated himself.

"Contrary to your supposition," said Captain South, "I have been quite desirous of speaking with you, but the work of celestial navigation has kept me busy. Now that we have landed, I feel that it is my duty to inform you that a very serious accusation has been made against you."

"Indeed? Of course I may ask what it is?"

"Of course. You are accused of connection with a band of interplanetary dope-smugglers aboard this vessel, the same band, I believe, that managed to get three tons or more of Martian venn into New York during the last year. This, of course, is the showdown. Unless you can clear yourself, I shall not permit you to land on Venus. I am curious to know why you attempt such a thing, after purchasing accommodations all the way to Mars."

"You seem to keep well informed about your thousands of passengers, Captain. Or have you made a special study of me?"

"You are to answer questions, not ask them," said Captain South.

"I shall answer only such questions as I please to answer," snapped the Martian. "Since you are so eager for a 'showdown', we'll have it out now. To relieve your anxiety, I shall state that I am a member of the smuggling ring under consideration; that I regret failing to kill this Dubrocq, as I had orders to do so. Frankly, he is a nuisance. Eventually, I shall kill him. Don't move, Captain, and, please, *don't* act so astonished. In about three minutes you will understand that I 'hold the steel whip' above all of you, to borrow a charming Venusian expression. This *is* what you vulgarly call a 'showdown', but I am the one who shall do the talking."

Meanwhile an old and wrinkled Martian had approached Vincennes on the airlock deck, speaking in halting English.

"Are you ze man name' Deeck? Deeck Du— Du— I do not know how to say—"

"Richard Dubrocq? No, he's not here now."

"No?" There was a faint note of alarm in the old man's voice. "You are name' Veec? Veec Vinzenne?"

"I am Victor Vincennes."

"Ah! Weel you come weet' me at once? Eet ees very eemportant."

Vic went with the Martian.

\* \* \* \*

"I have a number of things to tell you," said Tja Narro to the three in the navigation room.

"First: I have a weapon in my pocket, easily available. Second: I was entirely within my rights when I attempted to leave the *Cosmonia* here. Every ticket sold for this ship to Mars allows the privilege of discontinuing the voyage at Venus. From here, I understand, the *Cosmonia* will go directly to the Red Planet, but I have received orders from my employer, who has asked me to remain on Venus and perform some little services for him there. Mr. Smithers and I have both decided to cut short our trips."

THE captain started at the name of Harburton Smithers, wealthy Earthman, and reached involuntarily for a speaking tube; but he found Tja Narro pointing a mean little bullet projector at him.

"I regret that this diminutive weapon contains only one bullet at a time, but that one is poisoned, and the first of you three who moves will die, while the other two will gain nothing at all, even should you capture or kill me. Let the speaking tube alone, Captain. We shall probably be interrupted sooner or later by some unfortunate individual, but why sign a man's death-warrant by asking him to come here now?"

"At present I desire strongly to explain to you some of the latest Martian advances in the interesting science of physical chemistry. My talk, I dare say, will be quite instructive. Please listen quietly, and do not delude yourselves into thinking that I shall not be alert every second for the slightest suspicious move by any of you. Now, about this scientific discovery:

"On Mars, for the last thousand years or so, the best scientists have been inclined to uphold a theory of the atom somewhat resembling the theory presented on Earth a mere century ago by the scientist Bohr and others, the so-called 'planetary' atom. You know, I suppose—a compound central nucleus of protons and electrons, with more protons than electrons, hence positively charged. Balancing this charge are one or more planetary electrons, revolving around the nucleus. Of course, my description is inaccurate and faulty, but I don't want to spend too much time—

"The chemical properties, such as valence, depend on the number of electrons in the outer 'orbit' of the atom. A neon atom, for instance, has a full set of eight electrons in its outer 'ring' or 'shell', and is complete and stable. It will not combine with anything, not even another neon atom. It is inert, and—"

Tja Narro's manner indicated that he was likely to continue for several hours. Brad interrupted him.

"What are you driving at? Your forced lecture is not particularly new. I'm listening mainly because of the gun, but I confess a curiosity to know why you are discoursing upon the neon atom at the present time. Perhaps you are just killing time?"

Tja Narro laughed unpleasantly. "Perhaps. I find it more interesting to talk than to sit here in silence. Moreover, I am leading up to something quite startlingly definite. To continue:

"Recently a clever scientist of the Red Planet devised a way to make two neon atoms combine by sharing all their electrons. Understand, bineon is not a biatomic molecule. It is, rather, a totally new artificial atom, whose properties in no way resemble those of a neon atom. Instead its chemical and physical properties show a resemblance to those of calcium, the mono-nuclear element that has twenty planetary electrons.

"An ordinary neon atom has ten, two in the primary orbit and eight in the outer orbit. It is a gas. Bi-neon is a decidedly metallic solid, chemically active, with a valence of two, the valence of calcium. You can see that a great scientific advance has been made."

## CHAPTER IV.

### A Case of Invisibility

"**T** READ the scientific journals of Mars, Earth, and Venus," said Brad, "but I don't remember having heard about this achievement. It sounds incredible without proof. I'd have to know more about the scientist's methods before I could believe his claims. When and where was this discovery made public?"

"Most unfortunately, this scientist met with an accident before his discoveries were made public."

"Indeed?"

"Indeed. You see, the carbonate of bineon, while it resembles in a general way the carbonate of calcium, has very important special properties, one of which is its extremely great index of refraction. In the pure state, bi-neon carbonate is colorless and transparent, as is calcite, a pure form of calcium carbonate. You follow me?"

"Yes," said Dick grimly. "Go ahead."

"Bi-neon carbonate can be prepared as a hard, amorphous substance resembling glass, and the scientist found that a ray of light that once entered a sphere of it could never emerge, due to the extreme index of refraction. The scientist experimented further with mixtures of the bineon carbonate and a pure glass. By varying the percentages, he could vary the index of the finished product."

"I see you coming," muttered Brad.

"You probably do. The savant finally made a hollow sphere of a bineon-glass mixture that would let a light ray emerge at a point exactly opposite the point at which it entered, but without crossing the central space. The refractive index was such that the light ray was reflected and re-reflected, within the glass, around 180° before it emerged. Then, of course, the sphere, and anything in the hollow space within it, was totally and completely invisible. You know that a prism can act as a mirror, even though it's not silvered. In the same way the hollow sphere acts as thousands of perfect mirrors. No matter from what angle you look, you see nothing except precisely what you'd see if the sphere and its contents weren't there."

"A practical method of producing invisibility," said Brad slowly.

"Not practical. A sphere large enough to hold a man is rather unwieldy. A cylinder is more convenient, though not so technically perfect. You can see a cylinder from the top, though it is invisible if you look at the cylindrical surface.

"A cylinder seven feet tall, mounted on casters, with small holes for the man inside

to look through,—as no light reaches him, he can't see unless a small eyehole is provided—will render a man totally invisible. Also, there should be carefully machined openings and doors in the cylinder, to enable the occupant to fire a weapon, or to take objects inside, though by doing so he renders himself visible until the opening is closed."

"A very convenient machine for criminals," said Captain South.

Tja Narro laughed again, unpleasantly.

"You might have the courtesy to watch your language. But, after all, why not. I am what you call a criminal. So are the others in the—organization. We possess one of those man-concealing cylinders. After the accident that had occurred to the scientist, his inventions were all taken over and kept secret by the Imperial Government of Mars. They overlooked one cylinder, however, for the simple reason that it was invisible. I need not go into details, but that cylinder, after many adventures, is now on board this space-flyer."

THE Martian regarded a diminutive timepiece. "Mr. Smithers has by this time removed from the cargo-room the venn and venn-plants that you discovered with your prying XX-rays. The drug is now safe on Venus. My partner's invisibility enabled him to get rid of the unsuspecting guard in the cargo-room before that individual knew anything was happening.

"Then in two or three trips, he safely transported all the contents of that mysterious extra trunk outside to a fast waiting truck. Another trip, and he carried away the empty collapsible trunk in sections, just to remove all annoying evidence of our work. By simple dash-dot code on my Martian pocket radio transmitter, I have just asked him to come here as soon as he finishes. I expect him any minute. You will see the door open, but you will not see anyone enter."

"Would you mind stating just what your purpose is?" asked Captain South.

"Not at all," said Tja Narro coldly. "You don't suppose I intend to let you live after what I told you? You three have

been marked for death anyhow. As I have only one bullet I need assistance. My invisible partner will be well armed. You probably know that the average Martian has no compunction about killing. It's common on the Red Planet, in spite of the complicated system of decadent laws.

"We are a cynical race, not burdened with any flattering though false ideas of the sanctity of human life. An interesting scientific phenomenon, life, but not of any great value. Frankly, we are going to kill the three of you and escape. We can't expect you to like it, but we were peaceably minding our own business until you started to nose in with investigations. Don't move, my impulsive friend. You are a powerful brute, but I can shoot you quite easily before you reach me."

The door of the room swung open, but apparently nothing else happened. The three Earthmen were rigid in their chairs. Tja Narro laughed for the third time.

A hand and arm suddenly appeared in mid-air. A heavy automatic slug-gun was clasped in the hand.

But it was pointed at Tja Narro.

The Martian stared a moment, and with a lightning movement raised his own diminutive projector. There was the thud of a partially muffled shot, and the Martian fell forward onto the floor. From mid-air came an ironic voice.

"Had to do it. Couldn't give him a chance with that poison bullet. An interesting phenomenon, life, but not of any great value unless one possesses something remotely like character."

"Vincennes!"

"Right. Now, Brad, if you'll close the door, we'll wait for the charming Mr. Smithers. Unfortunately, he *did* manage to get the dope off the ship."

The disembodied voice ceased. Brad pushed the door shut, but in a moment it opened again.

Vic's arm and hand and slug-gun reappeared, and the muffled thuds of three shots were heard. Then in the doorway appeared the figure of a falling Earthman, surrounded by a heap of shattered, glittering fragments

of thick, curved biconcave-glass. A slug had penetrated his heart.

Vic suddenly appeared as he opened a narrow door in the seven foot high glass cylinder that enclosed him, and with him was the little old Martian.

"The shooting's all over," he said. "You can thank Kee Scarna for your lives. The little princess had a pocket code-radio too, and, being the Planetchief's daughter, of course she would know the Martian dash-dot code. She heard these two gentlemen plotting, and sent this faithful servant of hers to bring me to the only other invisible cylinder on board, one of those that the Planetchief confiscated.

"I was outside listening to your conversation several minutes before I decided what to do. The Planetchief doesn't know that Kee betrayed the imperial secret of the cylinder. I'll have this man put it back where Zon Scarna was keeping it before he learns anything about what's happened. He would probably scold her if he knew what she's done."

"She saved us," said Dick slowly.

"She would, of course, Dick. It's rather obvious that she loves you."

### Operative 96M

EIGHT hours later the *Cosmonia* was approaching the Earth's orbit on a direct journey from Venus to Mars, which two planets were just past their conjunction, while the Earth was approaching the opposite point in its orbit. The *Cosmonia* was making about one thousand miles a second.

One of the ship's orderlies entered the suite that the three shared. Dick read the message he brought.

"It's from Captain South. He says that an Operative 96M of the Terrestrial Secret Service came aboard when we stopped at Venus. He's after the dope-ring, and wants to hear what we know. The appointment's at ten-thirty. It's now just eight twenty-five."

"Righto," said Brad Culbertson solemnly.

Later in the evening the three went to the

private parlor where, according to the note, 96M was waiting for them. There was no one in the room but a very blonde and very attractive Earthgirl.

But on second thought the three decided that she was a woman, not a girl. No one of them would have cared to hazard even an appropriate guess as to her real age. There was an air of capability about her expression and her bearing, and an unobtrusive air of breeding and dignity that was not at all incongruous with her very obvious physical attractiveness. She was the first to speak.

"Mr. Culbertson, Mr. Vincennes, and Mr. Dubrocq, I presume?"

"Indeed yes," said Dick. "You must pardon our surprise. Captain South's message led us to think of you as a man. You are Operative 96M?"

"You should speak more cautiously. In this particular case it's all right. The captain has had this parlor electrically isolated, and, just to make sure, I've spent my time in a fruitless search for mikes or photovision eyes. If you'll be so kind as to close the door completely, the room will be soundproof and we can proceed with the business at hand."

Brad closed the door. "By the way, would you mind showing me your credentials? Just a precaution, you know. As we've never seen you before, there's a possibility that you're an impostor."

"Quite so. Captain South will vouch for me, however. My credentials happen to be in the ship's main safe at the moment. If you will wait here, I shall obtain them."

"Let me offer my services," said Dick. "I am well known to the captain, and I should be glad to save you the errand."

"No. There is also the possibility that you three might be impostors. It was extremely careless of me not to arrange for a positive identification without so much trouble. I appreciate your courtesy, but I must obtain the credentials myself. Please wait here, and say nothing unless the door is closed."

The woman left. Dick closed the door after her.

"What do you make of it, fellows?"



"She's the real thing," drawled Vic.

The giant Dubrocq hesitated. "I don't know, Brad. Somehow she impresses me as genuine enough. If she can present genuine papers—"

He left the sentence unfinished, and the three sat in silence, each occupied with his own thoughts. Brad was speculating about the unusual properties of the carbonate of the synthetic twin-nuclear element, bineon; Dick Dubrocq was dreaming about a slender grey-eyed Martian princess. Peculiarly enough one Victor Vincennes was thinking of the same Martian princess. Ten minutes passed, and then ten minutes more.

"Well, Brad?"

"She's about four times too slow. Let's go to Captain South's office. I think he's on duty now, and that's where the safe is."

Dick opened the door and the three stepped out.

ON the floor just outside was the body of the woman. A bullet had passed completely through her neck from the front. Brad stood for a moment as if dazed, then looked up and down the corridor. It was deserted, and there was no sound. Dick and Vic knelt beside the sprawled-out body. The face was beautiful even after violent death. The throat-wound had not bled profusely, but it had evidently been instantly fatal. The bullet had completely severed the spinal cord by shattering three of the cervical vertebrae. It lay on the floor not far away. It was made completely of steel, and its force had been almost spent when it emerged.

Dick went for Doctor Kunzie, while Vic stayed by the body. Brad went in search of Captain South, whom he found in the navigation room. The captain was horrified. He called the second officer to navigate and came quickly. Dick had returned with Doctor Kunzie and two white-faced orderlies bearing a stretcher.

For a moment Captain South looked down upon the woman. Then he turned to Brad. "This is not Operative 96M," he said slowly. "96M is a man. He finally decided to get some sleep and see you 'tomorrow' as we say in spite of the fact that there's no

day or night out here. I do not know who this woman is."

Brad seemed utterly absorbed as the doctor led the orderlies away with their burden, and the others knew that his keen mind was at work. Brad questioned the captain.

"You sent, of course, a second message stating that the interview was postponed?"

"Of course. Didn't you—"

"No, we didn't get it. Which orderly did you send?"

"The same fellow that brought you the first one; name is Joe—er—Joe something. Number 14."

"We'll speak to Joe 14 later. Captain, would you mind sending for the real 96M?"

"Not at all," said the captain, leaving hurriedly. A moment later Doctor Kunzie returned, obviously seeking the commander.

"What's the difficulty, Doctor?" asked Dick.

"No trouble. But I thought Captain South should know that there were about three hundred grains of Martian venn concealed on the woman's person. Pure drug, too. Not the usual adulterated stuff."

"In what form was it, Doctor?"

"Powdered, in ten grain papers."

"Thank you. I'll tell Captain South."

"I'll be much obliged. Good night, fellows."

As the doctor left, Brad picked up the all-steel bullet, examined it minutely, and put it in his pocket after wiping it clean with a handkerchief. Captain South returned, with a small, thin, and altogether negative-looking gentleman whom he introduced as Operative 96M. The small man produced his credentials, all in order. He listened minutely to all that Dick, Vic, Brad, and the captain told him, but his rather blank expression did not change. He betrayed a slight interest when told of the strange bullet, took it and carefully inserted it in a small leather case he carried. He betrayed no apparent interest at all when told of the venn. He thanked the three for the information, and took his leave, yawning. Captain South returned to the navigation room. The three made their way to their suite.

"Queer-looking little egg, 96M, isn't he, Brad?"

"Don't misjudge him, Dick. Few undercover men look the part. Don't make the superstitious mistake of thinking that men with chins like his are cowards. Well, let's get some sleep."

## CHAPTER V.

### The Planetchief Speaks

WHEN Dick Dubrocq rose he could not find Brad Culbertson anywhere on the flyer. A vague misgiving annoyed him. He roused the sardonic Vincennes and talked things over. Vic, characteristically, put his finger on the vital point of the mystery.

"Y'see, Dick, the main question is this: *Why* was she killed? Her identity is important, too. She had no credentials to present, and Captain South had never seen her. Her motive in trying to interview us is mysterious. Judging from the venn on her body, she was an addict herself, and probably connected with the ring. Maybe she wanted to find out just how much we knew about them, to ascertain whether or not our knowledge was dangerous to the organization. But who killed her, and why? 96M? No, he was asleep, or he let us think so, at least.

"Who else on the boat would have any possible reason? The dope-ring, presumably, would have profited by knowing just how much we knew. There's no reason for them to kill her, unless she intended to double-cross them and they knew it. If that were the case, she'd seek out 96M, not us. Why did she try that impersonation? There was no possible way to uphold it? Why? If we knew that, we'd be one step closer—"

"I wonder if she might have been killed by mistake. In the semi-lighted corridor, someone waiting outside the door, having seen us go in and waiting for us to come out, might have made a mistake—"

There was a knock at the door. Upon invitation, the small secret service man entered. He spoke in a low voice.

"You are alone?"

"Yes."

"Very well. I may speak freely. Captain South is not on duty now, and as I have been aboard this vessel only a short time, I do not know where his quarters are. It is important that I see him, even if I disturb his well-earned rest. None of the stewards seem to be very much in evidence at this particular moment, or I should not have disturbed you."

"We can direct you to his quarters," said Vic. "May we ask why you want to see him?"

"I've been led to believe I can trust you fellows. I must have the set of master keys that Captain South undoubtedly possesses. I intend to search for the gun that was used last night. You see, nine persons out of ten would look at that bullet and see it was from a .45 caliber weapon. I have precision measuring instruments with me, and I find that it's the merest trifle too large for a forty-five.

"It is from a Venusian weapon, with the unusual caliber known as 7.37 k'kri, in Venusian measurement. Guns of that caliber are very rare. I must have the captain's set of master keys, and the sooner the better. If I find a hidden seven-thirty-seven, we may learn who did the killing last night, and why it was done."

Dick Dubrocq explained in detail how the captain's quarters could be reached, and the little man left them.

"Come with me," said Vic. "You and I are going to interview the Planetchief of Mars. It strikes me that he might be able to help us considerably, but so far we haven't called upon him at all."

"I'm game," said Dick, and they said nothing more until the Planetchief's secretary admitted them to his presence. The stern ruler paid them the honor of rising when they entered his stateroom.

"Gentlemen," he said, "I seldom receive visitors at such short notice, but I should like you two and Mr. Culbertson to feel free to call upon me at any time. When we reach Mars I shall desire to decorate you for saving my daughter's life. In what way may I be of assistance now?"

"I do not know how much is known to you," began Vic, "but it has been discover-

ed that there is a ring of narcotic smugglers aboard this vessel. Their business is the illegal transportation of Martian venn to Earth and Venus."

"I AM fully aware of the existence of the 'ring', as you call it," replied the Planetchief. "I stated once that politics on Mars often become very bitter. I am hated by millions on Mars. There is a very good reason for that feeling. The organization that is smuggling venn from Mars is perhaps larger than you suspect. There are millions upon millions of Earth-dollars profit in the drug-traffic, but it lives on blood and human misery. The immense political group that is opposing my rule, sometimes even by violence, is organized and financed by the narcotic ring. They want to get rid of me.

"I have the reputation of being stern. Perhaps so; I am just. It is a matter of common knowledge upon three planets that captured smugglers and venn-agents and sellers are always rigidly prosecuted on Mars, and, if found guilty, immediately and severely punished. I insist upon such measures, although it is impossible to completely enforce the stringent Martian narcotic laws.

"If I were replaced by a weak or a corrupted ruler, the venn-distributing organization could acquire many more millions of Earth-dollars and Venus-tuals than it now does. Venn has legitimate medical uses. It should be controlled. I am doing so to the best of my ability, and I am cordially hated by thousands, millions of the inhabitants of Mars, who are swayed by the propaganda of revolution and revolt spread by the political groups which are directly financed by the illegal distribution of a deadly narcotic."

"Thank you. We have been wondering about the motives behind that attempted kidnapping. Do you happen to know the identity of any member of the ring?"

"Of only one, and by description only. An Earth-woman, refined and gentle in appearance, is a member of the inner circle of the organization. I believe that by Earth-standards she would be considered beautiful.

I do not know the name, but recently one of my personal agents has obtained evidence of her membership in the ring. Of course, as long as she does not appear on the planet Mars I can do nothing to her. The organization has many representatives on the other planets."

"Is she rather taller than the average, with extremely light hair and blue eyes?"

The Planetchief's eyes suddenly gleamed. "Yes. That is her description as reported to me."

"She, or someone like her, attempted to impersonate a secret agent of the World Federation, and was mysteriously killed several hours ago. We are seeking her identity and the cause of her death. It is inexplicable."

"We thank you," said Vic. "Your time is probably valuable, and we won't trespass on any more of it."

"No matter. I am under a very great obligation to you. Please convey my salutations to Mr. Culbertson."

"We shall," promised Dick. "Please accept our wishes for the speedy recovery of your daughter."

The Planetchief said no more. Outside in the corridor, Vic turned to his companion with a puzzled frown. His voice was as metallic as ever.

"Ten to one the woman he mentioned is the one killed by our bullet with the odd caliber. Somebody saved us from spilling what we know to a member of the 'inner circle'. Who? The Planetchief himself and 96M are the only persons I can think of who would have reason to shoot her, and I doubt whether either of them did. There's something funny about this business."

"Yes. And if Brad doesn't show up soon I'm going to be worried."

"I am already. There's been too much killing on this vessel. The organization commits cold-blooded murder with no more compunction than—"

THEY had just rounded a turn in the corridor. In a heap on the floor was the slight figure of the mild-looking, unobtrusive little man who was "Operative 96M." For a moment they thought he was dead.

Examination, however, soon showed that the man had only been stunned. A sizable lump on his head showed by its position that he had been struck from behind by some heavy object, powerfully wielded. A little patience and a little water brought him to.

He had not the slightest idea who had hit him, but the group of master keys he had obtained, by which every door on the vessel could be opened, was missing. No hope of making a careful search for the weapon now. Its rare caliber would have made it very incriminating evidence if it had been found, and microscopic examination could verify the fact that the bullet in question had been fired from it. The little man explained all this in a voice that was trying hard but unsuccessfully to conceal an extreme chagrin. Operative 96M had been very neatly robbed without getting a glimpse of his assailant.

They took leave of him immediately, and attempted to locate the boy named Joe Stubalski, Orderly Number 14; but Joe was mysteriously absent too. None of the other orderlies had seen him since their breakfast. It took about ten minutes to establish that Joe was totally missing.

Dick was worried. Finally he disturbed Captain South again and told of Brad's disappearance, and of the orderly's. The captain put in a call for 96M at his rooms where he had retired after making sure that the keys were gone from his pocket. Repeated ringing of the ship-phone utterly failed to elicit the slightest response. Then Captain South, under the assumed name the man was using, had him paged on all the decks by the loud speaking announcing system. There was no response, and none of the orderlies who searched the ship for him located the mild little man any place aboard the whole immense spacesphere.

## CHAPTER VI.

### Mistaken Identity

**O**PERATIVE 96M of the World Secret Service was missing.

After half an hour of search and indecision, Vic and Dick decided to enter the

two-room suite that the little man had engaged from Venus to Mars. The corridor door opened into a small parlor, but a spring lock was automatically keeping the door fastened from the inside. As the master keys were not available, the giant Dubroccq hurled his weight against the door, once. The lock gave. He stumbled in, Vic followed him, and Captain South was close behind them. For a moment all three stood motionless, appalled at what they saw.

In a coagulated pool of his own blood lay Joe Stubalski, Orderly 14.

"Just one more killing," said Vic sourly. "This makes about seven in the last day or so. Observe the document in the right hand."

"What? Oh, I see. You're observant, Vic. What is it?"

Gingerly Vic removed a small, bloody rectangle of paper from the hand of the dead orderly. It was a piece of Earth-currency, a hundred dollar note.

Captain South went to the ship-phone and called Doctor Kunzie.

"Suppose we see what's in the bedroom," suggested Vic, pushing open the door between the two rooms. "Say, come here. Something hellish is loose on this ship."

Vic's voice was quivering. The other two jumped to the door. Vic was kneeling beside another figure, that of Bradley Culbertson, and a third was sprawled out absurdly a few feet away. It was the little man. On the floor between them was a Venusian gun, of caliber 7.37 k'kri.

"Brad's hardly scratched. Just stunned," said Vic with a gasp of relief. "96M has checked out. We've got to find out who did this before—Attaboy, Brad—He's coming around."

Doctor Kunzie entered, examined the two dead men rapidly, and then helped Vic revive Brad. Solemnly he opened his eyes and looked around.

"Who did the shooting?" asked Dick.

"96M killed Joe and shot me. I got him," said Brad slowly. "You see, he's not 96M. 96M is that woman whom this impostor killed last night."

"Impossible," exclaimed Captain South.

"Let me explain," said Brad. "Before you awoke, Dick, I went to the radio-room after donning some clothes and a pair of your rubber-soled shoes. I couldn't sleep, you see, and I was suspicious. Thanks, Vic. A drink's just what I want. Don't worry, Doctor; that scratch on the scalp isn't dangerous. I've only been out a few minutes.

"I sent a cosmic radio message, in an intricate code I devised, to the Federation of Earth-Nations. I knew that experts on Earth would be able to penetrate the cipher.

"About three hours later I received an answer in the same code. It gave me an authentic description of 96M; she is the woman who was killed last night. The radio operator will confirm my statements; he sent and received the messages for me. Meanwhile, while the identity of the woman was still unknown to me, the doctor here permitted me to examine her body.

"I performed certain well-known chemical tests for venn in her blood, or rather for the end-product that venn finally changes into. She was entirely negative, and I began to think that the venn was planted on her body after the shooting.

"After the message finally arrived, I shadowed our little impostor, and selected a good moment to blackjack him from behind.

"HE didn't hear me approach in your shoes, Dick. I took the master keys he had obtained from the captain, and started to search his rooms as quickly as possible. I located the gun he used last night,—that seven thirty-seven. Also I found the most complete set of forger's tools imaginable; inks of all kinds, ink-removers of all sorts, pens, papermending tools that can splice two sheets of paper without leaving a tract of the joining, and samples,—I wonder where he got them—of all sorts of genuinely officially watermarked papers.

"And I found a uniform somewhat resembling Captain South's, except, of course, that there were no insignia such as the captain wears on his neck-band. So I knew what had happened. An interview with Joe Stubalski confirmed what I had guessed. I called him here and showed him what I

had found. He broke down and confessed, although the little man had bribed him, with that century note, to keep silent.

"With the pseudo-uniform the man had had the nerve to impersonate Captain South. He looked genuine enough; the woman accepted him without question as the genuine commander, particularly when Joe came up, apparently by accident, and addressed him as Captain South. She permitted him to take her credentials, to be placed in the safe, for captains of interplanetary vessels are always men who have proved throughout many years that they possess the highest type of honor and dependability. Don't blush, Captain. She would not have let any ordinary person have the credentials. She told about the interview she wanted, and to make it look genuine the man dispatched Joe with the message to us.

"Then he left her, went to his room, and made a hurried forgery of the credentials. It was easy enough to substitute photographs, but ticklish when it came to altering the name and the physical description of size, weight, sex, and so on, to fit his specifications. He managed to do it, splicing in some of his contraband paper, tinted just right with his splendid assortment of inks. The great seal of the Federation was genuine.

"He presented these credentials, and, for safety, to prevent us from finding anything wrong if we checked up, he had Captain South dispatch Joe with the same message the woman had sent. Of course, Joe did not disturb us a second time. He just left the captain's presence.

"But our impostor had to kill the real 96M if he wanted to be safe, and he wanted something of an alibi. So he told the captain he would retire. The captain sent Joe with the second message, but Joe didn't deliver it because of contrary orders from the little man. If we didn't keep our appointment the girl might be suspicious and on her guard. You know the rest, I suppose.

"When the little man came here he made the mistake of shooting Joe first. I had overlooked a gun he had when I stunned him. When he shot Joe I dodged into the bedroom and got that seven-thirty-seven he

had hidden in here. I wonder why he wanted those keys?"

### Nearing Mars

BRAD handed the set of keys to Captain South.

"I can't oppose your story," admitted the Captain. "The little man seemed genuine. When did you get Joe's message?"

"About eight twenty-five," said Dick.

"H'm. I sent Joe to you, the first time, just after nine thirty. You're right, Culbertson. He had almost an hour in which to make the forgery. Nervy, all right. I suppose he is a member of the ring?"

"I'm quite sure. Look in his inner pockets."

Vic Vincennes did so, and returned with a handful of small, thin, folded papers. Each, they found, contained ten grains of pure venn. "He planted those others on her body," drawled Vic.

"How," asked Dick, "can we explain the fact that the agents of the Planetchief describe the woman as a member of the narcotic ring?"

"Quite probable. The code-message from Earth, in response to my inquiries, told me that for several years she had been playing a desperate lone game, pretending to be one of the ring. She gained the confidence of the inner group, and probably had accumulated very valuable evidence. Recently somehow they discovered that she was a spy, and, you see, managed to get rid of her. The man with the little chin carried out his orders quite efficiently."

"I see. The Planetchief's operatives thought—"

Vic Vincennes, exploring further the pockets of the pseudo-96M, discovered a square of paper from which one end had been torn off. He read it and handed it to Brad. It was brief and to the point.

"*Kill Dubroq, Culbertson, and Vincennes within six hours. Destroy this note immediately. N. A.*"

"Well," said Vic, "we're slated for death."

"N. A.," said the herculean Dick. "H'm. Say, Nathan Axelmann is on board. The

New York financier. I wonder if he's mixed up in this—"

"Few people know it," said Captain South slowly, "but we also have aboard with us the venerable old Martian, Norr Avornu. He is the recognized head of the political party opposing the rule of the present Planetchief. Avornu stays closely in his rooms. An old man, I am told."

"But this is Earth-script—" began Dick.

"Of course. It was written to an Earthman who wouldn't understand Martian."

"Well," said Dick. "If we three want to live, we'll have to force a showdown soon."

"Yes," said Vincennes. "Damn soon."

They left Doctor Kunzie to his gruesome task and walked back toward the navigation room. "We've made exceptionally good time," said the Captain. "I've crowded the speed up to three thousand miles a second plus. The modern generators we possess can give very rapid acceleration that is also very smooth. By the way, in an hour from now our artificial gravity will be reduced to the Mars-normal, instead of the Earth-normal we are using now. Terrestrials and Venusians will have to wear positive gravity harnesses, set at approximately 3.09 to increase the pull on their bodies. Martians will be able to discard their negative harnesses, as our present electrogravitation will be gradually reduced."

They reached the navigation room. The little blood-red disk that was Mars gleamed through the thick windows of quartzinite. The Captain spoke again, gloomily.

"In less than three hours we'll have landed on Mars, and our last chance to strike a blow at this murderous organization will be gone. I have been morally certain for a long time that Norr Avornu is the brain of the venn-ring, but I have not the slightest shred of evidence upon which to hold him. This note proves nothing. It might have been forged. It would be necessary to *prove* that he wrote it. As far as I can see, our hands are tied."

BRADLEY CULBERTSON spoke quietly. "I think you will find Avornu a gentleman," said Brad. "Suppose you call him here for a conference, show him the

note, and mention that although you have nothing but that and other circumstantial evidence, nevertheless things look rather suspicious. Ask him if he has any statements to make, any denials. Ask him, as evidence of his good faith, to submit to a psychological examination.

"Doctor Kunzie was showing me this morning a beautiful instrument he possesses, a marvel of accurate scientific craftsmanship, a brand-new and unbelievably delicate sphygmopsychometer, such as are used by the World Police Organization. Y'see, Avornu can't fail to realize that a refusal to submit to the examination will look bad for him. If he refuses, don't press him. If he'll let you, hook him up to the soul machine and ask him all the questions you want to about the venn-ring. Doctor Kunzie is an experienced and competent psychologist. He can take a look at the charts made by the instrument and tell you whether the man is lying or not."

"By Jove, I never thought of that angle of attack," exclaimed Captain South. "We'll do it at once." He reached for a speaking tube.

"One moment, Captain," said Brad. "One of us three should stay with you, as a witness of the interview. I suggest that it be Vic, here. Dick and I would be superfluous, and I'm expecting a message from Mars any moment."

Bradley Culbertson rose to leave, and Dick accompanied him, leaving Vic and the Captain wondering just what he meant. Dick tried to question him as they walked down a deeply carpeted corridor. Brad would answer nothing.

"Believe me, Dick, I've got a good reason for not telling you what I know, yet. There's a fifty-fifty chance that there may be hell let loose on this flyer in a little while. I know what I'm doing. I want you to search all the decks for Kee Scarna. She's recovered from that sanzan, but she's still rather weak. She may be in great danger, and I know you don't want her to be in any sort of danger. Find her and ask her to go to her room until we reach Mars. See that she promises you to stay there."

"All right, Brad, you're the professor,"

said Richard Dubrocc. "What are you going to do in the meantime?"

Two-fifths of a smile played across Culbertson's sober lips. "I'm going to the ship's library and see if I can find a copy of Doctor Gnanson's scholarly work, 'The Theory and Practical Applications of Para-Electricity.' It's a branch of physics I've always wanted to study."

## CHAPTER VII.

### A Counter Revolution

ONE hour later the ship's announcing system warned the passengers that the change of gravity was soon to take place. Earthmen and Venusians donned gravity-harnesses of thin silver bands, attached to ludicrously small para-electric pocket batteries. The currents of para-electricity set up could be made at will to increase or decrease the electrogravitational pull upon the individual who controlled them. Terrestrials and Venusians adjusted their positive harnesses so that the Mars-normal gravity wouldn't send them flying around at every step. Martians discarded the negative harnesses which had kept the Earth-normal gravitation from harming their bodies.

Shortly after the change Dubrocc came to the library. "I finally located her maid, who says that she's feeling indisposed, and hasn't risen yet. She'll be safe, I suppose. The maid says that she won't rise until we reach Mars."

Vic Vincennes arrived. Vic was attempting to suppress a certain amount of excitement.

"Well?" inquired Brad.

"Doctor Kunzie gave Avornu a clean slate. He cooperated with us, and the psychomechanical evidence absolutely absolves him. He said that he knew of the existence of the ring, but he denied any connection with it. Any psychologist in the solar system would have sworn he was telling us the truth. Not the slightest microscopic deflection of the recording styli."

"I expected it," said Brad.

"It astounded Captain South. He's running around in mental circles at present.

Do you suppose that Martian can control his nervous organization to such an extent that he can lie to a sphygmopsychometer and get away with it?"

"I have not studied the nervous anatomy of Martians closely enough to hazard an opinion," said Brad academically. "It might be possible. Has any official message come from Mars yet?"

"Not that I know—"

The spacesphere's announcing system broke in, stating that Captain South would like to meet Dubrocq, Culbertson and Vincennes in the radiator room.

The operator was bending over his instruments when they entered. Captain South was holding a sheaf of message blanks, regarding the topmost with astonishment and anxiety. "Ah," said Brad. "A cosmic radiogram from Mars!"

"Yes," said the captain dully. "We've lost our chance. This radiogram announces that the established government of Mars has been overthrown completely by a short and deadly scientific revolution. Zon Scarna and his daughter are exiled forever; forbidden to land on Mars. For the time being the revolutionists have picked Norr Avornu, who seems to be the popular idol, to take charge of the complete reorganization of the planet's government. Norr Avornu has absolute power at present."

"I knew it yesterday," said Brad Culbertson. "I suppose you have sent copies of the message to Norr Avornu and to Zon Scarna?"

"Yes. Just a moment ago. They must have them by now."

"H'm. I wish you hadn't. I wanted to intercept that message. It's a peculiar trick of fate, to have both the present and the deposed ruler on board at the same time. I wish I knew more of Martian psychology—"

THE unmistakable sound of an explosive bullet detonating on impact interrupted Brad. He rushed to the door and out into the corridor while the others stood motionless for a fraction of a second, startled. Four more explosive shots were heard in rapid succession.

"They're gunning for Brad," said Vic un-

der his breath. He and Dick and the captain leaped toward the corridor door. A figure confronted them, then in a second four more appeared, all Martians, and all with an automatic or a ray-pistol in each hand. The first was Zon Scarna. His face was no longer stern and expressionless, but showed plainly anger—cold, calculating, and entirely merciless. He spoke.

"Some of my men now have control of the navigation room, and of the second and third officers of this spaceship. Others are guarding well Norr Avornu, an old fool. You, Captain South, and the other officers are, I fear, the only men aboard who know enough of celestial navigation to safely handle this spaceflyer. From now on I shall command. If you obey, and if everyone else aboard obeys me, I guarantee that most of the passengers for whose lives you are responsible will not be harmed in any way. With Norr Avornu in my power, I shall proceed to dictate terms to Mars. All of you will now proceed to the navigation room."

They did so, silently, well-covered by the weapons of the desperate ex-ruler of Mars and his followers. The second and third officers of the *Cosmonia* were helpless, face the guns of more of Zon Scarna's men. The former Planetchief spoke again, his voice level and cold.

"As for you, Dubrocq, and you, Vincennes, and your friend who tried to get away, I shall kill you, now. You three in particular have meddled with things that do not concern you. Your friend was wounded or killed in his foolish flight. An orderly who tried to resist us is dead. Culbertson is lying in the corridor now, probably dead too. I must make sure."

He spoke to two of his men in Martian, telling them to get Brad, whether he was dead or alive, and bring him to the navigation room.

"I shall kill you three with the poisoned needle-gun, and my men will immediately give you burial in space. You and your officers, Captain, will watch me with such composure as you may have at your command, and realize that I will brook no interference whatever; that I do not and shall



not hesitate to eliminate anyone who annoys me."

The two Martians returned from the corridor, empty handed. The Planetchief's countenance hardened. Vic Vincennes saw him lift his needle-gun at pointblank range, and felt an intolerable weight falling upon him, crushing the very life from him. He crumbled to the floor, overcome with nausea. The room seemed to be spinning, the sickness more acute and more horrible. Then unconsciousness.

### Brad Explains

IN the dynamo-room, in the very center of the enormous sphere, a figure lay recumbent upon the floor. Another pulled a huge double-throw knife-switch into its off-position, and began a systematic process of disconnecting other switches. His hands were bare—he ran the risk of death by para-electricity, the strange "cold energy", second cousin to electricity—but so expert was his manipulation that he did not give the thousands of ampores\* of cold "juice" a chance to short through his body.

Brad Culbertson glanced at the man he had felled, and proceeded to the navigation room. On the floor were the motionless bodies of Vic and Dick, of Captain South and the other officers. There were also ten shapeless masses, all that was left of Zon Scarna and his Martian aides. Dick Dubroccq, of the mighty physique, soon revived, and helped Brad revive Vic and the other Earthmen. The mangled bodies of the Martians were removed by the ship's orderlies, under the direction of the wondering Doctor Kunzie.

"Suppose you explain, Brad," suggested Vic pointedly. "Dick and I and these officers would like to know what it's all about."

"As briefly as possible," began Brad, "the situation is this: For many years Zon Scarna has been the hidden brain of the venn-smuggling organization, but not until very re-

cently was this known to the Martian people in general. Zon Scarna would permit no competition. Any unfortunate Martian who took up the smuggling business on his own initiative was soon ferreted out, tried, and condemned to death.

"Thus Scarna furthered his own interests by reducing competition, at the same time throwing a smoke screen across his own trail. He gained a reputation for stern and righteous justice. The Venus- and Earth-governments approved most heartily of his actions. But this apparently righteous ruler was the carefully hidden brain behind the venn-ring.

"Incidentally, Dick, his one and only redeeming feature was his love for that daughter of his. She knows nothing of her father's real character or occupation. She was the only thing he was capable of loving; and he would have been genuinely grateful to us for saving her life if it hadn't been completely demolishing his plans, and if you hadn't let him hear you say you loved her. He didn't intend to have any Earthman take that girl away from him—

"He brought aboard an extra trunkload of venn, and had it smuggled off at Venus under cover of invisibility. Remember how willing he was to submit to the attempted 'kidnapping'? He engineered the whole thing, in order to be very sure that the inconceivably valuable trunkload of the pure, unadulterated narcotic could be landed on Venus. He has a hidden landing cradle upon the Hot Planet.

"At the regular terminal of the *Cosmonia* the trunk might have been searched with XX-rays, for the Venusians don't observe the custom of exempting rulers through courtesy. He planned the 'abduction' by supposed Venusian brigands. But when the meteor struck the vessel, causing it to leak air, Scarna came back to the *Cosmonia* without giving his hand away. You recall that he was not under restraint on the alien vessel, Dick, although he appeared to have been so. Of course, with his daughter poisoned, he returned without protest to the *Cosmonia*, where expert medical aid was obtainable. I think Kee Scarna has suspected something wrong ever since that 'abduction' fell

\*The ampore is the para-electric unit corresponding to the ampere of ordinary electricity. As electricity produces electromagnetic fields, so para-electricity produces positive or negative electrogravitational fields, by which interplanetary vessels are propelled. Para-electric generators derive their power from coal, oil, and synthetic fuels, just as ordinary generators do.

through. The venn, however, was successfully landed on Venus by one of his agents, using the more risky and hitherto secret process of invisibility stolen by the Planet-chief from the Martian savant who invented it.

“OPERATIVE 96M of the World Secret Service penetrated his secret and informed the Federation of Earth-Nations, the Planetary Council of Venus, and the heads of the perfectly legitimate political organizations opposing Zon Scarna’s rule on Mars. A very remarkable woman, 96M. It’s a shame she was killed.

“I obtained all this information yesterday from the Federation of Earth-Nations in reply to my code message, but at that time Zon Scarna was still ruler of Mars and you’d hardly have believed me anyhow. With the knowledge and consent of Norr Avornu, his party led the almost instantaneous revolution on Mars, gaining complete control of the planet. That was what I was waiting for, for as soon as that news came through we could arrest Zon Scarna and perhaps put an end to these attempts on our lives.

“You are wondering perhaps about those initials. I could hardly keep from smiling at you when you interpreted N. A. to mean Norr Avornu. None of you seemed to recall a fact that is undoubtedly known to you all. The Martian system, and it is no less logical than ours, is to consider the last symbol in the name as the initial, rather than the first. And, even when his name was phonetically transliterated into Terrestrial spelling, he kept the same system; N. A. plainly and straightforwardly signified Zon Scarna.

“When I heard that shot today—the shot that killed a totally innocent orderly who happened to be standing in the Martian’s way, I saw clearly in a second what had happened in Zon Scarna’s mind. Always bold, he would capture the unarmed ship; then, with Norr Avornu as hostage, he would be in a position to dictate terms to Mars.

“I rushed out and he shot at me. The explosive bullet missed me, but I fell voluntarily and lay quiet while other bullets went

over me and struck the corridor wall, demolishing it in places. If he had only fired one bullet he would have seen, by the damage it did to the wall some distance away, that he had missed me.

“When he and the others went into the radiator room, I made a successful break for the generator room. I didn’t have time to argue with the man on duty there, so I hit him on the temple from behind. I disconnected the para-electric cables that supplied artificial gravitation to many of the rooms of the ship. I hooked them all to the cables that carried the para-juice to the navigation-room gravity-field circuits, and cut in all the generators for seven seconds. Anything longer would have burnt out the coils.

“I robbed the rest of the ship to concentrate our gravitational power here. You, with sturdy terrestrial bodies, were able to stand it for a few seconds without serious or permanent injury, in spite of the fact that you are wearing positive gravity-harnesses. The Martians, of much frailer physique, were crushed to death immediately, apparently just at the most opportune time. You may not have noticed it, Vic, but there’s a poisoned needle-dart sticking in the rug just three inches in front of your left foot.

“That’s about all. I reconnected the para-electric cable correctly, and came here, asking Doctor Kunzie to come with me. His office was horribly disarranged by the temporary cessation of gravity. I’m sorry. All of his instruments and medicines floated around the room at random. It couldn’t be helped—”

“I’m sorry for Kee Scarna—” began Dubrocq weakly.

“The shock is going to hurt the little princess,” drawled Vic, “but she’s take it standing. She’s a thoroughbred. Yet someone ought to take care of her. She’s just a kid of eighteen or so, according to Earth-time, alone in the universe. It’ll be up to you, Dick. I saw her fall for you when you spilled her wine, and I’ve watched you fall, son. Ask her, Dick; the invulnerable social barrier is gone, but she’s a Martian girl, and wouldn’t think it proper to take the first step herself. She’s exiled from Mars; it’s

up to you to take her back to Earth and make her forget—”

### All's Well

DICK had turned away, flushed, doubtful, afraid. Vic stopped talking. He posed as a cynic, Vic Vincennes. It wouldn't do to show any emotion. The others never knew that Vic loved the girl too; Vic would have denied that he knew what love was, had anyone asked him, which nobody did. Vic Vincennes changed the subject.

“What about Norr Avornu?” he ejaculated dryly. “According to Zon Scarna, Avornu was well guarded by several men. Most probably he still is.”

Captain South started, pulled open a drawer, and abstracted four automatics. “We'd forgotten him! Let's investigate at once.” The others took the proffered weapons and started toward the door of the navigation room. Vic Vincennes, in the lead, collided with something he couldn't see. It was a moment before he found his voice.

“An invisible cylinder!” he exclaimed, rubbing his forehead. “What in the—”

The cylinder wasn't directly in the path one would ordinarily take while entering or leaving the room. Vic had blundered into it by accident. The giant Dubrocq stooped, put his arms around the glass he could not see, and brought his tremendous strength into play. He lifted the seven-foot high, thick, heavy glass cylinder into the air and set it down again several feet away. Culbertson's low voice rang in his ears.

“Dick! I depended on you to keep her away. God, I've crushed her to death.”

For on the floor, revealed when the cylinder was moved, was a pitiful little heap of blue and silver.

Kee Scarna, however, was not dead. When her father had received the message announcing his defeat, she had donned slippers and had thrown a blue and silver silken robe over her pajamas, and—

“She tried to warn us,” said Dick. He had picked her up in his arms, had seen that she had not discarded her negative gravity-harness of thin silver bands. In-

stinctively, when she felt the gravity increasing, she had turned the tiny dial on the band about her waist, increasing the strength of the negative force that protected her. It had not been enough to prevent her from falling unconscious with pain; but it had saved her from being crushed. She was breathing regularly, slender and beautiful in the giant's arms. He was carrying her to the doctor's office. The others were with him, but Richard Dubrocq paid no attention to them. He bowed his head and kissed her pale lips, her warm white throat. Then he looked at Vic, and his eyes were sombre.

“You're wrong, Vic. If you'll think a minute you'll see. She'll get over her attachment for me. Interplanetary marriages are so seldom happy. There's too great a physical and psychic difference. She wouldn't be happy. I owe it to her to drop out of her life, before she does something she'll regret all her life. She been a dead game sport; I can be one too.”

Viv looked again at the girl's tear-stained face. “You are right, Dick; I was wrong,” he said, and for once in Vic's life his voice held no irony, no bitterness, no edge.

The giant relinquished his burden to the patient and overworked Kunzie. “Take care of her, Doctor, please,” he asked, and turned to join the others. They proceeded to Norr Avornu's stateroom, but received no response upon knocking repeatedly. The captain opened the door with a master key.

The venerable Norr Avornu held a weapon in each hand, covering two Martians who were cowering against the opposite wall of the room. Norr Avornu smiled pleasantly.

“Ah, gentlemen,” said he. “I am much relieved. I feared you might be the reinforcements these two individuals seem to desire. I take it that you have the situation well under control?”

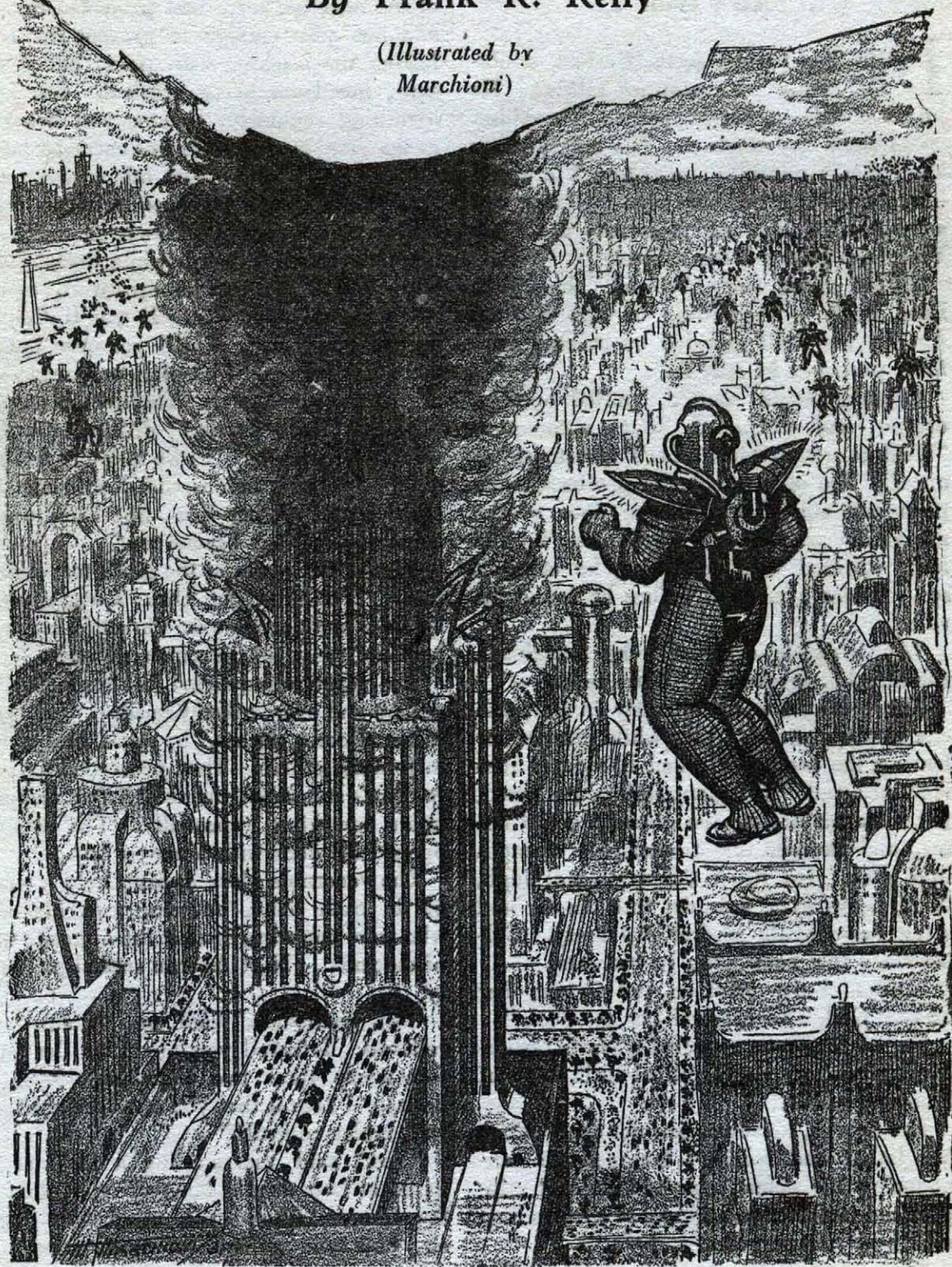
“Yes,” said Vic, smiling a little as he gazed at four deadly Martian ray-pistols on the floor. “Would you mind telling me, sir, how you gained the upper hand on these—er—gentlemen?”

“It was indeed most fortuitous. For some reason the gravity in this chamber failed  
(Concluded on Page 129)

# The Light Bender

By Frank K. Kelly

(Illustrated by  
Marchioni)



Something was happening to the Peace tower. Around its spire a pall of darkness was swiftly gathering, spreading downward. . . .

THE frosted glass door that led into the private office of Councillor Alvin Wentworth, Chairman, in this year, 2030 A.D., of New York City-State, was closed and locked. His prim, efficient secretary had received her orders; and to the many and varied numbers who came seeking audience with the great man, she gave the invariable answer:

"He's in conference."

In the large, luxuriously fitted room, Mr. Wentworth was in conference. He sat behind his permen-tite desk, staring with some misgivings at the two stalwart gentlemen who confronted him.

One was a very tall, thick-set, and determined looking man, whose attitude at the moment was one of an insistent request for attention; the other, smaller, wizened, but evidently more prudent, looked on in silence.

The two small pasteboards on Wentworth's desk read: "Hend & Rall, Science Engineers". To the Councillor, there seemed something familiar about the first of these names. Then he remembered: he had read, not long before, of the prominence and brilliance of the engineer-physicist, Arnold Hend, who had announced his intentions to visit America from his homeland, Germany, on some errand whose nature he refused to reveal.

But the smaller engineer, whom the big man had called "Hend", was silent. Rall had evidently been delegated to do the talking.

He was saying, briefly, "Watch."

Before him, resting on the smooth surface of the desk, was a small object. It was in the form of a hollow drum about a foot in diameter, in the center of which reposed a tiny model of an electric dynamo.

The only visible controls were two miniature switches: one labeled "Start", and the other "Stop".

He snapped the first lever forward and pointed to a glass paperweight a few inches from the drum.

The little dynamo turned suddenly. Slowly at first, and then with rapidly increasing speed, until it had become a blurred, whirling shape, from which came a shrilly penetrating hum.

Wentworth gripped the arms of his chair. Before his eyes a dark pall was clouding up around the paperweight. It began to take on a vague indistinctness of shape, as though it were slowly dissolving. . . .

The hum rose to soundless heights. And at that instant, the little weight on Wentworth's desk was gone.

Triumph showed in Rall's eyes.

He grasped Wentworth's hand, pushed it forward on the desk to the spot where the glass sphere had been. Wentworth experienced a queer sensation. He was feeling something that he could not see!

It was weird. Uncanny. The sweat formed on his forehead. He drew his hand back.

"Enough!"

**WE believe that this story is an extraordinary one coming from the pen of a sixteen year-old author. It would do credit to the name of a mature experienced writer.**

**Man with his tremendous development of science may be considered as a child fumbling about in the dark of a great cavern. He stretches out his hands and finds things that he puts to his own use and they serve him well. But the nature of the things that he finds and uses is still a mystery to him, and as he plumbs deeper and deeper into nature's laws to find new devices for himself, he may be intruding into a world that he does not understand.**

**So science may easily prove a boomerang to man, and destroy him in the process of civilizing him. Our brilliant young author has taken this theme and woven into it a finely conceived and executed, and tremendously gripping story.**

Rall snapped the other switch. He grinned: "Convinced, Chairman?"

"Yes. What I have seen would have removed the most obstinate of doubts. But it's—it's—dazing—stupendous—You have achieved invisibility. How?"

For an instant, Rand hesitated. Then, questioningly, he glanced at Hend, the third man in the room, who had maintained an enigmatic silence.

"Arnold is much better at that than I."

**H**END flushed; for a while he remained silent; and then, in a guttural, German voice, which, however, was untainted by any accent, he spoke:

"It is very simple. We have only taken advantage of something that all men have known for a hundred years: that gravity is a form of electromagnetism. Einstein told us that in the twentieth century.

"We have always been able, in our day, to produce powerful magnetic fields, and to intensify them to a degree limited only by our supply of energy.

"Around us, unnoticed apparently by all men with the exception of John and myself, is the hugest magnetic field of our experience, one of the most vast sources of energy conceivable—Earth's gravity!

"Science has long known (once more from Einstein) that a powerful magnetic field has a perceptible effect on light rays passing through it. Light beams crossing the sun were observed to have been turned measurably from their normal path, when under the direct influence of the star's tremendous, though unconcentrated, magnetic field; resulting in the phenomena of light-bending.

"Rall and I have simply combined these two facts: that gravity is akin to magnetism, and that magnetism has the power of

bending light. We have intensified, by this dynamo of our own construction, the whole vast magnetic field of gravity into a directed channel.

"You saw the result: invisibility. The incalculably powerful field of force which was centered on the paperweight so bent the light rays which made it visible to us, that they passed *around* it, instead of being absorbed or reflected. If gravity were pure electromagnetism, however, the effect would be a sort of dark 'hole' in space, blotting out still the sight of objects around it. But gravity, though *akin* to magnetism, is a separate, distinct force; with the result that it not only bends light, but renders those substances which come under its direct

influence extremely *permeable* to light *reflected* from other matter. Thus, the paperweight completely vanished."

Wentworth's face mirrored his struggle with incredulity. He said abruptly:

"Let me see that again."

Rall made a gesture of impatience. He flung the tiny switch. Once more the vibrant sound of the little machine on the desk filled the room.

Wentworth put out his hand for the second time. Expectantly. And then, annoyance on his face, he

passed his fingers over the surface of the desk in a searching motion.

After a moment:

"I can't feel it. What's the matter? It's gone. . . ."

Unbelieving, Rall stared at him. Hend had stiffened curiously at his first words, a strange expression on his strained face—the expression of one who suddenly finds an oft-expressed fear confirmed within him. . . .

He whispered hoarsely, half to himself:

"John! I—we've made a mistake!—It's too big for us, for our puny machine—We were too confident in ourselves. . . . Why,



FRANK K. KELLY

it's bigger than matter itself! Don't you see? . . . . It has warped the very *substance* of that paperweight, as it has bent its light. . . .

"I tell you I've always feared it; such power was never intended for man. . . . We must give it up, John, while we have the chance!"

His face was drawn into a mask of terror. His voice trembled, his hands shook. And then, as suddenly as it had come, the paroxysm of fear left him; he fell back into his chair weakly.

Rall snarled contemptuously. He swept his great hand out over the desk.

He gave an exclamation of pain, rubbed bruised knuckles. He laughed.

"You simply missed it, Councillor! It's there now right enough!"

He dismissed the incident as a mistake, a triviality; but in his laughter, Wentworth detected an undercurrent of nervous strain.

"Look!"

Before them, as he snapped the releasing switch once more, the little weight was coming into view. The vagueness about its surface was melting slowly.

Again a flicker of victory gleamed in Rall's eyes. It was short-lived.

### The Great Plan

THE glass sphere on the desk-top had *changed*. There was an indefinable difference in its appearance, a shadowy, impressive indistinctness of outline, a *darkness* about its surface. . . .

It had lost its prosaic look. It seemed a part of another, altogether different, world—

Wentworth was conscious of a vague foreboding. His mind was crowded with the tremendous possibilities that lay in the tiny, innocent-appearing drum. Surely such a little thing could hold no threat of danger, of menace!

With a feeling almost akin to awe in his heart, Wentworth stared fascinated at the inventors of this wonder.

Hend, the older, more cynical, was a small, sharp-featured man, grayed by years, and made skeptical with experience.

Rall, almost a giant physically, with a

genial nature and an insuppressible optimism, had a keen, ever-active brain that refused to admit the existence of the impossible. His was an absolutely fearless temperament.

Between them, the engineers formed an almost irresistible combination. Friends of long standing, each complemented the other in nature, intelligence, and outlook. . . .

Wentworth remembered his dogged reluctance to be convinced, and marveled at his now firm belief. But this demonstration had put an end to all his doubts. . . .

To the engineers, the enlistment in their cause of Wentworth, Chairman of the Executive Council of New York City-State, and by far the most powerful man in the city, meant all. Closer than they had ever thought possible before, loomed realization of their life's dream: invisibility on a practical scale. They had visions of crime wiped from the face of the earth by an invisible law force, of even the possibility of war abolished by the establishment of an international peace fleet that, invisible, would patrol the airways of the world.

To Wentworth, invisibility meant an incalculable advance to the civilization of man and, particularly to his beloved city, a stupendous power with infinite promises of good.

Each accepted as sacred the duty of presenting this new force to the world; and each searched his brain for a plan that should be both fitting and impressive.

It was Alvin Wentworth who first broke the lengthening silence.

"My friends, you have much work before you. We have yet to convince the world that invisibility is possible; so you must have some place of absolute secrecy in which to complete your task. That which I have in mind is ideal: the interior of the Peace Tower. . . . I alone possess the means of entrance. It has been closed to the public for twenty years. Its very obviousness will protect you! . . . . And finally, when you are ready, it will offer a splendid means of demonstrating your power to the world. . . ."

He paused. His gaze went from one to the other inquiringly.

Rall was obviously eager, acquiescent. And upon the calm face of Hend was supreme resignation, a fear conquered though not denied. . . .

"What is your answer?"

"Our answer is: yes!"

It was Rall's voice, vibrant, impatient. The German's head gave a slow nod. . . . The bargain was complete.

"Then, come!"

DOWN here, on the very bottom level of the City Canyons, there was an eery atmosphere of loneliness. The cold white gleam of the great street globes cast a greenish lifelessness over the vast stretches of deserted pavement; the looming enormity of the buildings that pressed closely in upon the little street gave an overwhelming impression of insignificance to the three who huddled in the long shadow of a crimson Tower. . . .

Wentworth sent a white, hissing beam leaping out suddenly from a queer-shaped cylinder in his gloved hand. It struck crashingly against crimson metal. . . .

There was an abrupt, startling click; a tiny disc embedded in the red wall had revolved in a slow, measured movement. . . .

The white beam flashed out again; and again, this time with a whirring, reluctant groan, the disc turned upon itself.

An instant's pause. Then once more that crashing cone of coruscating force—and silently the scarlet barrier before them was opening into a dark cavern whose height was hardly higher than a man. . . .

Wentworth turned. His low, hoarse voice whispered:

"You have one minute. . . ."

They gripped hands. With one last glance over their shoulders, the engineers were gone. . . .

Wentworth was left to stand alone.

\* \* \*

With an impatience born of two months' fruitless waiting for some word from those to whom he had given admittance to the Tower, Wentworth reached eagerly for the communication cylinder upon his desk.

With trembling fingers, he loosened the metal cap. He held it over the desk.

There was a dull thud. On the smooth surface of the wood lay a tiny roll of metallic substance.

Wentworth inserted it quickly in a slot that ran the length of a small, compact machine on one corner of his desk. He depressed a lever. . . .

An instant's pause; then:

"To our chairman, Councillor Wentworth, greetings! Knowing your anxiety and probable uneasiness over our continued failure to report our progress in the enterprise which we have undertaken, we must apologize for our negligence. But events since last we saw you have followed in such rapid order and with such bewildering marvellousness that we have almost lost track of time.

"We have succeeded far beyond our dreams. Within one week after the dispatching of this report, the first Light-Bender will have been completed; and we shall be ready to convince the world, in an indubitable manner, that our discovery is a practical reality.

"Necessity requires that this report be brief. At high noon on the twenty-fifth of this month (Sol), we shall, in accordance with the Plan which you outlined to us on that first day, remove from the sight of man the greatest of all his works—the Peace Tower in which we are. . . . Until then!—"

The lifelike voice of Rall ceased. Wentworth felt a great relief surging over his soul.

His fears had been vain! After all, he had nothing on which to base them, except the queer, distorted appearance of the paper-weight upon the desk. . . . But as he thought of that distortion, his fears returned again, augmented by a greater fear.

What if, as Hend had feared, the inconceivable power generated by the engineers' machine was capable of warping the *matter*, as well as the light, that came within its influence? There had been some who claimed that dimension was determined by rate of vibration. . . . Then if the vibration of the matter made invisible was altered also, might not that matter be translated into another dimensional plane, to be re-



turned only in grotesque travesty of its former shape?

He shuddered, refused to think of the alternative: that it might not return at all . . . That the sole reason for the return of the paperweight lay in the comparatively weak energies of the tiny light-bending model. . .

With an effort he arose, walked to the window. He looked out upon the vast spectacle of the city, asparkle with brilliant night lights, throbbing with a fulsome life; his eyes were for only one thing: the huge, overshadowing blotch against the darkness that was the Peace Tower. . . . He sighed. Soon, very soon, all his doubts would be answered. . . . He could only hope.

### The Peace Tower Goes!

**S**USPENDED between the earth and sky by a slender pencil of force, Wentworth hung motionless; and strained his eyes eagerly through the eye-pieces of his air-helmet. His gaze clung fascinatedly to the vast city that spread out far below him.

New York in 2030! Vast spires of shimmering chromium, whitely brilliant in the hard-bright sun. . . . Wideflung, feathery street bridges of silvery metal. . . . The floating beryllium islands with their great traffic beacons. . . . The teeming airways, packed now with homeward, winging millions. . . .

And, most wonderful of all, the power beams—thin streamers of etheric force, pouring out, from the laboring solar generators far beneath the city, waves of a mysterious negative gravity that held up all who flew the skies, they were the most marvelous achievement of twenty-first century civilization. . . .

Wentworth, if he thought of these things at all, did so with pride of possession. For New York City-State, in 2030, had acknowledged Alvin Wentworth, Chairman of its Executive Council, as its leader.

And in the elections of that Fall, it had been Wentworth who had stood highest in the Fitness and Intelligence tests of his faction, and who had won the biennial contests for the Council by a wide margin. . . .

He gave no thought to such matters now.

Body tensed in his flexible metal air-suit, he had eyes for but one point in all the vast panorama below.

That was a spot near the center of the city. There, raising its crimsoned sides three thousand feet toward the sky, was the Peace Tower of 1990.

It was acknowledged the summit of architectural achievement. To its construction had been brought the best efforts of the world's greatest artisans. It had been born of an inspired time—the years immediately following the holocaust of the Third World War of 1990, when a planet gone mad in a frenzy of rejoicing from the horrors of scientific warfare, had poured its all into a stupendous memorial of thanksgiving.

Within its hollow core were placed the plans for all the engines of war then known to man; and the entrance sealed with the most indestructible shield of force and metal that ingenuity could devise.

A chamber of equal size, decorated lavishly with pictorial representations of the horrors of war and the benefits of peace, was thrown open to the public for a period of ten years. Upon the expiration of that decade, this also was closed by an immense portal of chrome-steel, and the means of entrance given into the hands of New York's governing body.

After the completion of the tremendous structure (which required nearly five years) three decades of peace had followed. Deprived even of the wherewithal to carry on warfare, and engrossed in an unprecedented revival of science and the arts, man began to forget the desire for conflict which had absorbed his energies for many thousand years.

During this golden period, government became a matter of intelligence and capability, rather than of political cunning; poverty, disease, and insanity were almost completely eradicated; art, literature, science, the chief interests of all. . . . Man was coming into his own.

Wentworth, a half mile above New York, suddenly felt a quiver of emotion stirring every muscle of his body.

Something was happening to the Peace Tower!

Around its shining, brilliant spire a pall of darkness was swiftly gathering, spreading downward, devouring remorselessly the apparently invincible solidity of the monstrous edifice. . . .

And suddenly, where a moment before had been a gigantic, sky-reaching structure, was now but a half-defined, swiftly-vanishing shadow. . . .

Wentworth waited no longer. Springing into swift flight, he winged his way above the city toward his own apartments. But as he went, he looked down upon the milling, awe-struck myriads below with a pre-occupied gaze that partook of something of their own awe. Even now, he had difficulty in believing that the wonder he had seen did not contain elements of the supernatural. . . .

But in seven days all the world should know the truth; and believe, with such evidence before it. . . . He must have patience.

WITH the beginning of the Week of the Darkening, Alvin Wentworth entered upon the most terrible period of his existence.

For it was at this time that he began to have visions.

They came to him at night, after he had retired. At first they were vague, shapeless, of brief duration. . . .

Those he was able to banish. But with the coming of the third night, they were stronger, plainer, and—longer. They stayed with him. . . .

He had dozed off in the drowsy, warm darkness of his room; and suddenly started awake with sweat beads on his clammy forehead. The long shadows in the dark corners of the room had become cold, menacing, *sentient*.

They would creep up to his bed from those dark corners, and lay soft, repulsive, dark fingers on his skin. . . . And they would whisper. . . .

That was what bothered him most: the whispers. . . . *They* were something you couldn't fight. . . . And you had to stay awake or the fingers would come sliding around your throat. . . .

On the fourth night he sensed a change.

The Shadows were gloating, triumphant over some evil of which he was ignorant; he knew it had to be *evil*, though. . . . The Shadows were all evil. . . .

That is, except two. These were never strong, but always he knew they were there, helping him, fighting with him, trying to tell him something. . . .

He could never quite get it. They would whisper, and he would lean forward, strain his ears for the soft, hissing sound. . . .

And always the Evil Shadows would rush forward, drown it out with evil whispers, push the Two back into the dark corners. . . .

And after a long time (on the sixth night) he could see another Shadow, other than those with which he was familiar. This was vast, unmoving—the huge shadow of a Machine. . . .

When he saw that, the Two grew more desperate than ever. They would rush toward him with a terrible force, almost break through the crowding Evils—and toward morning they managed to reach him for a single instant. . . .

The whisper came to him: "*Tomorrow!*" And in the middle of it, he felt light on his face, and knew that the Shadows were gone. . . . It was day.

\* \* \*

On the morning of the Seventh Day, Wentworth sat alone in his private chambers. He had given orders that he was not to be disturbed.

He was trembling. At intervals he rose nervously, went to the landing stage outside his window, gazed out upon the vast open space in the heart of the city that marked the location of the vanished Peace Tower.

He stood on the balcony. He glanced at his watch.

"Almost time!"

In five minutes it would be noon; and Hend and Rall would reverse the switches that held the great tower invisible. . . .

He tried to shake off the growing fear that obsessed him. . . . He gripped the railing of the balcony. It would not be long, not long! . . .

And suddenly, he was gripped by a cold Terror. . . . A vague shadow had come suddenly into the sunlight, was growing,

thickening before his dazed eyes into—darkness. . . .

The air was a shimmering blackness before him, the white stone of the balcony had turned suddenly to jet black. . . .

The whole city was plunged abruptly into a strained, menacing shadow. . . .

He was stunned, paralysed. But only for an instant. . . . With a grim effort, he roused himself from his lethargy. . . .

He hurled himself across the room, regardless of the confusing darkness. He went rapidly down the hall to his Communication Room. . . .

### A Message From Beyond

A LITTLE sob of relief came from his throat. The television was unharmed. The three-foot screen that reared itself from a clustered mass of apparatus gave forth the quiet hum that indicated all was well. It glowed dimly in the darkness about it . . .

His fumbling fingers found the directional dial. He spun it feverishly. . . . The hum became a whine, a shrill scream; the glow illumined the whole room. . . .

And suddenly Wentworth gasped. Fascinated, he stared at the Thing fast becoming visible on the screen. . . .

Instinctively, he knew it was not of human construction. And yet there was something about it familiar, a characteristic possessed by something he had seen before. . . .

It was monstrous, vague, menacing—*blacker* than the darkness that surrounded it. . . . It was possessed of a slimy repulsiveness that nauseated. . . . Yet there was about it, for him, an indescribable fascination. . . .

With a cold finality, he *knew*. . . . He had seen its *shadow*. . . .

Wentworth was suddenly conscious of pain. . . . His whole body was wracked with an excruciating torture, as though each atom that composed it contended against itself. . . .

The walls of the room were wavering strangely. . . . The television screen was going black. . . .

He was conscious of crawling painfully

toward the balcony. . . . His bursting lungs cried out for air.

His last impression of a sudden, cataclysmic wrench that shook the universe, he passed into oblivion. . . .

Wentworth raised his head, groaned. He gazed about him in a dazed manner.

It was dusk. The fading sun sent long shadows over the little balcony on which he lay. The cool quiet of approaching evening enveloped him.

The world seemed bathed in healing silence. And so, content, he lay unmoving for a time, gazing up with vagrant fancies at the twining colors of the heavens.

Memory returned to him like a blow. He sat up at once, pain forgotten in his emotion. He crawled laboriously to the edge of the little platform, looked out over the city. . . . How long had he lain thus? What events might have passed over his unconscious head! . . . .

He passed a hand unbelievably before his eyes. New York had subtly changed! The human city that he had known seemed gone; beneath him stretched a succession of grotesque, distorted towers, holding within them an odd suggestion of darkness, fantasy. . . .

But suddenly far below him something stirred. A single, tiny speck in human form winged its way uncertainly between the fantastic spires. . . . And presently, there were others, growing with increasing speed into a vast swarm. . . .

New York was awakening! But curiously, the knowledge left him with little interest. . . . He was suddenly discerning a familiar aspect about the nearer towers. . . . Then he *knew*!

They were still the old, well-remembered towers that he had known before—before the Visit. . . . And remembering a certain paperweight upon his desk, the cause of their distortion was plain. . . .

The Monster had failed. But it had left its mark upon the city. . . . With a sudden shudder, he realized how close his myriads had been to the Brink. . . .

The thought that followed close upon realization left him white and shaking. The Invaders would return! . . . .

He pulled himself erect. He forced himself to walk, and found that he had no broken bones.

Then he saw the cylinder. It lay, a battered little tube of twisted metal, close to the edge of the balcony.

A sudden suspicion cut his heart. There were only two men in existence who would attempt to communicate with him in that manner. . . .

He stooped, picked it up. Holding it in shaking hands, he made his way inside, sat down at his desk.

He pulled his radiophone to him. Unexpectedly, it was still in working order.

"Give me Washington."

A LONG silence, broken by a crackling discordance of protest from the phone . . . . Then:

"Washington speaking."

And swiftly, at the sound of his voice:

"Chairman! Thank God! We thought you were dead. The entrance to your building has been blocked with debris for three days. The President—"

Wentworth cut in shortly:

"What's happened since *It* hit here?"

Hesitation. At last:

"We don't know. Boston's been dark two days, and Buffalo—"

"Bad?"

"Yes. . . . It hasn't been seen since, so we have hopes. . . . There was a rather bad storm last night. . . ."

The voice was unconvincing. Wentworth said:

"Call me if you get anything new. I'll be here!"

"But—"

He cut the connection. He put his head in his hands for a long time.

And at last, a set look of determination on his face, he placed the battered little cylinder into the translator.

There was a crackling discordance. And finally, strained, unnatural, came the voice of a man. . . . A familiar voice. . . . Rall's! . . . .

"To whosoever shall find this: immediately on discovery carry to the offices of Alvin Wentworth, Chairman of New York

City-State; the remainder of this message is translatable only by the means which he alone possesses. . . ."

There was a whirring click. Then:

"Chairman Wentworth, I have not much time in which to say all that I wish, for at any moment we may be detected in the act of recording this, by Those who are our Captors. . . . So I will be brief. . . ."

"In the first place I, John Rall, wish to state that upon me alone rests the blame for the fate which we know will soon be upon the world. It was I who, heedless of the warnings of one infinitely wiser than myself, insisted on continuing our ill-fated experiments with a power inconceivably too great for the tamperings of man.

"The result we know only too well: for us, imprisonment, and later, an unimaginable death; for the world—destruction. . . ."

"My friend, Arnold Hend, was, unhappily, justified in his fear that the gigantic Light-Bender which we constructed in the interior of the Peace Tower would warp the *matter* that came into its scope as well as the light. . . ."

"When we rendered the Tower invisible, we unknowingly translated it into another dimensional plane. . . . It was not long before we—we came in contact with the Inhabitants of that plane. Within twenty-four hours we were in their hands. . . ."

"There is no word in our language to describe Those who are our Captors, nothing in our experience with which to compare Them. . . . They are simply—Monsters. . . ."

"But their intelligence is gigantic. They had no difficulty in grasping the principle of the Light-Bender, or in accepting the fact of the existence of another World-Plane . . . . And they have determined, by the use of our Light-Bender, to invade our world. . . ."

"They build with inconceivable rapidity. For days they have been engrossed with the building of the Machine by which they hope to translate New York, and later, others of our cities, into their own plane, where they will have them at their mercy. . . . And they are ignorant of the meaning of Mercy. . . ."

"Their Machine is nearly finished, des-

pite the immensity of its size and the complexity of its equipment. And, apparently with a species of sadistic humor, they plan to—to drag New York under on the very same day that we had planned to again make visible the Tower. . . .

"For several nights we have attempted to communicate with you, Councillor; at first we thought that perhaps some Engine of Man could avail against These. . . . And we have nearly been successful, for in some places the Wall between the Worlds has been worn very thin by Their constant experiments with the Bender. . . .

"But we have failed. To you, what conceivable meaning could the strange antics of *Shadows* hold? . . . None. And we have given up all thought that anything little Man could do would have any effect upon the balance. . . . There remains to us one, only one slight hope. That hope lies in the incalculable power of the Light-Bender.

"It is our belief that if, on any occasion, the full force of the Bender is used by the Monsters in maintaining their position in our dimension, or if the power is held on for any appreciable length of time, not only will the atoms of their Machine be warped, but they will be *completely disrupted from their orbits!* . . . .

"In such a case, we realize that both of us are doomed to an inconceivable death; but even that will scarce make reparation for the unspeakable horror which we have loosed upon the world. . . ."

The message came to an abrupt end. Evidently it had been interrupted. . . .

Wentworth sat motionless for a long time. A silence settled over the room. . . .

It was dark when he took the battered little cylinder into his hand and went with it to the small round door of a wall safe.

He opened the door. With a careful motion, he slid the cylinder gently into the wall.

Then he took up the radiophone.

"Washington. . . . Any news?"

The answer came faintly back over the ether:

"None."

He prepared himself for a long period of waiting. He took the little 'phone into his bedroom, and set it on a small table beside his bed. He arranged the automatic alarm; and at last, with a weariness born of mental and physical exhaustion, he threw himself upon the bed. . . .

He waited many days—in vain. And after a time, the rescuers broke through crumpled metal that had yielded to the Bender, and he went back once more to the world of men. . . .

He was destined to wait a long time.

\* \* \*

For the days and the months swung past and grew into years, and still there was no news; that is, if one except the whispered story of a German tramp steamer in Mid-Atlantic that had come upon, at dawn of the day following the last visit, a vast section of boiling sea, in which seemed sinking a gigantic dark mass. . . .

The short memory of the world forgot quickly the menace of Darkness that had so nearly obliterated it; and the affairs of men went on in their accustomed way. . . .

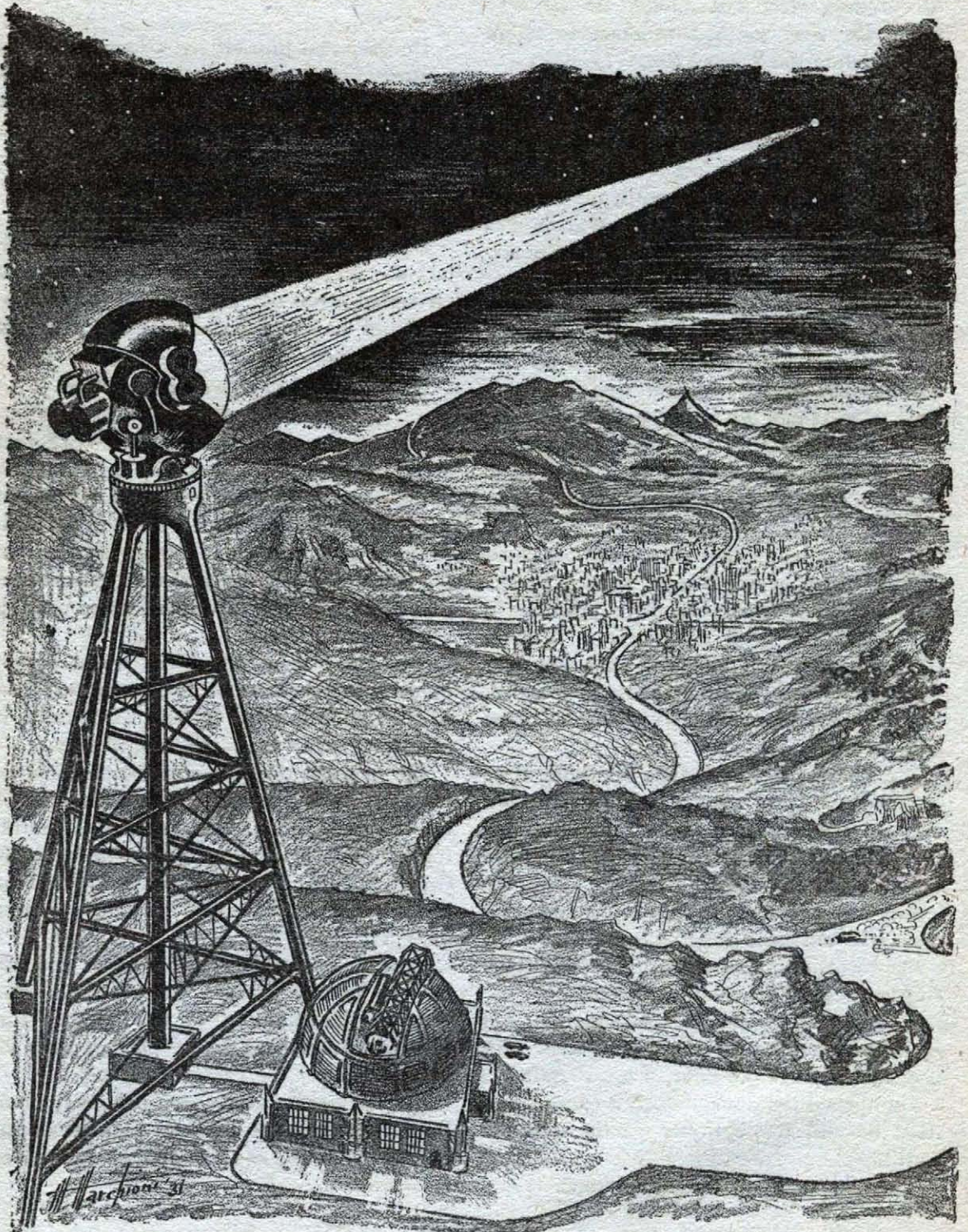
But at times the Chairman of the Council of New York City-State will lock himself up in a little room high in an ancient building, and run his fingers once more over the two cylinders, and gaze with a vague fear at the paperweight, and the drum, which he does not touch.

And there are some who wonder and are curious as to the reason that the Councillor ordered the building of two mighty statues in bronze, and the placing of them in a great way of the Lower Canyons. . . .

But the world is busy, and has many more important things to think of than two dust-covered statutes, and the foolish fancies of an old man.

# The Eye of Two Worlds

By Arthur G. Stangland



(Illustration by Marchioni)

**It turned like the mighty all-seeing orb of a colossus  
and focussed itself on the rising planet.**

“CALLING Stone Mountain . . . . Calling Stone Mountain . . . .”

The news line speaker droned on mechanically until Fran plugged in the teletype receiver. He depressed a little button marked “start”.

“Well, Acre, it’s going to be too late to call Mars pretty soon. Anything coming in here will have to be boosted over to Honolulu.” He yawned widely, stretching his slender but lithe arms high. He scratched the back of his head absently.

“Yeah,” the other said, and yawned because he couldn’t help himself. He glanced at the big electric clock on the wall. “Two o’clock. Just about time for Venus to be peeking over the hills. Think I’ll make this the last item. It’s almost press time for them in Vel Deur, anyway.”

The big heliograph chattered high above the building on its steel tripod, blinking its intense violet eye at the dimming red pin point of Mars. Above everything else around it, the small stone building squatted firmly to the top of Stone Mountain, a very important nerve center for interplanetary communication. Here was received the news from all over the Earth to be flashed to Venus and Mars when they were in favorable position.

Acre sat in his chair before the big keyboard of the helio, his nimble fingers flying over the keys, and his eyes roving over the news item before him.

“Well there ‘30’ for the boys at Vel Deur.

Guess we’d better let ‘er cool off for awhile before we call Kraupuk, Venus, eh?” he said, leaning back with his hands clasped behind his head.

“Yeah, better do that and keep that water cooler running in the meantime. Got a lot of messages piled up here for Kraupuk,” Fran advised. He went to the big control panel, and shut off the intense, blinding arc of the helio.

Fran Hammond was a young University student on vacation and, though his father was president of Hammond Interplanetary Communications, Ltd., he had worked his way through school during vacations by operating in the helio stations of the company. He was a healthy, glowing type of youth, and loved the glamor and excitement of interplanetary communication. His sole companion, Acre, was an older man, chief of the station and destined for something big in the Hammond Company.

“Better tell Frisco to shoot everything for Mars over to Honolulu, Fran. The planet’s getting too low. Don’t take anything—check ‘em back.”

Fran sat down at a small microphone, and pressed a button. In a moment there was an answering buzz.

“Hello, Fritz? Better switch over to Honolulu now. We’re through with Vel Deur. I’ve got a few items from there I’ll send in to you on No. 2H.”

“Oke, Fran,” came Fritz’s voice through the resonant speaker.

Fran stepped over to a spindle and took

**UNCONSCIOUSLY before our very eyes, a revolution in business has been going on by the invention of new communication devices. Not only is it possible to send photographs by telegraph and radio; but also a man’s signature, or a legal document. All that is needed to complete this picture is the perfection of television. By that means four men in four different parts of the country can sit at their own desks and draw up a contract; or a teacher can hold a class for students in all parts of the country; or treaties between nations can be drawn up without any envoy being obliged to leave his country.**

**These wonders are well on the way to perfection, and there is no doubt but that they will change our whole lives radically. They will introduce new complexities into our existence, new conflict, and new thrills. Some of these conflicts Mr. Stangland gives us in his fast moving story of deviltry and intrigue.**

down a reel of perforated tape. He placed it in a multiplex transmitter, and immediately there began a high speed clicking sound from the machine. In the room was a number of complex machines, several receivers that looked like overgrown typewriters and several high speed transmitters for relaying messages from the helio stations on Venus and Mars.

These messages were received by the electric eye of a highpower telescope and transformed into electric impulses for the multiplex receiver. In an adjoining room were humming motors and big fat transformers that sang a deep song of tireless work all day and night. A straight and trim brown-skinned figure, Fran stood before the high-panelled window looking east, enjoying the sharp, clear outlines of the mountains in the early morning.

It was several hours before sunrise. In the crystal sparkling atmosphere of the high altitude the stars scintillated like a myriad of tiny polished jewels; some were red and white, and others appeared to be revolving slowly, flashing purple, red and greenish-violet from a thousand facets. Outside a crisp breeze swept up from the valley below, and whistled about the corners of the lone, squat building. Over the rim of the world a brilliant, sparkling planet rose imperceptibly, ascending into the blue-black sky. Fran felt a thrill in his heart every time he witnessed the glory of the rising of Venus.

"Well, there she is!" he announced, turning to Acre.

The latter stood behind Fran and looked at the silvery gleaming eye.

"Certainly a pretty sight, eh?" he commented. He walked over to an instrument that looked like a sextant. "Guess I'll take a shot at her and get ready for work. Sig-

nals will be kind of distorted until she gets a bit higher."

He noted the angle, and stepped over to a hemisphere. Throwing on the power to a motor that moved the big fiery eye of the helio, he traced a course in the sky for the day, and set it for slow motion, locking the instrument in place. Outside, the huge helio slowly turned like a mighty all-seeing orb of a colossus, and focussed itself on the rising planet. And then of a sudden billions of candlepower flashed out across millions of miles of empty space.

"Hope we can get them right away, because we'll only have a few hours to operate before the sun gets too bright," he told Fran, seating himself before the keyboard of the transmitting helio, and making a few tentative pecks at the keys for adjustment.

"Stone Mountain calling Kraupuk," he typed off as a preliminary to two-way communication with Venus. The immense, brilliant pupilled eye hundreds of feet above Acre blinked rapidly.

**T**HE chattering and clicking ceased, as the two operators waited tensely in the contrasting silence for an answer.



ARTHUR G. STANGLAND

Minutes passed . . . .

Click-click, click-click . . . .

At Acre's right hand the receiving teletype machine started to form intelligible words on a tape.

"Kraupuk answering . . . v . . . v . . . v . . . v . . . have lots of messages for you. Unable to get Catskill station. Cloudy. Ready for double communication?"

Acre inserted the perforator in the receiver and sealed its case.

"All right, Fran, let me have those items on your hook. Here goes."

"All clear. Start firing!" Acre typed.

As soon as the light impulses, travelling



at 186,000 miles per second, had reached the distant planet, the room was filled with a multitude of high frequency sounds of speeding messages coming and going over the nerve centers of two planets.

Fran was busy with the Frisco and New York lines of the News Co., receiving messages and turning them over to Acre, and in turn taking his messages to transmit to the head offices. There was news from every corner of the Earth: political developments of the past day, reports, disasters and . . .

"FLASH.

Millions in interplanetary credit units were stolen today from the Bank of Italy, member of the Interplanetary Banking Association. Numbers of the credit letters were evidently obtained from someone in the bank, and were withdrawn by persons unknown. The case resembles the one at Kraupuk a year ago which has not yet been solved, and it is hinted that an interplanetary league of criminals is back of the theft. All Interplanetary Association banks have been warned."

"Well, will you look at this, Acre!" Fran exclaimed, showing the flash to the operator.

The flying fingers of Acre stopped, as he paused to read the dispatch.

"Oh, my aunt, I wonder if they got my million!" he cried in a high falsetto, feigning alarm.

"They'd wait a long time for you to make your first million so they could steal it," Fran grinned. Then he sobered. "That's a funny thing, Acre, isn't it? Remember that theft in Kraupuk mentioned here? They did the same thing up there, didn't they? Took a cool million in credit units without anyone knowing it. Wonder how they got those numbers? And then, too, before the million could be drawn out, finger prints had to be taken. I don't understand it."

"Yeah, 'tis kind of funny, at that. Think I'll send this flash right away. It ought to take precedence over the rest of this stuff," Acre commented, turning to his keys. His fingers itched to get going again. He started the message.

Bang . . . . crash! . . . . crash! . . . .

There was a sudden report followed by the loud crash of collapsing glass, and still

later the crackling reports of splintering glass on the roof of the building. The glaring eye of the helio went out with a blinding, terrific flash and a crackling explosion.

Acre jumped to his feet, overturning his chair, and sprang for the control board. There was a bright flash and a report as several circuit breakers opened on the black panel.

"There they go!" Fran cried, pointing out the window down the mountain side.

Racing madly down the broad, mountain road a long, low slung car sped in a black streak, her powerful lights flooding the highway like day.

"What in the world—?" Acre began, totally surprised.

"You stay here, and get Sacramento with the televisor and warn everyone around this country. I'm going to follow 'em!"

Fran grabbed a small highpowered electric flash gun, and made hurriedly for the station garage. Here was kept a beautiful, sleek looking Lynx for use of the station, one of the fastest Diesel cars made and capable of a top speed of 300 miles per hour on the table smooth 200-foot concrete highways. The machine was made to pierce the air like a falling drop of water, broad and massive in front and tapering down to a small rear.

Wind slid off its rounded, glossy body like water on an oily billiard ball. The faster the car went the safer it was, for air has properties of a solid at high speeds, striking its sloping nose with terrific force, and therefore creating a vector pointed downward, forcing the car to cling to the road.

### The Mad Pursuit

OPENING the tiny door, Fran jumped into the heavy cushioned seat and pulled the transparent top cowling piece shut with a slam, making almost an airtight compartment. He pressed a small button on the broad dashboard, and immediately the car started forward under the silent power of a giant battery. Upon reaching twenty miles an hour the electric motor cut

out, and fifty droning cylinders, champing at the bit, let out a gargantuan roar as they took up the momentum, and sent five hundred horsepower to the four massive wheels.

The great three-ton car leapt ahead eighty miles an hour down the winding, high banked road. Fran stared ahead into the dark, smiling grimly, thrilling to the light touch of his foot that controlled so much power. There was a sense of safety in the muffled, deep throated roar that streamed back from under the long hood. He peered into the night ahead through the slanted windshield that clove the air like an aerial torpedo. No sign of them yet. He dared not increase the speed, for the centrifugal thrust indicator already showed five miles in excess of safety around the mountain curves. A big neon sign with three numbers on it came into view, as he thundered around a curve.

"Speed limit 100."

"Getting down into the valley," he mumbled to himself, and shoved the speedometer to "100". But he was straining at the tether. 100 was too slow; he could slow up for the next curve with his big air brakes. The indicator made a rapid ascent to 150. Those signs, anyway, were for ordinary careful drivers who didn't drive a Lynx. The four fan-shaped exhausts protruding from the tail of the car let out a high pitched whistle, as the huge car fled down the straightaway with her giant engine emitting a continuous, deep bay like a bloodhound close on the heels of his quarry.

Down the raceway a mile, Fran saw the red numbers standing out against a dark background: "75".

"Seventy-five be hanged!" he said half aloud to himself in the luxurious, soft gloom of his compartment, "I can take it at eighty-five."

He looked out at the countryside streaming by the car in different variegated streaks of color. Overhead, through the glass covering, he could see the twinkling stars and lower down was the brilliant white star of Venus. What did the station at Kraupuk think? Stone Mountain suddenly blind. Hm.

The neon sign left a red-streaked impression in his eye, as he flashed by it. He still

had a mile and half to the curve. He throttled down to ninety and took a grip on the wide, thin rimmed wheel as the curve raced toward him. Eighty-five miles an hour. He entered on the left hand side, taking a terrible chance. The centrifugal needle immediately jumped to ten miles, and a little red light flashed above it. Maximum speed before turning over.

The broad, heavy duty tread of the thick tires sent up a deep singing cry of warning. In spite of his death grip on the steering wheel Fran could not hold the heavy car low on the curve, and with a panicky thumping of his heart he watched it creep up to the top closer and closer, and as it came out on to a long straightaway again, the hub of the right rear wheel carried away a thirty-foot section of safety wire netting with an ear splitting screech. But he had made it, yet nevertheless at a price. His legs seemed to sag even while at rest, and he brushed away a bead of moisture on his brow.

However, he must be getting along, he told himself. Hadn't seen hair nor hide of the others. On the long ten-mile stretch the speedometer almost revealed 200. And then as he rounded a wide, long curve, he started at the sight of two tiny twinkling lights miles away. One was red and the other green. Suddenly they both flashed a bright red, and then disappeared.

"Went into a curve," Fran thought.

A sign flashed by in a red streak, "250".

"Well, that means three hundred for me. The sign shows the limit for most cars, but it's not mine!" and his foot touched the floor.

280 . . . 290 . . . 300 . . . 305 miles per hour!

An excited grin spread over his face. This was the fastest he'd ever gone in a surface car. Things just streamed by in a hazy kaleidoscope.

But he was more careful in rounding curves after his sickening experience. He took the next one at a safe speed. The massive, low car swept around the wide curve with a slight whining of tires at 80 miles. The brilliant flood lights of the car turned with the front wheels, and before he was around the curve Fran jammed at the big

double air brake pedal with a cry of despair. Spread across the road was a number of fence posts taken from a pile at the side.

THE brakes took hold with a big sigh, and the car careened to the side. Would he stop in time or run over the posts, inevitably damaging the car beyond repair, and perhaps injuring himself fatally?

It was with positive relief that Fran pulled the emergency brake though he nearly went through the glass, and stopped the skidding car several feet from the dangerous wood posts. He climbed from the cockpit a bit shaky, cursing the man or men ahead. With rapid work he cleared the road, and made for his seat again. He smiled grimly at two streaks of black behind his car on the white pavement.

With a heavy roar the weighty car leapt ahead down the highway guided by a very determined hand at the wheel. Several miles on Fran made out the two lights again, and in the thirty-mile stretch across a small desert he ate up the intervening distance to the car ahead. A half mile away the other car suddenly took a little used road leading back up into a lonely stretch of mountain country.

A chance glance at his oil reserve drew an oath from Fran. It was almost empty. For several fuming minutes he waited at the cross roads oil station to take on 75 gallons of fuel. Helplessly he watched the other car rumbling up the road while he lost precious moments of hot pursuit.

"All right, charge that to Hammond Communications!" he tossed to the attendant, and in a burst of roaring exhausts rolled out of the station swiftly.

The road led ever upward in a desolate, thinly inhabited country. Across raging, white foamed torrents, and up steep, rocky grades the powerful Lynx sped in relentless chase. By now the sun had hoisted itself into the sky enough to suffuse the mountainous region in a wondrous golden glow. It bathed the upper crags warmly, and skipped over the ravines, still wet and dripping with the heavy dew of night. Upon everything was a freshness as if Dame

Nature had just bathed the new born babe of day.

Fran was gaining slowly, risking curves and taking hair breadth chances to make up the distance to the elusive car ahead.

"Who in the devil are they, and where are they going?" he puzzled to himself. What reason did they have for demolishing the helio? It was the first time he ever heard of anyone destroying such an instrument.

Coming to a sharp curve on a steep grade, he gave her the gun to maintain momentum. The droning motor answered with a blast of power, and swept around the curve like a swooping hawk. There in a cut between two solid rock walls was a huge massive boulder, lying as if having just fallen down onto the road from the cliff above. Too late. The heavy car bore down helplessly upon the immovable rock. The broad wheels dug into the road desperately trying to grip the loose macadam like a bear sliding down a gravelled slope. In the flash of a split second it was over, and the fleet, shiny road monster lay a crumpled twisted mass of steel and broken glass. Immediately, three men came around the sharp curve behind the boulder, and ran for the smoking car.

### Imprisoned!

"A W, he'll be all right."

Fran opened his eyes to stare at a rough log ceiling. For a moment his mind seemed to be a blank. Then he recalled the crash with a shudder, and stirred to look for the source of the voice. A sudden shooting pain went through his back. He winced.

"That's all right, fella. You'll be oke in a little while," a blue eyed man said, bending over him. Fran noted they were a steely blue that very likely could be frosty on occasion.

"Where am I?" he asked blankly.

"In a mountain cabin," the other answered cryptically, "Now don't get too curious. Just shut up."

"Nice chap," Fran mumbled to himself, as the man went out.

For awhile he lay still, examining the room from his cot. It was a rustic hunting lodge belonging to some wealthy man,

he concluded, and evidently he was on the second floor, because he could hear voices droning down below. How his head ached! It felt as if it had been strapped tight to a plank for days on end. After an hour he heard two men coming up steps somewhere.

One was the man of the blue eyes and the other was an angular man with long hands and fingers and a beaked nose.

"What's your name?" the second man asked point-blank.

"Fran Hammond. What's yours, and what am I doing here?" the operator replied, thinking of all kinds of questions he wanted to ask.

"Hammond? Hammond of the Interplanetary Communications, Ltd.?" the other queried with increasing interest.

"Well, my dad's president of the company, if that's what you mean. But I want to know where I am." Fran began to have a sneaking suspicion at the appearance of a sneer on the man's face.

"So!" the man said slowly, a slight note of sarcasm in his voice. A crafty gleam came into his eyes, and he turned to the other man with him, "Rolvaag, you heard what he said?"

"Yes. A Hammond," the man addressed as Rolvaag answered.

"Well, what of it!" Fran exclaimed.

"We didn't realize we were racing with such distinguished company," the angular man said mockingly. "Permit me to introduce myself. You have the pleasure of being the guest of Nicolle Lorentz, soldier of fortune."

"Lorentz, the Racing Fool!" Fran cried.

"Not so much of a fool, however," the other returned.

"And you're the one then that destroyed the helio," the prostrate man exclaimed aloud.

"We conveniently put it out of working order," Lorentz smiled, liking the euphemism better.

"Don't you realize you are liable to exile on Phobos for life for tampering with interplanetary communication, man? You'll be hunted for life for this!" Fran cried. "And in the first place, what's behind all this?"

"Ah, you are very direct, my dear fellow,

aren't you? I see no harm in telling you since you have in a way earned that right to know, having come several hundred miles hot on our trail. You did well to tail the Racing Fool so closely. Yet it takes a Lynx to follow a Lynx. Well, you see, it was to our advantage to prevent the transmission of a certain message to Kraupuk for a certain time. And if I understand the heliograph code at all, I might say we were just in the nick of time. Do you follow me?"

"Crude tactics you used trying to stop me from trailing you, Lorentz," Fran sneered.

"It was a rather large obstacle in the pass, and perhaps a bit crude, I admit. But then—here you are!" Lorentz shrugged his angular shoulders.

"Well, what're you doing with me, crippled, on your hands?" Fran demanded.

"I'll have to admit myself we didn't know at first. It looked as though you'd have to be left here by yourself as there was not room enough with you for a trip to Venus. But your identity has changed everything for us. We shall not go to Venus, at least not yet."

"I see it all now. You're the one responsible for the Bank of Italy robbery, and you were making a getaway when you thought of the helio. You fool; you won't get very far in this day and age," Fran returned caustically.

"**H**AH, by now those credit units have been negotiated into the minor exchanges of the Chinese provinces, and never will be found, my simple lad," Lorentz boasted.

"Nevertheless, when you leave for Venus, I shall be at large to give you away."

"Oh, but my dear fellow we said we might have to leave you here for lack of room on board. You forget we didn't mention how we should leave you. Understand that in these uninhabited parts of the high altitudes many boulders come down onto the roads, and it would be simple to leave you in your wrecked car down there and set the scene for an unavoidable and fatal crash."

"You murderer!" Fran cried out rising from his cot with difficulty.

"Tush, tush, my headstrong youth. What is a life after all in the career of an aggressive man?" Lorentz exclaimed lightly.

"You black hearted beggar!" Fran almost yelled, sitting up in excruciating pain.

"Rolvaag, get him some quick nourishment," ordered Lorentz. And then to Fran, "It'll take you the rest of the day to get the use of your back, and by tomorrow morning we'll be able to use you. Now don't be a fool, Hammond. Be a good lad, and we'll find other means of handling this deal." And Lorentz went out, locking the heavy door.

Until Rolvaag returned, Fran pondered in vain the use that Lorentz could have for him. He felt uneasy at the matter-of-fact threat he had so casually mentioned, for a man so used to evading the law as the Racing Fool never did things haphazardly even though he took chances. And yet, and yet Fran thought, there is always the fatal slip-up that finally arises to damn the cleverest of thieves.

He took the food brought to him. It was mainly liquids of the synthetic vegetable bases, and concentrates in small cubes. Even if he wasn't immediately made well, his spirits rose with a filled stomach and an invigorated system due to one of the light liquids. He was locked in the room, and after a bit he was able to sit up and flex his muscles, relieving himself of the constant spinal pain.

He looked out the window and discovered indeed, that it was a two-story lodge somewhere in a lonely spot in the mountains. Below, showing just the tip of its rear was the massive Lynx of Lorentz.

He smiled grimly at the memory of the pursuit. And just beyond was the torpedo outline of the space flyer that would be leaving soon for Venus carrying the criminals away to evade the Terrestrial Police. And once on that planet they would hide away in fastnesses of the Polarian Mountains to wait for things to blow over. Then a return to the Chinese provinces to claim their booty.

Unless he did something to stop them. And yet Lorentz had said they would not be

leaving for Venus for awhile until he had been used. Until he had been used! He puzzled over that sentence. Tomorrow morning he was to be forced to be a party in their nefarious work, a tool in their hands.

There seemed to be a great deal of talking and working in the room below him. A third bass voice sometimes joined in the conversations against a background of humming motors and clicking machinery. For awhile he listened intently trying hard to distinguish intelligible sentences, but the noisy machinery made it impossible. Once his interest and curiosity were piqued to a high pitch when the deep foggy voice cried out sharply:

"Don't be so impatient, Lorentz. I'll have it set up by tomorrow in time!"

Fran sat on the edge of the bed resting, considering this remark. But it was a fruitless game of guessing, and he set about examining his prison. By light exercising he had been able to work out a great deal of the soreness in his back. He had got a pretty badly wrenched spine in the wreck, evidently. Tip-toeing about the floor he was disappointed to find the room barren of everything. It was approximately fifteen by twenty feet, and if it had contained anything besides the bed, it had been moved out before he gained consciousness.

To save his strength he decided to sleep for several hours, impressing his subconscious mind that he must awaken before evening. By then he would have saved up strength enough to carry out some plan of escape.

### At the Needles' Point

HOURS passed while three men in the room below labored over a low humming machine, holding prolonged discussions and heated arguments. And in the room above, Nature mended the bruised body of the sleeping Fran, building up the young athletic constitution to meet anew the battles of existence.

There was a step at the door. Fran woke up immediately, nerves a-tingle. It was early evening, and the stars were already coming out. In the gloom he saw the door

opening. A cylindrical mercury-arc lamp suspended from the ceiling snapped on.

"Ah, been sleeping and resting like a good little lad, eh?" Lorentz exclaimed facetiously.

"I had to, you scoundrel! I can't move," Fran cried out, feigning a wince as he lifted his head.

"What! Still on your back? Come, come, man, you must be able to sit up by now. Get up and move around," the angular Lorentz commanded with a puzzled frown on his brown. And he grabbed Fran's arm to help him up.

The injured man cried out in pain and showed all the facial expressions of excruciating agony. After a moment Lorentz stopped, half unbelieving the condition of the recumbent Fran.

"Rolvaag, he called at the door, "bring the vibrator and sun lamp here!"

And for several minutes the secretly amused Fran was given electric treatments to banish the pains in his muscled back. As Lorentz went out, he turned to Fran, a menacing look in his face.

"Whether you can walk or not, Hammond, tomorrow morning you are going to assist us a bit downstairs. So make up your mind to be able to get around!"

He locked the door and went downstairs.

Fran waited in fear that the men below would never stop to get sleep and rest. He sat on the bed listening intently to them moving them about. Finally, the humming motors died down, and the deep voice said:

"Well, Lorentz, let's get some sleep if we got to go back to Frisco tomorrow. I'm all in what with driving hard this morning and setting up this cranky thing all day. It finally works though."

Rolvaag evidently had gone to bed before the others, for already Fran could hear his snores somewhere in the house. The lights were put out, and after an hour he crept over the floor to the window, and drew it up slowly. Throwing his foot over the sill, he let himself down easily to the lower window sill, and then dropped noiselessly to the ground. He crouched for a moment holding his breath and listening. Not a sound.

Immediately, he started for the Lynx.

"No. Better take the ship," he breathed to himself, stopping, "they'd get me from the air, if I didn't. And maybe that road is still blocked. Too much of a chance."

Halfway to the intricate space annihilator, a wonderful achievement of mankind, Fran felt his heart leap, as the entire court was flooded with a blinding light and a voice cried out: "Halt where you are!"

His spirit sagged within him. No telling what the madcap Lorentz would do now. The three men came up from behind him with wicked looking little needle-pointed flash guns.

"So the lad decided his back was good enough to take him elsewhere tonight, eh?" the sharp-featured leader snarled. "But you didn't fool the photocell, my smart young man."

He was handcuffed to an iron ring in the middle of a big room for the rest of the night. In vain he attempted escape from the cold iron clamp. And finally he decided to make the best of the situation by getting a fitful snatch of sleep.

\* \* \* \*

"Come on, up with you!"

To Fran it seemed he had hardly closed his eyes. Rolvaag had unlocked his shackles and was standing over him. It was early morning.

"Don't try anything funny now. Up with you and into this room." The cold blue-eyed blonde jerked his tired body to standing and propelled him into a room filled with a multitude of instruments and humming motors. The third man with the bass voice stood over a live television, adjusting it for synchronism. Lorentz called him Troën, Fran noted.

"Well, had a refreshing night's rest, I hope?" the ironic Lorentz smiled.

"No. And you know it!" Fran said sullenly. "See here, Lorentz, what do you want of me?"

"I CAN'T help admiring your desire to know the stark truth in all matters, Hammond," the wily Lorentz commented. "But we shall tell you. It is true that your father has banking connections in Portland,

Oregon, at the Columbia Trust Company and at the old Hanover Bank in New York, isn't it?"

"Yes, but what good does that do you?"

"Ah, lots! You see, you are going to call those banks on their television service and transfer one million in credit units from Portland and two millions from New York to the Trust and Savings at San Francisco."

"But that is impossible! They would suspect such a large movement of units to Frisco," cried Fran, realizing the plan of Lorentz in full.

"It is a well known fact that your father transfers large amounts such as these to other cities for the use of the Interplanetary Communications Company. Now, when we connect with Portland, you give the cashier the correct numbers, because if he reports them as wrong, you get a touch of the sear-needle right here!" and Lorentz drew out a little barrel-like weapon and focussed it at Fran's waist. Immediately there was a tiny pencil ray shooting from it, and Fran twisted in the grip of the other two men. It felt like a white hot needle pricking his skin. Beads of nervous perspiration stood out on his forehead.

"I can make it hotter if I want to. And if I choose, I can reduce you to a gibbering idiot by aiming at the base of your brain!"

Fran looked about the room in hope of some means of help or escape from this madman. He was helpless.

"All right, here's Portland," announced Troën who had been tuning the instrument.

"Don't forget now. Make a plausible excuse, and transfer the stuff to the account of one Emanuel Vincenes," was Lorentz's final warning as Fran was made to stand before the rapidly clearing glass screen of the televisior.

"Good morning," greeted a cheerful face on the screen. It was the television service cashier of the bank.

Lorentz and the others stood to one side out of range, training the needle guns on Fran. He felt their prickly pencil points and knew that they could be more powerful and terribly painful.

"This is Fran Hammond, Mr. Bruce. I want to transfer a million credit units for

my father to the account of Emanuel Vincenes in the Trust and Savings in Frisco," Fran said in a slightly nervous voice.

"Mr. Hammond, everyone has been wondering where you've disappeared to—where are you?"

"Why—ah," the pencil rays began to burn, "I just got back to Stone Mountain. We've just placed an order for a new helio projector and since Dad's gone off to South Africa it was up to me to transfer the money for it."

"Well, I know your dad has let you place some of these orders before just for the business experience. But a million credit units! That's quite a bit."

"I know, but I'll take all responsibility for this in Dad's absence." Fran almost squirmed under the three hot rays.

"Well—all right, then. You sign a finger print identification card to take to the bank. We'll transfer yours for verification. Give me the number of the account," Bruce said somewhat hesitantly.

"Just a moment, 'til I fish the card out of my pocket," Fran said. "Here it is. 528-29-1—oh, oh, I dropped it." And he stooped to pick it up. The rays came dangerously close to the base of his skull. Bruce looked up from the pad upon which he was copying the combination of numbers. Fran finished the number and then looked into the screen at Bruce.

There was a new look in the man's face. The lines about his mouth were tighter and his eyes looked intently at Fran. He wrote something on a slip and gave it to a man.

"What happened down there, Fran, at the station?" he asked, and for a minute the cashier engaged Fran in conversation about the wrecking of the helio.

The rays grew hot. Fran was talking too long. Finally, he broke connections with the bank televisior.

"You fool, you talked too long! Lorentz blazed in a passion at him.

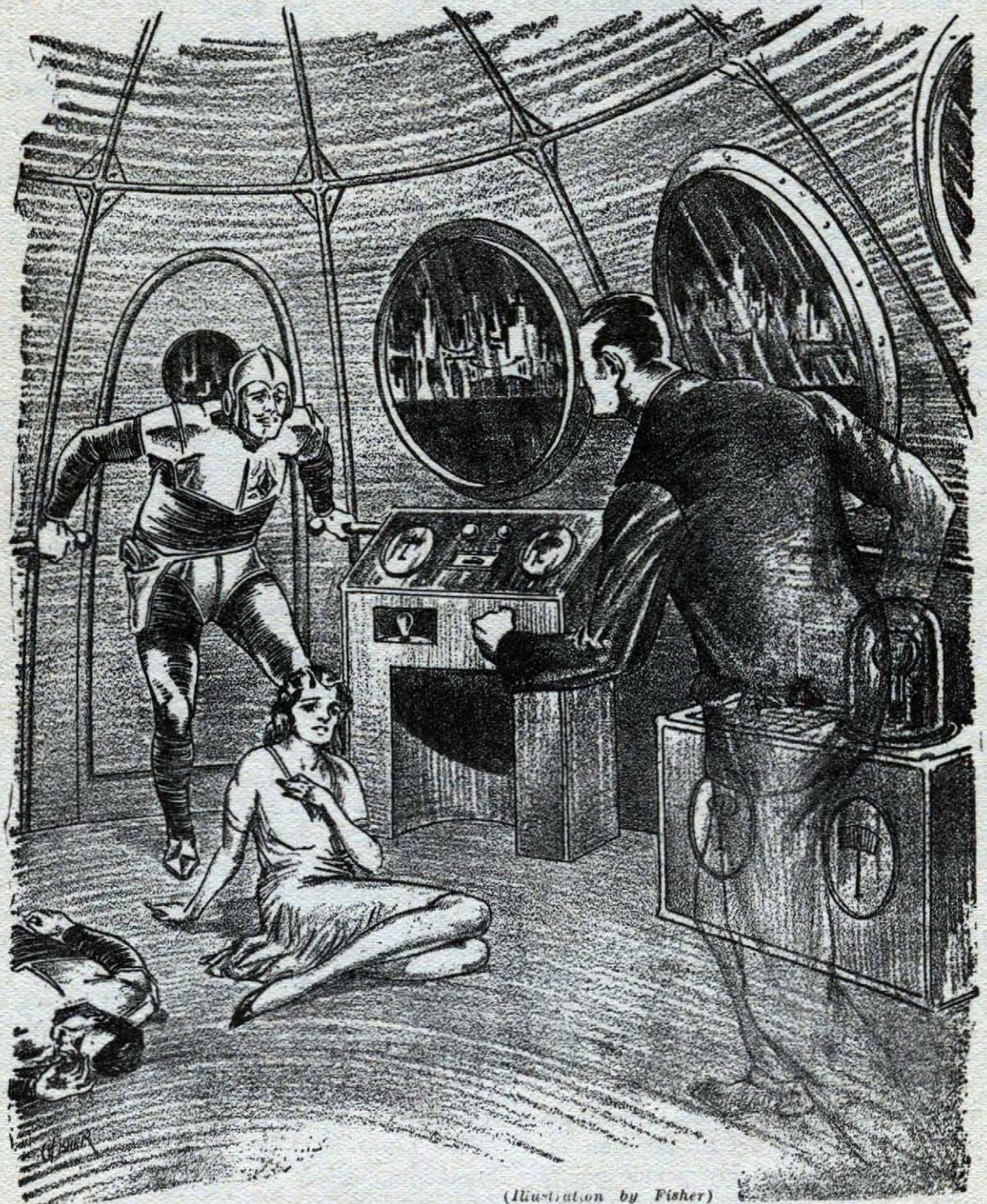
"We better let New York go, Lorentz," Troën admonished, "they'd be too much explaining to do."

Very reluctantly Lorentz gave up the slim chance of getting another two million.

(Continued on Page 129)

# The Man Who Changed the Future

By R. F. Starzl



(Illustration by Fisher)

Then Park felt the floor under him. And then a fierce and joyous lust for battle. He was leaping across the floor. . . .



LAKOPOLIS is a big town—a city of over three million people. As a matter of course it has its gangsters and super-criminals. Most people have become used to them, but Park Helm threw down his *Tribune* with disgust at the monotonous headlines.

"How's it ever going to end!" he exclaimed. "Mobs in high-powered cars,—not even bothering to wear masks,—carry on their trade of murder without fear of punishment. Is there no limit to what the public'll stand?"

The speaker was a young man, probably not more than 23 or 24. He was tall and lean, with the purposeful look of a crusader in his straight, thin lips, firm jaw, and deep-set dark eyes. His face was tanned, except the upper part of his forehead, and from it the hair was brushed back, dark and crisp.

Professor Nicholson smiled. Those who knew his fame were always surprised when they first saw Nicholson. He was so young. And instead of being austere and spare he was fat and jolly. He had a magnificent bald head, curved eye-glasses that twinkled like rock crystal, and beautiful false teeth that denied their own authenticity by their very perfection. And here in the opulently equipped laboratory of the University of Lakopolis he was far removed from the world of gangsters. So he smiled.

"You're still on the Citizens' Reform staff, aren't you?"

Park Helm darted a startled look around.

"Pipe down! Pipe down!" he admonish-

ed. "We've lost four of our men in the past month. Just because you know I'm on the staff you don't have to cry it to the world!"

Nicholson lost his smile.

"That so?" he said soberly. "I've been working on something new lately and didn't read the papers. I thought the gang-men only killed one another."

"They'll kill anybody that stands in their way, so please don't be too careless when you talk."

Nicholson thoughtfully pulled out his short calabash pipe and set it going.

"Y'know, Park, I wish you'd kept up your work here. You were the best man in my class. I had a fellowship all lined up for you."

But the young man shook his head. "There's bigger work to do," he said. "Our very existence as a self-governing people is at stake. I'm in this battle, and I'm going to stay in it!"

Nicholson reminded him casually:

"You remarked a while ago that you'd like to know how it's going to end."

"That I certainly would," Park Helm admitted. "It would give us something to

go on." Then his grim young face relaxed in a smile as he remembered.

"If you had your time equipoise ready—the one you've been working on all these years, you could shoot me into the future, say about the year 2030, and I could have a look for myself."

The professor was not disturbed by this gentle raillery.

"All right," he said, "when do you want to go?"

*AS we struggle with our daily problems and vexations, it is probable that we wonder many times whether the future will hold as many tribulations as the present, whether, in fact, man is doomed to live out his racial existence in unhappiness.*

*Considering our present social life, many prophets profess to see in the rise of gangdom and racketeering a threat at all law and order; and that we will revert to feudal days when "robber barons" held control of all highways and plundered all passersby irrespective of their station in life.*

*The threat offered by gangdom is even more dangerous when we find it using all modern scientific weapons, even before the forces of law and order use them. Mr. Starzl offers us an exciting prophecy of the future, based on excellent logic and judgment.*

He got heavily to his feet and led the way to another room where the apparatus, already familiar in its general appearance to Park Helm, was set up. It consisted essentially of two enormous helices crossing each other at right angles. Inside the vertical helix was a cage of bakelite rods large enough to admit a full grown person.

Heavy cables led from the helices to enormous, motor-operated mercury jet switches.

"You can hardly notice the difference, eh?" Nicholson commented happily. "I was right in principle all the time, but the capacity of my condensers was too small. I invented those." He pointed to racks of square glass jars covering one entire wall. "I have here now—" he paused impressively—"a storage capacity of nearly a billion farads at 5,000 volts!"

PARK looked dazed. "Yes sir!" Nicholson insisted. "See those generators? Twenty-five kilowatts rating apiece and they've been running for weeks to charge the condensers. They're pretty well up now. The discharge, oscillatory in nature, will be enormous, but because of its brevity will not melt the coils. You can imagine the etheric strain where the fields of those two coils meet. Any object in there goes backward in time if the fields oppose, and ahead into the future if they cooperate. The angle of incidence governs. Now, I believe you said 2030." He turned a handwheel and the horizontal helix tipped until it was at an angle to the floor of about 45 degrees.

"Guess that'll hit it within a year or two. I'll leave it set that way and when I call you back I'll simply give you reversed polarity out of the auxiliary condensers."

Park Helm was somewhat uncertain.

"Pardon me if I hesitate, professor, but shouldn't I take a gun with me, some money

and . . ."

"No need for that," Nicholson interposed cheerily. "Your body won't go, you know. That isn't quite safe, as yet. Only a sort of astral projection of yourself. You can see and hear, but you will be invisible and incapable of making a sound. You'll be a 'ghost'."

"Yeah, I guess that's so. A ghost for good."

"No danger at all," Nicholson assured him. "I tried it yesterday with my switches set for automatic return. I hung around Julius Caesar, and my automatic switch snatched me back just in time to make me miss seeing Julius get murdered."

Park laughed nervously as he climbed up the side of the vertical helix and dropped down through an opening into the cage. "Somehow I can't believe it—it seems so fantastic!"

Nicholson pressed the button. The switch motors leaped into life, and in a few seconds it was all over. The machinery automatically set itself to neutral. The body of Park Helm slumped to the floor of the cage and Nicholson reached through the bars to compose the limbs in

a more restful attitude.

"No use letting the lad get all cramped up while he's away," he muttered.

\* \* \*

The one instant Park Helm was looking through the bars with a slightly nervous smile, and the next he was standing in a room that was strange to him. He looked at the calendar on the wall and noted that it was August, 2030. He glanced down at his feet and they were not there. This gave him somewhat of a shock, and when he tried to feel his body, only to realize that he had no body nor hands to feel it with, he received yet another shock. Then came the reassuring thought of the confident profes-



R. F. STARZL

or back in the laboratory, and his promise to bring him back at midnight, about 14 hours hence. He looked around him.

He saw a girl. She was gazing pensively out of a window at the streets some thousand feet or so below. There was a vista of cloud-piercing pyramidal buildings with innumerable levels, and ways for pedestrians and vehicles on every level. Spidery thoroughfares, that wound everywhere through thin air with seemingly no support, carried swarms of humanity in bright colors and restless activity. Overhead the sun was often obscured by innumerable flying machines. It was a city such as the prophets of science had dreamed of—this Lakopolis of 2030. A city of sheer hugeness, of illimitable vistas, almost of mystic beauty.

Park Helm never gave it a second glance. By merely wishing, he found himself at the girl's side, where he could drink in her delicate beauty. She was utterly unconscious of his presence, and continued to gaze out of the window, half wistfully—half impatiently.

Her small, perfect body was draped in a garment that was vaguely reminiscent of the Greek influence—a shimmering light-blue substance that was like silk but much finer. Her profile was cameo-like, and her skin had the delicate golden tints of old ivory. Her hair, drawn tightly to her head like a helmet, and fixed low at the back of her neck, was golden too, and so was her voice. She turned and spoke to someone in the next room:

"He said he was coming right in. Do you suppose they got him after all, mother? Her tones implied uneasiness, and perhaps, a trace of shamed hope.

"Give him a little more time, Myra." An older woman came to the door. She resembled her daughter in many ways, save that she was stouter and the hair on her finely chiseled head was white. She put a thin, white, wrinkled hand to her forehead and sighed:

"It's dreadful—dreadful— What are the times coming to?"

The girl did not answer.

"I remember it was like this when your

father was put on a spot. Just like this. He was doing some experimenting with etheric waves, and accidentally cut in on one of Angelo's beams—"

"It wasn't Angelo, mother," the girl corrected, a little wearily. "It was Spumoni. Angelo wiped him and his gang out about five years ago. But it was Spumoni who put Dad on the spot." The tragedy oft repeated had long ceased to arouse emotion in the girl. She hardly remembered the big, kindly man who had been her father. Her father who had been so unlucky as to cross a gangster chieftain's path.

"I don't know how this'll all end!" the older woman continued. "It was just like this. A man he had never seen before called him on the televisor—told him sentence had been passed. Your father went to the police—it was right during a 'police drive on the hoodlums'—(they've dropped that pretense anyway!) The police locked your father in a cell where they said he'd be safe. Yet the next morning he was found dead with an infrared burn on his temple.

The girl turned and rushed to her mother's side.

"Mother, don't take on so!" she cried. "You'll have another of your spells."

"I will say it!" the old woman persisted with obstinacy of spoiled old age. "Like the angel of death—the angel of death, Angelo reached him behind the prison walls!"

"Spumoni, not Angelo," the girl corrected mechanically, "and it was all done quite naturally. The assassin had entry to the prison."

A soft chime sounded, and the girl stepped over to it and peered into the teleplate to see who was at the door. Immediately she pressed the button to admit the caller.

### Bought and Paid For

PARK HELM, invisibly present in the apartment, took an immediate and instinctive dislike to James Burgess the moment that gentleman entered. He was dressed like all the men of that age, in a

blouse of light, flexible chain-mail, and trousers of the same material, while a cap of chain-mail, with flaps that could be drawn down to protect most of the face, covered his head. Park conjectured that his clothing was to some extent at least, both bullet and ray proof.

Burgess threw his cap off, and Park had a chance to observe him better. He bore himself with a swagger, which he had some trouble maintaining. He was about average height and slenderly built. His complexion was sallow, rather dark. His hair, black, straight and coarse, was combed back sleekly. He was handsome, not more than 27 or 28, and obviously a man who had done rather well in the world. Yet tonight he had a furtive air—something for which a man in his position might well be pardoned for.

The old lady greeted him with a singular mixture of eager welcome and reserve. One might think that he repelled her, yet she was obviously eager to please him and solicitous for his welfare.

"James!" she gasped, "I'm so glad you're still alive!"

"Still alive and kicking!" he exclaimed heartily, looking speculatively at Myra, his black eyes glittering and excited.

"We'll have to tear out right away!" he told the girl with a forced casual manner.

"We?" Myra's hand flew to her heart in an involuntary movement of protest.

Her mother was almost joyful. "We can be ready in half an hour," she declared. "You young folks can talk over your plans while I pack."

Burgess stopped her with a motion.

"Not you, mother," he said somewhat awkwardly. "You can join us later."

"You mean—you want to leave me here at the mercy of Angelo?"

"Angelo won't hurt you," Burgess assured her impatiently.

"And then he won't hurt me either," Myra submitted, "so I'll stay here."

Some of Burgess' studied urbanity dropped from him. He exclaimed harshly:

"Say, what's the idea. You planning to welch on me?"

Myra's chin came up a trifle.

"I didn't know I was bound to you yet!" she said coldly, "and the more I see of you of late the less I want to be."

"You can't go back on him now!" her mother interposed anxiously. "Why, he's—"

Burgess held up a warning hand, and when he addressed Myra again it was with suavity:

"Come, my girl, you used to like me. Now that we could leave this place forever and be safe always, why turn? We can go to Panama, Buenos Ayres, Paris or Vienna. The world is ours—all but Lakopolis. I have accounts at half a dozen European banks—trust me to see this coming for a long time. Now my amphibian helicopter is waiting at the lake front. We can get in and away before morning." He turned to the mother with a smile;

"It's only natural for a young girl to feel like that. She will change. She will live like a queen."

"My life is my own. I will not go with you!"

Park Helm, hanging invisibly at her side, exulted.

Burgess stared at her a long moment in silence.

"Suppose you got the idea somehow that you're too good for me."

Myra met his gaze defiantly.

"Not necessarily," she said at last, "but I have reasons to believe that you were one of Angelo's men until you split with him, and that's why he's spotting you."

"Your father was spotted by the boss whom Angelo bumped. Mean to say your father was one of the gang?"

"Where does your money come from, then?" the girl exclaimed, bravely suppressing her tears.

"Myra! Myra!" the old lady scolded. "You're shocking—you're—"

"So my money's tainted money, eh?" Burgess sneered. "Milady is too fine and pure to have anything to do with me, is she? Well, all right, my money did come from Angelo—every cent of it. Know how I got it?"

"No, no! Don't tell her everything!" the mother exclaimed, pawing at him with her fine white hands.

"Time she got wise!" Burgess snarled harshly. "Yes, I was Angelo's first man. I took care of his confidential business, handled his accounts, and did whatever odd jobs no one else could be trusted with. Shocked, eh?" Burgess laughed with sardonic amusement.

Myra had become pale, loathing plainly written on her face. Burgess took another tack;

"Nice apartment you have here—high and airy—cost five hundred a month. The dress you have on—nothing better or finer in the world—the automatic servants—the meals you eat every day—did you think these things came from the air? Well, they didn't. They were paid for by the tainted money you're spouting about. Didn't you ever wonder how your mother was able to do you so well here—coming from a little cubicle on the west side to this? You've lived here for three years on my money—ever since I saw you with that cheap young mechanic at Technical Park. Don't that mean anything to you? Why, I could have had you brought to me then and there. Instead I've paid to bring out your beauty—I've paid—"

"Myra, forgive me!" The old woman threw herself on the floor at the girl's feet. "I knew you'd never have a chance!" she wailed. "We were poor. You deserved the best. I wanted you to marry well—and common people can't afford to marry any more. Here I thought you'd have a chance, and Mr. Burgess loaned—"

"Ah yes! Mr. Burgess *loaned* the money!" Myra exclaimed bitterly. "And I was the collateral." Quietly she turned her back and walked to the window. Presently a tear splattered on the deep-tufted rug.

TO Park Helm, the role of detached observer was almost intolerable. He ached to take Myra's slight form in his arms, to comfort her. He entertained no doubt about his welcome. Already he loved her—the irony of it—a girl almost five generations removed from his own age; it seemed the simplest and most natural thing that she should return his love. But Myra looked through him at the hard glit-

ter of the city, and Burgess came up behind her. He did not touch her, knowing that in her present state of mind she would shrink as from a venomous serpent.

"Be fair enough to give me a hearing!" he begged, his voice low and pleading again. "D'ye know *why* I broke with Angelo?"

Not waiting for an answer, he went on: "As I told you, I was often commissioned to carry out special jobs for Angelo. The other night you were present at some charity doings or other. The Society Televue Company contributed some flashes of the party to the general news screen, and I happened to be with Angelo as he was watching the screen. By bad luck he saw you and heard your voice—you *are* beautiful! I claimed I didn't know you when he asked me, but he had one of his secretaries check up—"

Wonderingly, Myra turned and looked at him. She had detected a tremor of real emotion—of horror—in his voice.

"He gave me an order," Burgess went on in a lower tone, "to get you for his Rest Farm!"

Myra's startled eyes grew wide, fear-stricken. Many and furtive were the stories of that Rest Farm—ironically named. Many women disappeared from Lakopolis each year to provide fuel for the unbridled licentiousness of the gang chieftain's mob.

"He wanted you for himself," Burgess went on in a still lower voice, "and I didn't dare refuse. He was impatient. Spies immediately informed him that I was withdrawing funds on deposit here. You know the rest. And now, dear—" he tried a momentary caress which she did not resist—"Now, dear, you know how much I love you. I am driven to the ends of the earth for love of you—must I go alone?"

With a gesture of resignation she turned.

"I'm bought and paid for; I won't welch on the bargain." She stooped to the huddled form of her mother.

"Never mind, mother dear," she whispered. "Better this than the Rest Farm." She submitted to Burgess' embrace, and listened carefully to his instructions about the business of escape.

Burgess explained that his present where-

abouts were unknown to Angelo. Some time ago he had discovered the secret of Angelo's uncanny ability to know at any moment where his men were. A small radiocasting plant run by the power of radium was built into the Angelo identification belt that all members of the mob were required to wear. It was a simple matter for Angelo to identify each member by the particular wave harmonic emitted, and to locate him by means long unknown.

But Burgess' belt was in the side pocket of a public Dieselcab. It would lead Angelo a merry chase as the chauffeur plied his trade.

"Meet me tonight at Helicopter Basin No. 7", was Burgess' parting instruction. He kissed the cold lips upturned to his, and hurried out to one of the numerous landing stages. A pimply faced youth who had loitered nearby followed him quickly, spoke in a low voice into a pocket transmitter as he walked, leaped into an aerocab and followed the twinkling helicopter blades of Burgess' machine.

### The Coward

TO Park Helm a great sadness had come. He was but a disembodied ghost in this new, fascinating and dangerous world. The past, that body of his in Professor Nicholson's cage, was not. It did not exist—was sunk in the depths of eternity. A homeless spirit, he was obliged to stand by and see the immolation of the girl he loved to the heartless exigencies of an age that was crueler, madder, more corrosive by far than the times that belonged to him.

And he would go back! He was certain of that. At midnight Professor Nicholson would reverse the polarity of the fields, and he would be jerked back to 1930 and to sanity. Park hoped that midnight would come before the whole sorry tragedy could be fully played out. Nothing as simple as going away was possible. The still, stricken face of Myra held him as light holds a moth—would hold him until the time-equipoise tore him away.

It only he had his body! He yearned for its competence, its athletic solidity. He

pictured himself, clad in the outmoded clothing of 1930, appearing suddenly before the incredulous eyes of the girl. He could face with her the perils of her time with the same crusading spirit with which he had begun his work with the Citizens' Reform Committee. He wondered if it wouldn't be possible, to a supreme exertion of the will, to augment the effects of the time-equipoise to bring his body to him—something after the manner of oriental mystics who are said to perform deeds of preternatural scope by sheer will power. Nicholson had said that the body could *almost* be transported in time. A little more, perhaps. . . .

Though he willed with desperate urgency, he remained bodiless.

\* \* \*

Lakopolis was bathed in light. The black heavens above were studded with stars, and the thousands of aspiring towers of the great city were flooded by the glare of innumerable ionic tubes. But the helicopter basins at the lake front were dark save for occasional small ionic tubes among the trees.

Without conscious volition Park Helm had come with Myra in the Dieselcar. She sank deeply into the soft cushions, her luggage about her feet, and stared unseeingly out of the window as the driver expertly guided the machine through the labyrinthine maze of aerial roads. He was an expert, that driver. Besides attending to his car in a masterly manner he found opportunities to make guarded, low-voiced remarks into the portable transmitter he took out of his pocket.

Arriving at the outer gate, Myra produced a key and let herself into the enclosure through a high gate marked "No. 7". "You may leave the luggage just inside here," she told the driver wearily.

"Yes, Miss," said the driver, pocketing his fare.

Myra waited until the car had disappeared around the curve. The driver stopped the car as soon as it was out of sight. Other forms materialized out of the darkness. There was muttered conversation. One of the men chuckled amusedly;

"Boss in good humor tonight, huh?"

"An' why not? Did'ye get a good look at de jane? Man! I'd give me right arm to be in his place!"

With such small-talk they beguiled their waiting, until the light of Burgess' helicopter, floating out there in the basin, flashed on. It was too far to see anything, but the watchers could use their imagination. They lay there in the shadowy park, pleasantly acrawl with cruel excitement.

Park had seen Myra walk into the trap unsuspecting. At the water's edge she was met by Burgess, almost unrecognizable in the darkness, and he conveyed her, in a small skiff, across the still water to where the small wavelets slapped woodenly against the hull of the flyer.

Burgess was trembling with eagerness and excitement. He had distanced the fear of death and was licking his lips with amatory anticipation. He picked up Myra's unresisting form and carried her into the darkened cabin. She had stirred him as no woman ever had. He intended, with reservations, to be true to her.

Park Helm, raging, desperately anxious, and impotent, followed.

Just then the light flashed on. It revealed Angelo, standing in the middle of the cabin. He smiled mockingly.

Burgess was utterly ludicrous in his fright. He let Myra fall to the floor. Wide-eyed, she stumbled toward the door.

But Angelo held out a sinewy arm, forced her back, pulled the door shut. In his other hand he held a short pistol-like weapon with a barrel about an inch in diameter. Instead of an opening at the end of the barrel, however, there was a lens of black glass.

Angelo was handsome. He was young, not more than 35, and his reputed excesses had not left any mark on him. Taller than the average height, he might have been a pirate from the historic Spanish Man or a knight dressed in the chain armor of feudal days. His face, dark and smooth, was amused. His piercing black eyes were twinkling, but there was that in the curl of his scornful lips that made Burgess quake.

But with the quick wit of one who had long trod dangerous paths, Burgess grinned;

"COME to take delivery, eh chief? Can't say as I blame you." He leered at Myra, but even his hardihood failed him when he saw the look she gave him. Beads of sweat formed on his swarthy face, which was tinged with underlying yellow.

"Oh, you were bringing her to me?" Angelo asked politely, stroking his little, sharp-pointed mustache.

"Yeah, you see. . . ."

"Did she know where she's going? They usually don't come so easy."

"Well, you see. . . ."

"That's plenty!" Angelo's brows contracted. But his voice became pleasanter—and more dangerous.

"We've always been good pals, eh Burgess?"

Fascinated, Burgess looked into the ophidian eyes. He managed to nod.

"And as long as you played square with me you did well, eh Burgess?"

Angelo went on, not expecting an answer;

"You know what happens to traitors?"

"Wait! Wait, I tell you!" the doomed man screamed.

Angelo smiled another tight-lipped smile, toying with the weapon. A mere touch of the thumb-button conveniently placed at the side of the grip and Burgess would be as if a red-hot iron rod had passed through his body.

"What is it you want to say?"

"I can't fool you, Angelo," Burgess whined, "but you've got her now. You've got what you wanted. Why not let me go? I'll never come back to Lakopolis again."

"She is your sweetheart?" Angelo asked, softly, curiously.

"She was, yes." May there was hope after all. "She was, but that's all right. Can't let a woman come between pals!"

"This was to be your bridal night?" Still Angelo wore that marveling smile.

"Yes!" The tiny droplets of moisture were coalescing and running down off Burgess' nose. "Sure, I'm for you first, all the time!"

"Just how far would such touching devo-

tion go?" Angelo pursued tenderly. "Bring her to me!"

At the command the cringing Burgess seized Myra's wrist. With averted face he led her to Angelo, and Angelo's arm went around her.

"I just wanted to see if it was true," Angelo remarked, still half incredulous. Then he carelessly pointed his weapon at his former lieutenant and pressed the button. At the touch of the black ray Burgess collapsed.

Park Helm, present in the little cabin but utterly unable even to make his presence known, felt a lively sense of satisfaction. But this was immediately swept away by disgust, anger.

Myra was clinging to Angelo, clinging passionately. Her little face under its helmet of golden hair was flushed and amorous. She pressed her lithe body tightly to the mailed figure of the gangster. And her golden voice was thrilling;

"I go with you gladly, Angelo. Never before have I known a real man."

Disgust and sorrow filled Park Helm. Yet he could not go away. Some unholy fascination held him, and so he watched. Angelo, quickly responsive, strained Myra to him. Her white fingers fluttered, here, there, until they came to the holster of the ray pistol. In a moment she had the weapon, wrenched herself away.

"Move one step," she panted, "and you're dead."

Angelo's surprise was complete, appreciative. He thought he knew women, but this little girl! Oh well!

With a well-directed kick he struck the ray pistol, but Myra did not drop it. The black ray flashed out, and a red-hot spot appeared instantaneously on Angelo's armored chest. The chain mail was thicker than the average, however, and the man did not fall. Roaring in pain, Angelo jerked the weapon out of the girl's hand, struck her a brutal blow in the face.

"Castagleri, Kaponi, Hurwitz!" shouted the gangster chief angrily. "The little hell-cat," he gritted. "When those gorillas get through with her she'll wish I'd killed her now!"

Myra staggered to her feet and made for the cabin door. Angelo roughly seized her burnished hair, so that it became unloosened and fell down over her shoulders. He knocked her to the floor, and as a precaution locked the safety latch.

"Coming!" came a faint call from the water's edge. Myra lay prostrate, moaning.

All at once Park Helm noticed the navigating chronometer. It was less than a minute to midnight, when he would be recalled to 1930. In an agony of protest he watched. To be recalled now, when he could never know how this night's terrible business would end—the thought was almost more than he could bear. The chronometer seemed to race. Now there was only 30 seconds left, 15 seconds—now—now!

PARK felt the floor under him. He saw self, as he had been in the laboratory that morning—no—100 years ago. His body had come to him. And with it a fierce and joyous lust for battle. He was leaping across the floor before he had even drawn a breath, planted a terrific left hook to Angelo's jaw that shook his powerful body to its innermost tough fibre.

Angelo launched a kick at this uncanny apparition's face. Park caught his heel, lifted it high, and as Angelo toppled, brought a powerful right smash to the jaw. This time Angelo dropped. Groaning, he tugged at his ray pistol, which he had thrust carelessly into the holster. Now it was caught.

He never got it out. A gush of blood, curiously dark and burnt looking, welled out through the chain-mail where the red hot spot had been, and Angelo, gangster, died.

"Here Myra, do you know how to work this thing?" Park asked. The gangsters had arrived and were shouting for the door to be opened. And they were clambering over the hull.

The girl leaped to the controls unquestioningly, and under her manipulation the craft shot skyward. It was a good ship, and some of the hoodlums, when they were eventually shaken off, fell for miles before their bodies struck the water.



Angelo's death precipitated a bloody and decimating battle among his followers for the throne he had held. It was an ideal moment for Park Helm, that astounding but unquestionably authentic visitor from the past, to lay his plans for the protective reorganization of society before a group of prominent and as yet untarnished citizens.

And it was inevitable that in due course, Commissioner of Public Safety Park Helm should win as his willing bride the golden girl whom he had learned to love when he was a ghost.

But Park did not know for a long time how his body had been translated to him at the moment most ardently desired. Eventually he found the answer to this question in a perfectly obvious manner. He called for the 1930 files of the Lakopolis newspapers. There, on time-yellowed and brittle paper, he found the following item:

#### INDICTMENT QUASHED

State's Attorney Byron Nelson today moved to quash the indictment against Professor E. Nicholson, famous scientist, charged with manslaughter in connection with the disappearance of Park Helm, special investigator for the Citizens Reform Committee. Mr. Nelson said in court:

"We have the professor's own confession that he forgot to reverse the polarity of a device he calls his time-equipoise, and accidentally sent the body of Park Helm out after Helm's 'astral projection' instead of bringing said 'astral projection' back.

"Without impugning the statement of a scientist as eminent as Professor Nicholson as it touches on a matter of science, I must say there is no legal basis for the indictment. Park Helm did not die here, in our time, for if he did we should have his body and the *corpus delicti*. And if he died 100 years in the future, as the professor has indicated may be the case, I can find no legal precedent for trying a man for a killing that will not be done for another 100 years. Therefore I respectfully pray the court that the indictment be dismissed."

THE END

## FOR THE JULY ISSUE

*we offer*

a really new story, of a world-shaking series of events that sprang suddenly upon an unsuspecting world. In

### "The Time Projector"

by David Lasser and David H. Keller, M.D.

you find, told in grim realism, what would happen, if the truth about existence were made known to us. In order not to give away the secret we ask you to start this novel length story, and be thrown with its characters into the tumult of world-shaking events . . . .

### Clark Ashton Smith

repeats his triumph of "An Adventure into Futurity" in his new story

### "The City of Singing Flame"

Mr. Smith's words burn and grip you. He carries you along to his strange world, where you feel as he did the overpowering lure of the flame . . . .

### The Planet of Despair"

is

### R. F. Starzl's

latest contribution. You learn of the enslavement of one world to another, and how the yoke of despair was broken when a man pitted his wits against that of an overpowering race.

### In "Rebellion—5000 A.D."

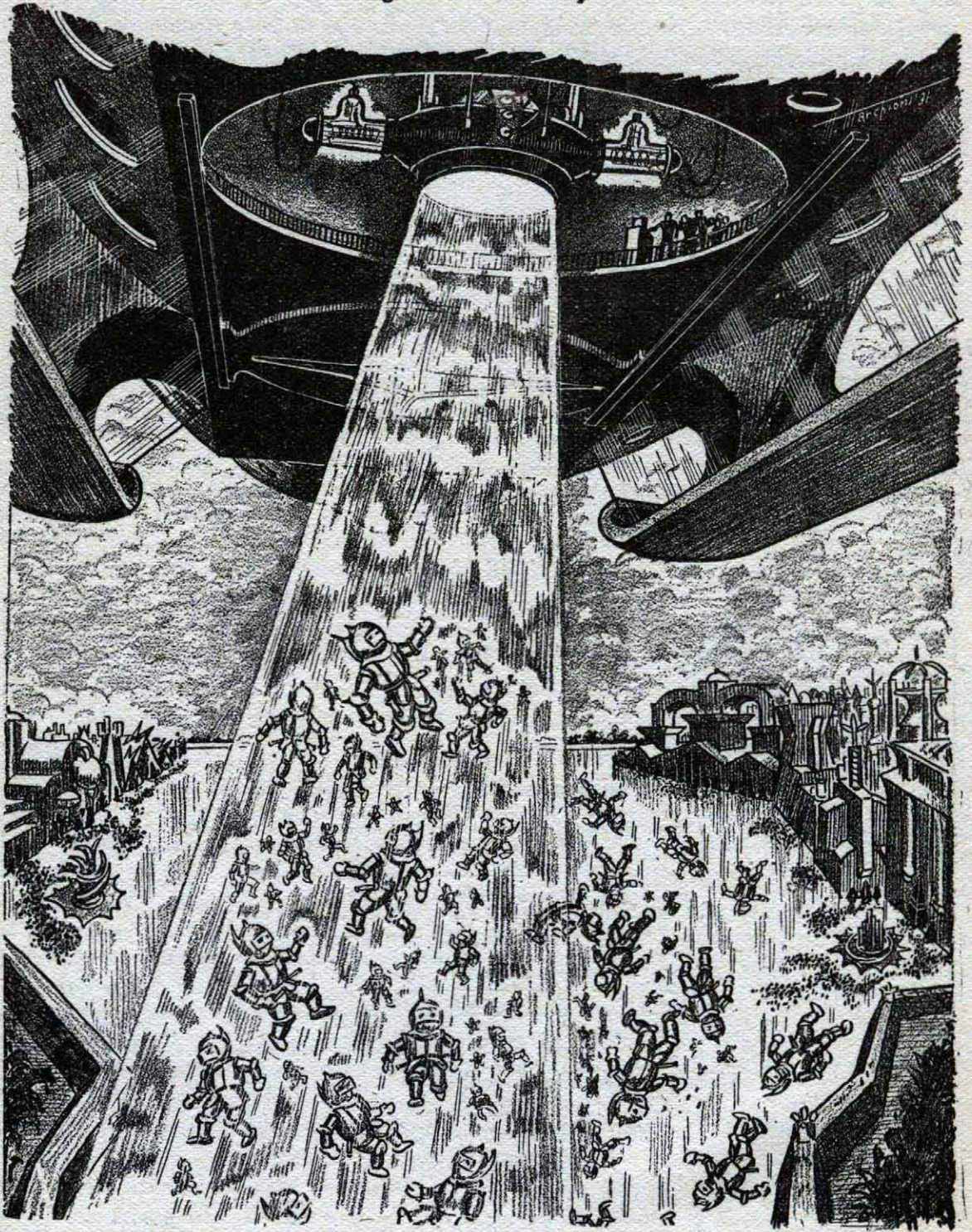
by Garth Bentley

we get an intensely dramatic picture of future worlds, of their strangeness, their problems, their loves, and hates and wars; their conquests and greeds. Mr. Bentley has drawn a masterly picture of what our civilization may have to contend with 3000 odd years hence.

These and other stories in the  
JULY 1931 WONDER STORIES  
ON ALL NEWSSTANDS JUNE 1

# The Exiles of Venus

By Jim Vanny



(Illustrated by Marchioni)

With the powerful magnetic ray, he literally picked the Tanarkans off the ground and dashed them to the streets below.

Los Angeles, Feb. 3—The two air-men, Bert Reid and Jack Simpkins, who three days ago set out from Grand Central Air Terminal at Glendale in an attempt to establish a new world's altitude record, have not yet been located. The mysterious disappearance of the men and their airplane, a specially constructed ship of foreign design, has caused wide comment in aviation circles. Up to the present no plausible explanation has been offered as to the flyers' strange disappearance. A wide search is being made in an effort to locate the flyers or some part of their ship which may offer a clue as to their probable fate.

The foregoing despatch represented all the world knew about the strange disappearance of the altitude flyers three days after they had vanished into the cloud-laden sky above Southern California. The big plane had carried fuel for five hours in the air, enough to accomplish what the flyers had set out to do.

There was little doubt in the minds of the majority as to the ship's fate. The flyers had evidently lost their bearings in the clouds and crashed into the mountains or had been carried out over the Pacific by a high altitude wind and had fallen into the sea. Had the world but known the altitude ship's fate, it would have stood aghast. But let Bert Reid, pilot of the ill-fated craft, tell the story from the beginning.

\* \* \*

### The Attempt that Failed

THE morning of January 31 dawned cold and cloudy at Glendale Airport. But in

spite of the adverse weather conditions, my observer Jack Simpkins and I were determined to attempt the flight which we had so long been planning.

"It's foolhardy to attempt it in such weather," insisted Airport Manager Lane as we wheeled our imposing looking biplane out onto the field to warm up. "By the time you're ready to return to the field those clouds will have the place hidden from view. It'll be impossible to land."

I waved him away impatiently. "We said we would break the world's altitude record today—and we're going to do it," I replied with finality.

"Sure," chimed in Simpkins. "What do you think we are? A couple of chicken-hearted butterflies?"

Lane waved his hands in despair. "No, no. Of course not," he replied in a tone of utter hopelessness. "Only why be a fool just to show you've got the guts!"

But the preparations went on. Soon the big engine was sputtering and popping, gradually settling down to a steady drone as it warmed up. From out of the west a heavy bank of black clouds were drifting, swiftly

approaching the field. Lane again warned us but could not dissuade us from our hazardous adventure. He turned and walked back to his field office muttering to himself.

Fifteen minutes later he was on hand to issue a last warning against the swiftly approaching clouds and stiff wind. However, he wished us luck and with a small group of other flyers and officials, watched us spiral slowly out of sight.

**MUCH discussion has been raised on the question of interplanetary travel, of the way in which the first flight will take place and its consequences. Will it be made for adventure, for pure science, for exploration, for greed or personal gain of some kind? Certainly, at this date, no one can answer the question. It is to be hoped that the discovery of the secrets necessary to the space flight will not come first to those in whose hands it might prove to be a misapplied power. Even the scientist is at times blinded by his own zeal so that he utilizes his powers for what turn out to be evil ends.**

**Mr. Vanny has written here, a fascinating account of what the type of expedition might be, and how the consequences of it could pursue the space flyers for many years.**

On board the big altitude plane, which Simpkins and I had jocosely named the *Alta*, all was going well. The altimeter was registering a steady climb which, fifteen minutes after the start of the flight, totalled nineteen thousand feet. The ship was still far from her ceiling, but we had preferred to carry ample fuel and take more time to make the flight, rather to force the ship and the motor.

The minutes wore away. Off to the west where we should have been able to see the broad Pacific lay an unbroken expanse of clouds that were slowly moving inland to engulf the valley below us.

"Do we go up—or down?" asked Simpkins above the roar of the engine.

"Up," I replied.

And up we went. Up and up went the *Alta*, our goal set at 50,000 feet, one thousand feet beyond the record held by the great LeMoine of France.

In the tightly-sealed cabin, Simpkins and I were now wearing oxygen masks. The atmosphere at the level where we now were flying, about thirty-five thousand feet, was too rare to provide sufficient oxygen for breathing. The motor of the *Alta* was equipped with a specially designed supercharger. Outside our snug little cabin the temperature was approaching sixty degrees below zero.

And on and on flew the *Alta* and her determined crew. At 45,000 feet we had penetrated three cloud layers and were now soaring through a sky suddenly darkened as though night had fallen quickly over us. All about us we could plainly see the myriad stars. To me it seemed that we had entered another world as we soared steadily upward.

Suddenly Simpkins pointed to the left.

"Look! What is that?"

I peered into the star-studded heavens. A group of lights were moving swiftly downward from an even higher altitude and tow-

ard the *Alta*.

"Looks like a lost comet," I said, not knowing how to explain the strange sight.

Swiftly the thing approached.

"Comet nothing!" snorted Simpkins. "It's some sort of a craft!"

"That can't be," I insisted. "We are higher now than any other human has ever flown."

"I tell you it's a ship of some sort," he maintained stubbornly. "Maybe—"

**B**UT Simpkins' conjecture was never made known. Without warning a long, narrow shaft of violet light penetrated the darkness of the upper heavens, falling directly

upon the nose of the *Alta*. The motor stopped dead and the silence of the upper air held sway. Strangely enough, the altitude craft had not started to descend. Instead, as we looked at her air speed indicator, we found her speed was increasing while her altimeter showed no signs of falling. Straight toward the strange ship we were speeding. I struggled with the controls, gave her full aileron, threw the rudder and elevators over in an attempt to swing the *Alta* away from the oth-



JIM VANNY

er's path. But it was in vain. A collision seemed inevitable. We were almost upon her.

"Jump!" I yelled.

In an instant the door of the cabin was thrown open. A moment later Simpkins had flung himself clear of the speeding craft. Releasing the controls I sprang to follow him. But as I did so, a back strap on my 'chute became entangled with the door and I felt my fall checked before it had actually started. I was held a helpless captive in mid-air!

Swiftly now the *Alta* approached the stranger. But it did not strike. For as the two craft met, the *Alta* slid beneath the oth-

er. I had a vision of a great black void in the belly of the monster. Then the *Alta* and her entangled pilot were swallowed up in its black depths.

Seconds passed. I was suddenly dazzled by a bright light and was aware of a sound like metal doors being closed. I looked about me. The *Alta* lay at rest in a large chamber resembling a hangar. And then hands grasped me and I was lowered to the floor of the chamber.

A dozen peculiar little men were staring at me even as I stared at them. They were small fellows, not over four feet in height, rather slightly built, human beings except for their large eyes which were almost twice the size of my own. Their military-cut hair was black, their features dark, their uniforms of a beautiful royal blue, trimmed with scarlet, while orange caps topped their black hair in striking contrast.

And as I looked on, one of them, apparently a leader, stepped forward and motioned me to follow him. For a moment I hesitated, then tried to speak to him.

"Who are you?" I asked. "And why have you brought me here?"

But the little fellow only shook his head and again beckoned me to follow him. I did so.

He led me through a doorway and down a long, narrow passage that contained a glittering array of machinery. Behind us followed two more of the little fellows and for a minute I smiled at the strangeness of it all. I felt that I could destroy an army of these puny men. And yet there was something distinctly business-like and suggestive of power in their appearance.

Pausing at the doorway, the leader of the party pressed a button. A moment later the portal swung open and I was ushered therein. Not a word was uttered by my captors as they silently retreated and left me alone.

I looked about me. I was in a severely furnished room about ten feet square having but a single port through which I could see the starry heavens.

I wondered at the type of craft this must be to so easily maintain such an altitude. I wondered where it must come from and where it might be bound. And I puzzled

over the strange little men. Then, as I looked again through the small window or port in the side of my room I gasped in astonishment.

### An Unexpected Sight

BEYOND me lay a giant half moon, beautiful and radiant in her splendid glory—much larger than I had ever before seen her except through powerful telescopes. I remembered that twice before I had been fortunate enough to see the orb like this through the great two hundred-inch telescope at Mount Wilson. And also through the telescope of the Lick Observatory on Mount Hamilton.

The moon was approaching with amazing rapidity. Were these little men from the Moon? That I knew to be impossible. The Moon was a dead world, devoid of atmosphere, plant life, everything necessary to sustain life; and with such varying temperatures that it would be impossible to live on its surface.

Still it grew larger and larger until the entire heavens beyond my little window were filled with the orb. As one greatly interested in astronomy, my interest in this sight was intense. I peered eagerly at the approaching surface. We were apparently swinging around now so that more and more of the surface was becoming lighted. Now the crescent was rapidly vanishing as the Moon approached more and more to the full.

I racked my brain to remember the features of the orb. Near the south I recognized the crater of Tycho, and the immense oblong enclosure known as Clavius which is some one hundred forty miles in length and the deepest formation of its kind on the Moon. One peak on the east is said to reach an altitude of twenty-four thousand feet. Because of its situation and depth the Sun never is seen from some places in its interior.

As I looked I could see the far-reaching shadows of colossal walls and peaks breaking the line of sunlight in jagged lines over the entire lighted surface.

The giant craters of Kepler and Copernicus stood out majestically as did the

Ocean of Storms; the Sea of Clouds; the Sea of Serenity; the towering ridges of the Apennines and Carpathian Mountains. Off toward the north was the Caucasus Mountains and just east of them the Alps, whose highest peak, Mont Blanc, is said to rise to an elevation of fourteen thousand feet.

It was a beautiful spectacle as we approached closer and closer. The sun bathed the great Alpine Valley to the west, quickly climbed the rugged walls of the mountains and shot its rays into the valley beyond. The mountains cast sharp, rugged shadows. The absence of atmosphere, omitted any shading from light to dark, caused the surface to be either intensely light or plunged into Stygian blackness.

The entire surface of the aged orb was like this. There was no skillful blending of darkness with light. Each detail stood out with a harsh intensity on the scarred and furrowed dead world.

Rapidly now were we approaching. No longer was the entire Moon revealed but only a portion of her silvery surface. We swung down over the Alps, the Apennines, and the Carpathian Range until now only the crater of Copernicus and the surrounding plain was revealed. We could plainly see the jagged peaks and the level plain within. All about her surface, plains were spattered as though from the discharge of molten matter which had been ejected from the interior when the world was formed.

Not long afterward we dropped closer to her immense surface, flew under the shadow of her lofty mountains and darkness shut out further view from the wondrous spectacle.

WHEN the door of my prison was once more flung open my original escort entered and I was again ordered to follow them. I did so, this time without protest.

Once more I was led down long passages. And as I turned at the end of one, a flurry of white rounded the corner and ran full into me, nearly knocking me over.

"Oh—I beg your pardon!"

I had seen some strange sights since my captivity aboard the strange craft. But this was most unexpected. A beautiful blue-

eyed girl with closely cropped bobbed hair, clad in English riding boots, natty white cord riding breeches and silk shirt stood before me. I found myself quite speechless. But she quickly took charge of the situation. Turning to the little fellow who had taken charge of the group she eyed him coldly.

"What does this mean, Geeko?" she asked severely.

The little fellow hung his head for a moment.

"Hurry," prompted the girl.

"He is a spy," replied the little man and I was completely surprised at his perfect English.

"A spy?"

The little man called Geeko nodded curtly.

"We discovered him in a space ship car near the Earth. There was another but he got away."

The girl paused for a moment. "That will be all for the present, Geeko. In the meanwhile I will take care of him," she said nodding to me and I felt a breath of relief. The little fellow looked crestfallen for a moment and then with a short salute, he and his companions walked away.

"Come!" said the girl to me and I followed her.

She led me back down the passage through which I had just come, and opening another door bade me enter. I presently found myself in a room some twenty feet square, tastefully furnished.

The girl invited me to sit down; and taking a chair opposite me, asked my name.

"Bert Reid," I replied. Then added, "From the Earth."

The girl smiled. "So I had observed. I am Phyllis Stoddard, also of the Earth, or perhaps it would be more correct if I were to say 'formerly of the Earth'."

I shook my head hopelessly.

"This is all beyond me," I told her. "I yet am not sure but that I am quite mad—or in the midst of a terrible nightmare."

"It is all quite true," replied Phyllis. "God grant it were a dream."

"What?" I cried. "You don't mean that you, too, are a prisoner here?"

She shook her head sadly.

"A prisoner of promise," she replied. "But tell me first how you came to get aboard the *Space Rover*? I give you my word I had nothing to do with it. I did not even know that you were aboard until just now in the corridor."

As I looked into her frank blue eyes I believed her. And so, for the next half hour I told her my story, leaving out no detail. When I had finished she only said:

"I am sorry. But there is only one thing for me to do. I must return you to Earth. But first you must accept our hospitality. And Muriel will be glad to see someone from Earth, too."

"Muriel? Who is Muriel?"

"My elder sister. But you must have dinner with us. Then, if Muriel sees fit, we shall tell you our story. I must ask you to excuse me until then."

"Certainly," I replied.

"And now," continued Phyllis. "We have arrived at our base. I will give Geeko instructions and he will see that you are properly taken care of until dinner."

### An Amazing Tale

I BOWED and she left me. My head was in a whirl. From now on I would never say that anything was impossible.

Geeko led me from the car and, as I stepped from the monster, I found myself in a gigantic cavern whose rock walls and towering ceiling seemed to have no limits. The *Space Rover* occupied but a small part of the room yet it was all of five hundred feet in length with a breadth of nearly two hundred feet. It resembled a great whale as it lay at rest in its titanic hangar.

From somewhere came the low hum of machinery and presently, as my eyes became accustomed to the brilliant illumination within the cavern, I could see that numerous tunnels ran off this main room.

Geeko led me to one of these and finally to a room hewn from the solid rock, though its beautifully-decorated interior wall disguised the fact.

Here I made my toilet and tidied myself as best I could after the day's experience. An hour later Geeko appeared again and

conducted me down a long rock-walled passage to another doorway.

We entered an anti-room and passed therefrom into a large dining room. Here Phyllis met me and turned immediately to her sister, Muriel. She too, was clad in a comfortable riding outfit. But as I looked at her I thought her the most beautiful creature I had ever cast my eyes upon. Her hair was much darker than her sister's, her brown eyes and flashing teeth set in a perfectly moulded face, her figure slender and graceful.

"Make yourself at home, aviator," she said to me cheerily. "It is good to see someone from home. You see, they are few and far between in the realms of outer space."

I smiled at the girl and secretly admired her spirit. For beneath her bantering conversation, I knew there was something more serious than I could possibly guess.

"If all space wanderers are as beautiful as you and your sister, they must be scarce," I replied.

She shook a warning finger at me.

"Remember you are on the Moon—not the Earth," she laughed.

The dinner was excellent. It was completely vegetarian—grown in specially prepared gardens in this Moon base beneath the orb's surface. When dinner was over we retired to a small library. Here Muriel threw off her mask of joviality and became serious.

"Phyllis has told me your story," she began, addressing me. "From what I have observed, I believe I can trust you."

"I don't understand it all," I admitted frankly. "But you can depend upon me, I assure you that."

"Did you ever hear of the astronomer, Professor Max Stoddard?" she asked.

"Certainly. He is the man who disappeared nearly six years ago with his two daughters—Say! You don't mean—Phyllis Stoddard! Why—!"

Muriel smiled mirthlessly.

"Yes," she replied evenly. "We are Professor Stoddard's daughters."

I was speechless. It was an astounding

revelation. Unbelievable. Yet I had the living proof before me.

"Mr. Reid," the girl went on. "Daddy had been working for years prior to his disappearance on a space ship. He had the assistance of a young electrical engineer, Alan Starbuck, whose faith in Daddy's invention was unbounded. When they had perfected their plans they hired a crew of mechanics to assist in the construction of the machine.

"But when Dad finished it he had no crew. He could not induce the men who had built it to become his companions. Alan was the only man he had. He could probably have procured enough scientific men who would have been eager to go, but he needed men who understood the main workings of the car.

"To show the men that he appreciated their efforts in the construction of the *Space Rover* Daddy decided to give them a little informal dinner on the ship. There was just Daddy, Alan, the five men who had worked on the space car, besides Phyllis and myself.

"DURING the course of the dinner Daddy acted rather strangely but we thought that he was tired from the long hours of work on the *Space Rover* and accordingly gave it no serious thought.

"But later in the evening, the five workers and Alan became drowsy. Then I had a strange premonition. Not long afterward it proved correct. The six men were able to keep awake no longer and lay sprawled across the furniture asleep. Then Daddy came forward, a terrible light in his eyes.

"Quick!" he cried, turning to us girls. "Carry them into the bunks!" We were terrified by his strange actions, but as we hesitated he menaced us with a gun.

"All my life I've planned this thing," he cried. "And now I won't have my plans thwarted—not even by my own flesh and blood!"

"Well, at the point of the gun, we carried the men to prepared bunks. With our help Daddy managed to get the *Space Rover*

started into space. And when the drugged men finally came to their senses, they were thousands of miles away from the Earth. They threatened to take the ship away from father but he only laughed crazily and asked them how they were going to navigate it back to Earth.

"Alan was helpless, of course. He could navigate it, but it meant the prosecution of my father if he did so. And on the other hand father threatened him night and day."

"And he went to the Moon," I gasped in amazement.

The girl shook her head in the negative.

"No, not to the Moon—to Venus!"

"To Venus!"

"Yes. That is really where the story begins. Like a great many astronomers Daddy figured that there must be some form of life existing on this planet. So with his space car perfected he determined to find out. We flew through space for days and days and finally landed on Venus. There we met these little people who are with me now. They were a friendly little race and at once we took to them.

"But they were harassed by a war-like people from another part of the planet. Daddy desired to help the little fellows gain their own and accordingly assisted them to make war on the Tanarkans, as they were called. But Daddy's dream of universal Venusian power for his little friends came to a rude awakening. The Tanarkans won war and took our friends into captivity and slavery. Only a few escaped in the *Space Rover* with Daddy.

"From then on he was a changed man. He lost his insane manner and became more like his old self before the success of the *Space Rover*. We retreated to the Moon where we built this underground city. We found water beneath its surface and Daddy and the others constructed machines to generate oxygen to breathe. There are two entrances to this city, each protected with a double door like the diving chamber of a submarine.

"Daddy's old aggressive self completely vanished. He had but one aim in life—to win back for the Venusians what he had lost for them in his mad scheme."



"And your father?" asked I. "Where is he now?"

"Daddy is dead," she replied quietly. "His tomb is high up in the mountains that surround Copernicus. His last wish was that Phyllis and I carry on the work where he left on."

"And Alan Starbuck? You have him to assist you?"

"Alan Starbuck was captured by the Tanarks," replied Phyllis with a catch in her voice; and I knew that Alan was the blue-eyed girl's sweetheart.

"And so," concluded Muriel, "these people are my people until I have helped restore to them the land that my father lost. Whether I shall ever return to the Earth, I do not know. The Earthlings whom father so forcibly carried away I returned two years ago, after they had trained my Venusians to operate the *Space Rover*."

"And the power that drew the *Alta* aboard the *Space Rover* was also an invention of your father's?" I asked.

"That was an invention of Alan's," replied Muriel. "If anything should go wrong with that ray, we have no way of repairing it. It was called the magnetic ray by Alan and he told his secret to no one but Daddy. And he left no information, either verbal or written in regard to it. We have tried to analyze it but without success so far."

### On to Venus!

"IT is the most amazing story I have ever heard," I replied as Muriel explained this. "And if it were not for the testimony of my ears, I should never believe a word of it."

"And I have but one thing to ask of you," she said.

"And what is that?" I asked wondering.

"That when I return you to Earth you will say nothing about this—for a while."

I smiled. "If I want to keep people's good opinion of me," I replied, "I am afraid I shall be forced to remain quiet. No one would ever believe my story. People would brand me as insane."

"And when I return to Earth I'll bring you a piece of Venus for a souvenir," she

laughed, her old jovial mood momentarily returning.

"Then you really mean to return to the planet?" I asked.

"It is the only thing to do. It was Daddy's dying request. There was nothing wrong with his sanity when he made it."

For a moment I stood swaying on the brink of uncertainty.

"Do—you suppose—that you could make room—for another member?" I asked rather awkwardly.

"Why—I don't know. Do you mean that you—?"

"Yes. I've no claims on Earth. There is no reason why I should not remain missing for a while. And you—well, I've no doubt of your capability—but you are undertaking a big venture for a girl."

A broad smile slowly overspread her face.

"And so you wish to go along to protect little Muriel?" she asked rather lightly.

"I should like to go with you," I replied, "because I have a taste for adventure and—well, yes—because it is no venture for two women from my Earth to undertake alone."

The girl held out a slender hand.

"It's a go," she said with decision.

I gripped the hand. And then I knew why I was willing to gamble my life with this bewitching girl.

\* \* \*

The Moon hung beneath us in a beautiful silver crescent as we sped through space toward the home of the exiled Venusians. Five years had passed since they had been driven from their world by the mistake of Professor Stoddard and the power of the warring Tanarks. Five years of suffering; five years of planning, and now the last act to bring about the fruition of two women's dream.

I sat in the pilot house of the *Space Rover* at the side of Muriel and Phyllis. At the controls were Geeko and his lieutenant, Neepo, whom through patient hours of instruction, the late Professor Stoddard had made into expert space navigators.

Quickly the *Space Rover* cut down the abyss separating us from Venus. The Earth lay behind us in a great, bronze ball, her continents outlined in sharp relief. But

the speed of the *Space Rover* was terrific and our own planet was soon diminishing in size.

We covered the twenty-five million odd miles between the Moon and Venus in two weeks which gave the *Space Rover* the amazing speed of approximately seventy-five thousand miles per hour!

As we approached the planet through the half twilight caused by her dense atmosphere, we could plainly see the city of Tanark through the powerful infra-red telescopes that were part of the *Space Rover's* equipment. The city lay in the midst of a tropical forest, enveloped in clouds, and well guarded by a high wall that surrounded it on four sides. And as we drew nearer, the Venusians on board could hardly be restrained from hurling themselves down upon their enemies in open combat.

**S**LOWLY we descended. The location of the dreaded Tanarkan prison at the lower end of the city was no secret. There was not a Venusian aboard who did not know and fear that place. The lights of the *Space Rover* were either turned out or masked so that they were not visible from without. Then, a silent messenger of deliverance, she settled slowly into the forest about a mile from the city wall. And now I turned to Muriel.

"Now I must leave you," I said huskily. "I must go into Tanark—alone."

"No—no!" she grasped my arms tightly. "You can't go in there alone. They would kill you. I won't let you!"

"My dear girl," I said quietly. "Do you suppose for one minute that I shall unnecessarily expose myself to danger? And what would they do to the Venusian prisoners—and Alan—if we were to launch an open attack?"

"But—alone. Isn't there some other way—?"

"If there is a better way, I shall be glad to take it, Muriel," I answered her. "But I have been thinking out this thing since we first sighted Tanark. I can see no other way."

"But you may never come back!"

I smiled dryly. "But how about Alan Starbuck? Five years in a stinking Tanarkan prison. If he isn't—" I did not finish. She nodded her head. She understood. Phyllis was not with us and I was glad for that. She would never believe that her Alan was dead.

"Phyllis loves Alan, doesn't she?" I asked Muriel abruptly.

The girl looked up at me for a moment.

"Yes," she replied slowly. "Phil loves Alan."

"Then Alan Starbuck must be rescued before the Tanarkans know of our presence. That is imperative."

"But—you and—I, Bert. You *do* care for me, don't you, Bert," she cried clinging tightly to me.

I took her in my arms. "No man has ever loved a woman more than I love you," I told her fervently. "That is why I am so anxious to bring Alan back to Phyllis. Muriel, my love for you makes me understand how Phil and Alan feel."

As the *Space Rover* ascended once again leaving me alone upon that lonely planet, I experienced a feeling akin to one who has lost his last friend. The semi-darkness and heavy clouds with a threat of rain, assisted me materially as I darted through the heavy undergrowth toward the city.

Before I had gone a half mile I was dripping wet from the heavy dew that lay on the surrounding foliage. The Venusian forest was not unlike the tropical forests on the Earth and I was ever on the lookout for wild life that might endanger my life and the success of my expedition.

At length I came within sight of the city walls. Certainly now, if ever, I must be cautious. As I watched, the form of a man drifted slowly along over the wall and I knelt in the underbrush in amazement. The Tanarkans had invented some sort of a floating suit by which the guards could patrol above the walls of the city.

The city wall was constructed of great slabs of rock and masonry—rough and uneven. Moreover, it was about thirty feet high, fifteen feet thick at the base tapering to about five at the top. If I could get the chance I knew I could scale that wall. Ac-

According to the Venusians, the Tanarkan prison lay beyond this wall.

As I crouched there puzzling out a plan by which to gain entrance, it began to rain. Slowly at first but increasing to a steady down pour within fifteen minutes. The guards were not numerous now and watching my chance I made a run for the wall. Feverishly I scaled its rough sides, sprawled across the top and looked toward the city beyond. There were many squat buildings in a large square and these I took to be the prisoners' quarters of Tanark. Without delay I slipped down the inner side of the wall.

### Within the City

THE storm had turned the twilight to almost the darkness of night; and many lights shone about the city, casting shadows which I quickly used for temporary hiding. And as I lay in the shadow of a building, the guard passed slowly overhead. I felt the blood pounding against my temples but he did not see me. On the other hand I got a much better view of his space suit as he passed in front of the many lights.

They appeared to be of a metal entirely enclosing the man save for a window panel before his eyes which extended around the head to the ears. Waist high, at either hip, there was fitted a bull's eye glass which seemed to be mounted on a socket joint so as to give the lens a wide angle sweep. The suit seemed to fasten together in front, with a long hinge running down it by which to swing it open. What kept them aloft was beyond my imagination.

Presently I saw three of the little men approaching the building by which I was concealed and for a moment I felt that I had been discovered. But they passed over it and came to earth on the other side. Then carefully edging my way along the side of the building, I discovered two of the Tanarkans in front of it, evidently on duty.

This was no doubt the guard house or police headquarters. The three who had just descended must have just come off duty. They disappeared into the building. The other two followed. Through a window on

the shaded side of the building a light streamed. I made my way to this and peered within. The building was composed of two rooms. I was looking into the rear one. There stood the three guards. The other two were in the front.

The three divested themselves of their space suits and after placing them carefully in one corner on what appeared to be a rack, they passed through the front room and left the building. And as I looked in at the empty space suits a daring plan came into my mind. I examined the window of the guard house and found it had evidently not been made to resist entrance. So a few minutes later I found myself inside. Every second I expected to be discovered by the two men in the front room.

Quickly I gathered up one of the suits and started back for the window. But as I did so a footstep sounded at the doorway. Wildly I looked about for some weapon. Behind the bull's eye on either arm of the space suit was a sinister looking trigger. Ray guns! Instantly I grasped one and swung behind the suit.

The Tanarkan guard saw me and made a rush forward. But as he did so I squeezed the triggers.

With a horribly contorted face he dropped to the floor as my poorly directed ray cut away one shoulder! I was sickened at the sight but desperately completed the work I had started. But not before the fellow had uttered an outcry. The other guard came running into the guard house. I did a better job this time. He dropped, seared and blackened, without a sound. Had anyone else but the guard in the front room heard the first one's outcry? I listened intently for a minute and hearing nothing suspicious, left the building.

My next task was to find out how the suit operated. That I could not do. So I cast the thing aside and began to plan my next move. I wanted to go back and plunder the building in hopes of finding a ray gun detached from the space suits. But it seemed unwise, and so, carefully concealing myself in the shadows, I crept carefully across the square. I knew it would be but a matter of a short time when the two bodies in

the guard house would be discovered. That would cause an uproar. So I determined to locate Alan Starbuck as quickly as possible.

There were hundreds of Venusians imprisoned here. From building to building I went. Then I thought of Muriel and Phyllis and the thought of them gave me fresh determination to succeed. I had learned a few words of the little Venusians' language and now was the chance to make use of it.

### The Battle of Tanark

I SLIPPED up to the back of one of the ground cells and through the tiny window called within in the language of our Venusian friends, "Hello!"

The effect was like an electric shock. The little fellow must have been one who had been imprisoned since the coming of Professor Stoddard, for when he saw me he was not in the least surprised that I was a white man.

"How good it is to see you!" he cried. "The great Earthling (Professor Stoddard) promised to return to us."

"The great Earthling could not come," I told him. "But I came for him. Where is the Earthling who was left here?"

He told me the building where Alan Starbuck was held captive. With a promise that he should soon be free, I went quickly to locate Alan. Carefully I searched the cells, from the tiny windows in back. And at last, as I was beginning to think my Venusian friend might have been mistaken, I found him.

"Starbuck!" I hissed. "Quiet, now. Don't give an alarm. It's a friend come to help you. A friend from the Earth!"

The man wheeled toward the window, wide-eyed.

"Help? From the Earth? Who are you? How did you get within the city?"

"Quiet," I warned him again. "Listen, Starbuck. We've got the *Space Rover* hovering over the city now. Will these prisoners help us if we release them?"

"Will they help? Just give them the chance!"

"All right. The guards don't suspect me here. I can easily overcome the one inside this building. Then we can organize—"

"Yes. Hurry. And Professor Stoddard—?"

"Is dead," I replied.

"But Phyllis, his daughter—?"

"She is aboard the *Space Rover* waiting for you."

The man breathed a sigh of relief. Five years in this Tanarkan prison had left their mark upon him.

I slipped quietly around to the entrance. Only one man stood guard. I had no weapon. Slipping cautiously up behind him, my fingers gripped his throat. He was unable to make an outcry. A couple of whacks of his head against the stone wall were sufficient to quiet him. An instant later I had the keys to the cells and was releasing the prisoners.

It was dangerous work to overcome the other guards without raising an alarm but we accomplished it and in the meantime the guards patrolled the wall ignorant of what was taking place.

From one of the Venusians we learned how to operate the space suits of the Tanarkans, and Alan and I each donned one. They were plentiful about the prison executive buildings.

Watching our chance we rose quietly and slipped unseen over the wall and into the forest beyond. Quickly we sped over the tree tops when we had cleared the city and soon arrived upon the spot where I had arranged to meet the *Space Rover*.

There was no sight of her though it was long past time for her to return to the spot. We carefully examined the ground where I had disembarked. There were fresh tracks here. Distinctly impressed in the soggy earth were the marks of the *Space Rover's* gigantic landing skids. All about them were the imprints of many feet—Tanarkan feet!

The *Space Rover* had fallen into the hands of the enemy!

With heavy hearts we sped back toward Tanark. We must locate the *Space Rover* without delay. Cautiously maneuvering about we came again to the wall where I had first entered the city. The place was in confusion. The mob of released Venusians had started to storm the city without awaiting our aid in the *Space Rover*. There was no

sight of our craft. We moved swiftly on. And near the center of the city we found it, surrounded by a curious group.

THEN, as we descended among the Tanarkans, the mob from the prison broke in upon them from all sides. The slaughter was terrible. But it was our chance. Quickly darting in, Alan and I stole aboard the *Space Rover*. There were several Tanarkans aboard trying to force the crew into betraying the secrets of the car. A few squeezes on the triggers of our ray guns and we were again in possession of the ship.

"They disabled our magnetic ray!" cried Phyllis as we threw our suits to one side, and she flew into Alan's arms.

"What of those Venusians?" I cried pointing to the onrushing mob that was being swept aside by the barrage from the Tanark rays.

"They won't stand in front of that long," replied. "We told them not to do such a fool thing. The ones who escape we'll rescue later. Get going. I must fix this ray."

As the *Space Rover* swung away, to the surprise and consternation of the Tanarkans, Alan began to work feverishly over the various cells and circuits. Phyllis was ever at his side.

As we swung away from the city the space men from Tanark followed us. But only for a short distance. Their speed could never equal that of the *Space Rover*. Two hours later we descended again on the city.

The Battle of Tanark will ever remain an outstanding event in the history of Venus. The giant *Space Rover* showed no mercy to the cruel Tanarkans. With his powerful magnetic ray, Alan Starbuck literally picked the Tanarkans off the ground and dashed them to death in the streets below. They were never able to get within range of the big ship to bring their guns into play.

And so our Venusian friends returned to their own world. Geeko has been elected president. Neepo is his aide. And the wondrous feast that was given in our honor shall never be forgotten by us to our last hour on earth.

A month later we departed from the plan-

et enroute to the Moon. It was the final trip of the Venusians to pick up those left behind. It meant final abandonment of the Moon City. But before that, we dropped toward the disc that we knew to be our own beloved planet—the Earth.

At twenty-five thousand feet the trap door in the bottom opened and the long captive *Alta* dropped from below. Her powerful motor roared farewell to the *Space Rover* as that proud monarch of the heavens turned back once more toward the long dead world far above us.

"I owe the *Space Rover* to them," said Muriel, in the close quarters of the *Alta*. "And besides, it has brought enough trouble to us. The Venusians need it more than we do. I want to forget that any other world but our own beautiful earth exists. I have had enough of space flying." And we all agreed with her. After all, there is no place like home.

The *Alta* swooped downward with me at the controls. Below us loomed the beautiful San Gabriel Valley, the mountains on one side, the sparkling Pacific ocean on the other. And directly below us lay the airport from which we had departed but two short months ago.

Needless to say, our story is given little credence. But that concerns us little. I need not say there is one who believes every word of it. That is Jack Simpkins who jumped safely from the *Alta* on that memorable thirty-first of January and finally found his way back to civilization.

Muriel and Phyllis are at last enjoying their long delayed happiness. Together Phyllis and Alan, Muriel and I, live happily on our beautiful Buena Vista Rancho among the hills of the Carmel Valley.

Often we sit and gaze at that brilliant point of light in the heavens that was known by the ancients as the Morning and Evening Star, and which modern astronomers call the planet Venus. And we speak of our little friends and wonder if they are as happy as we are. We sincerely hope so.

Perhaps we shall meet them again in that mythical world that knows no strife and where all good abounds. Who knows?

# Utopia Island

By Otfrid von Hanstein

(Translated by Francis Currier)

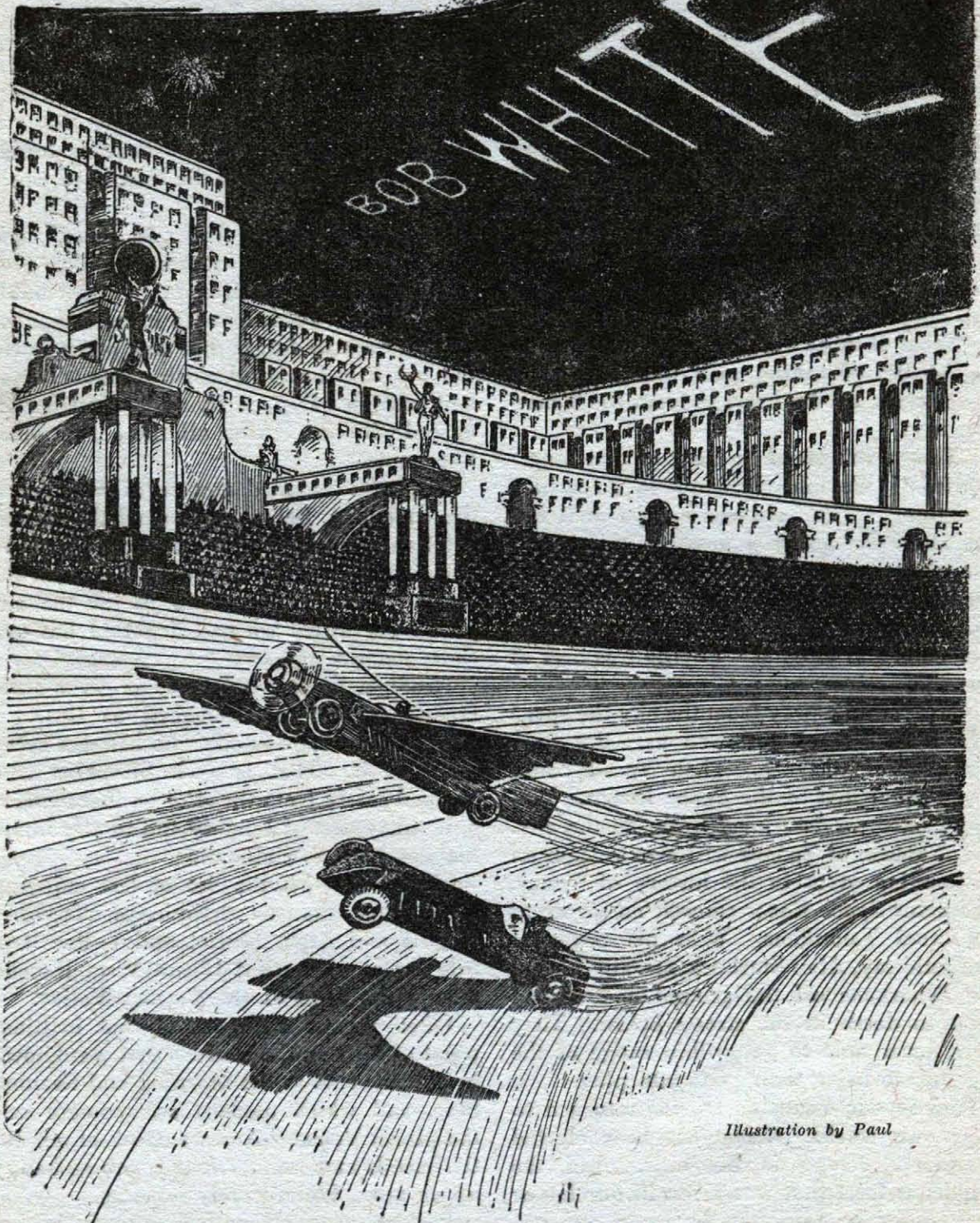


Illustration by Paul

**Then a miracle happens. At both sides of Bob's car there emerges wings. The car seems to rear up and rise into the air.**

## What Has Gone Before

**A**N expedition of German scientists to study some natural phenomena in islands of the Pacific encounters a terrific storm at sea and finds its ship being drawn toward a terrible reef. But it reaches the reef safely and finds a man there who introduces himself as Bob White and who welcomes them as guests to Santa Scientia. He explains that the ship was drawn to the reef by remote control. The scientists are taken by undersea railway to a strange city where they find themselves in elaborate hotel rooms provided with every device for their comfort. White explains that some years ago a German scientist Alesius discovered under these islands a vast Incan treasure and turned the secret over to a Mr. Cook to use for the benefit of humanity. Cook has bought the island from the local government of Puitu. They meet Cook who explains that they are in a city of the future where tremendous experiments are being tried out in all lines of human endeavor. He begs the men to remain as guests and investigate what they are doing.

The visitors investigate the city and find not only beauty in the planning of it but also incredible feats of engineering and scientific and medical skill. That

evening they read the history of Santa Scientia and how it was established as a place where men of science might have freedom to work out their pet schemes for promoting the general welfare of humanity.

Cook had received the secret of the great Incan treasure under the island from Alesius and five years ago kidnapped a number of young German scientists to help them build this city.

Into this colony as a stowaway comes Elsa Dorn, young cousin of Bob White who is chief assistant to Cook, the head of Santa Scientia. Elsa is given the job of caring for the mail of the colony. The city is now only partly built and needs many more capable technicians and workers to complete it so that it may be the university of the world.

Meanwhile on Puitu, the little nation that sold the Iguana Island to Santa Scientia, unaware of the Incan treasure, the president Ferreira is fighting his enemies who seek to overthrow him. His son Don Joao, bands together with conspirators to get the Incan treasure, whose existence they have learned of from Sam, a negro who had hidden himself on the Island. They plan to steal onto the island to capture the treasure.

### Now Go On With the Story

#### CHAPTER XIII.

##### A Feminist Movement

**B**OB WHITE was in his office, thinking for the first time in many days about his cousin, of whom he had heard nothing since their first meeting. Guiltily he shook his head and resolved to speak of her to Mr. Cook, when he went to his chief in the next few minutes as was his duty. He did not even know where Elsa was or whether she had been given a position.

He felt the more ashamed when there now appeared in the glass plate over his desk an announcement: "Miss Elsa Dorn would like to see you."

"Certainly."

He sent back the signal, jumped up, turned a few cranks, and with decidedly mixed feelings awaited the entrance of his cousin.

"Good evening, Your Excellency!"

He passed over the slight mockery. "Good evening, Elsa! Are you well?"

"All except for the knowledge that you are a very neglectful cousin, I am doing excellently, thank you," replied Elsa.

"Have you already seen Mr. Cook?"

"Right on the first day. He was more concerned about me than you. I have a position, earn some ill-gotten gains, and am content, except with you. I have taken over the care of the mail."

"The deuce! I see all right that I am not an attentive cousin, but if you knew what this visit of the German scientists means to us. . . ."

"You would see that I now have no time to talk with a foolish cousin, to say nothing of bothering about her." She thus completed his sentence and sat down, while she looked at him and laughed.

"You must excuse my inattention at present. You see, you are going to remain here for quite awhile."

"Thank you for your permission, Your Excellency!"

"Stop that nonsense!"

"What is nonsense? It is a good thing if a person regards life contentedly, does not get vexed at ungallant cousins, and takes one's fate into one's own hand."

"Have you already done that here?"

"Of course. Besides caring for the mail I have already a very important post."

"What sort?"

"I am at present—further advancement of course not excluded—general secretary of the woman's club of Santa Scientia."

"Think of that!"

"You do not need to look so funny. In this new capacity of mine I am now coming to you officially."

"As the envoy of the woman's club?" Now Bob laughed out loud.

"Yes indeed, but please do not laugh.

You see, the woman's club has determined to take into its hands the question of the admission of people and particularly of women. In consequence of my unanimously accepted proposals this plan has now taken on a more definite form. I intend to save from destruction the work which you have so excellently carried out."

"Very charming of you."

"We are indeed agreed that people, in fact men and women, must come here in great numbers."

"In principle, yes."

"Then you will not object to my having racked my brains about these matters. Since I have given myself up body and soul—do you hear?—as much as is possible for me—to this splendid city of Santa Scientia, I think it my inevitable duty to look after its future in my own way."

She again put on a half mocking, half serio-comic expression, and Bob laughed. "Very kind of you, but I think you can safely leave it to Mr. Cook and the rest of us."

"Oh, no! In reality it is only we women who have good ideas."

"See here!" White began angrily.

"I already have a plan."

"Then fire away!"

"I do not intend to. Time is money. Why shall I say the same thing twice, since I now have an appointment with Mr. Cook? I just wanted to be more cousinly than you and tell you beforehand, especially since I am now a sort of feminine Imperial Chancellor of Isabella."

"WHAT does—" Bob could not continue, for again the glass plate lighted up. "Mr. White and Miss Dorn are expected by the chief."

Elsa curtsied mockingly. "See! 'And Miss Dorn'!"

While the cousins were on their way to Cook's office, the latter was sitting at his desk, with Mrs. Helling opposite him.

"What do you wish of me?" he asked her politely.

"I must speak with you."

"Yes?"

"We have founded a club."

"Good! The National Woman's Club of Santa Isabella."

"Quite right, especially if you leave out that really superfluous smile. Things are not progressing as you expect. Now we are almost a thousand people here, among us—counting Miss Dorn—thirty-seven women. The only marriageable girl in Santa Isabella is Miss Dorn."

"The deuce, she has plenty to choose from!"

Mrs. Helling paid no attention to this remark. "Then men are not content. After all, nature is such that men and women

belong together. You know that requests are continually being made by the workers to be allowed to return home."

"It cannot be permitted at present."

"I know, but things cannot continue as they are. We have formed a club whose purpose is the immigration of eligible women into Santa Isabella."

"Do you want to do the way the Mora-

**WE** come now to the conclusion of this masterly novel. The first installment has been but an introduction to the strange island of scientific wonders where dreams come true. Now we come to the smashing finish in which the hates of the envious, the greedy and the destroyers are massed against our little colony.

Mr. von Hanstein is not satisfied to picture only daring instruments of science that may transform our social and industrial life, he transforms sport and play also. The sport festival of Santa Scientia is a triumph of imagination, and the ability to put great and stirring events into words.

If science wishes for an answer to its deepest problem, how it can work to benefit humanity without being involved in the two deadly things, "Politics and war", in this story the answer may be found.



vians used to, get in women and marry by drawing lots?"

"Of course not."

"What then?"

"That must be discussed. There are probably many among the workers who left fiancées at home."

"It is questionable whether these would suit our basic law of selection in physical and intellectual respects."

"A state of bachelors dies out, let Prof. Weigand prolong life as much as he wants."

Cook paced back and forth a few times. Then he stopped before Mrs. Helling. "You are a brave woman."

"Why do you call me brave?"

"Because you have expressed what we others have certainly thought for a long time. It is the hardest problem we have."

"That is why we women ask to be allowed to discuss it with the men."

"Of course you may."

"Then might I ask you to listen to Miss Elsa Dorn also. She will put before you some proposals which we have discussed together. Miss Dorn has in fact been unanimously elected secretary and executive officer of the National Woman's Club of Santa Scientia."

"See here! We seem to have caught a tartar! The young lady has been here only three days, so far as I recall, and here she already is one of the revolutionists."

"On the contrary, she is heart and soul in our work, but she comes right from the great world, which we have almost forgotten already. Your plans are noble; what you seek to do is magnificent; but with all the machines we cannot forget that we are people who have to be treated as such."

"Great! Little Mrs. Helling has changed and become the opposition party. But here come the two cousins! My dear White, it seems to me that your relative is a very

dangerous person."

Even the sight of Cook did not intimidate Elsa. "On the contrary, you will be grateful to me, to me and to the whole club."

"Well what great plans have you? Mrs. Helling has already explained to me that you think immigration of women necessary, and I must admit that this idea has long been much on my mind. Only all this is very dubious, and I should not want to settle these questions before having spoken to the scholars who are now giving us a sort of examination."

"What do men understand about it? We are agreed that there should be women also at Santa Scientia, are we not?"

"Yes indeed."

"Very well. We are further agreed that we cannot take the first comers but only a choice of the best people."

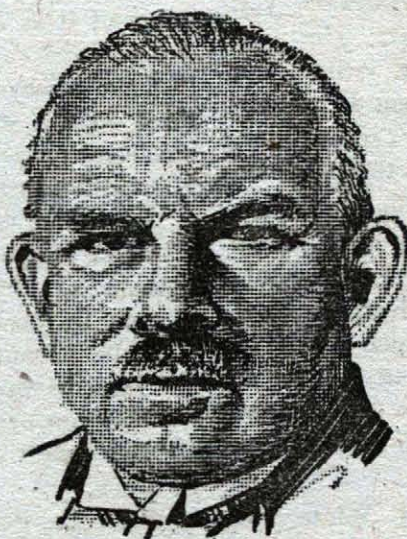
"Certainly."

"We women are furthermore of the opinion that Santa Scientia only can accomplish its purpose by means of a great deed which will make the whole world take notice."

"Do you know of such a deed?"

"Of course. If that all there is to it!"

"Then speak please!"



OTFRID VON HANSTEIN

### The Age of Sport

"WE live in the age of sport. It is quite clear that only such persons belong here as have, without yielding to senseless extremes, toughened their bodies in athletics."

"Quite right."

"Then we will open up Santa Scientia with a gigantic athletic festival, with a meeting of the champions in all healthy sports."

"Not bad." Cook shook his head appreciatively.

"But that is not enough."

"No?"

"It is no use to have here simple contests

such as one sees also in Berlin and Frisco. With your ideas you have revolutionized the world and have carried out what the boldest scientists have hitherto dreamed of as utopias."

"Not I alone."

"Only a fool is modest. You have carried out the work of Prof. Alesius and have found the right men in your friends. You are the soul of all."

"You are forgetting your cousin Bob."

Not heeding this, Elsa went on: "Now you must put sport also on a very different plane. The simple human strength, which is used in sport, ought to be increased by you through technical aids to what is super-human. With your fellow workers you must study every type of sport. The motorist must become a flier, the swimmer a person who masters his element in an undreamed of fashion. All this can be done, if one wants to do it. That is the problem."

"Think it over and have Olympic Games in which you show humanity that giants are battling here. Then invite the whole world! Put out huge advertisements! Make me, who have studied such things in America, your advertising agent! I wager that a hundred thousand guests would come at once. Your task will be to amaze these guests with technical marvels."

Elsa Dorn was silent. Bob White was greatly enthusiastic, and Mr. Cook showed a serious face. "What you say is not foolish but has excellent possibilities. We will discuss it. It is hard to make people enthusiastic about scientific novelties. But if we first get the people here by this (let us simply say) bluff, then they will also have eyes and ears for everything else."

"At any rate, my dear White, I ask you to discuss this with your friends, I mean our old fellow workers. Mrs. Helling and above all Miss Dorn, I thank you very much. We must set about it so far as possible this very day, so that when we have a talk with the new gentlemen tomorrow or next day, we can make very definite and tangible proposals to them. I thank you again. Dear White, use the evening to get things going!"

The three left the room. When outside,

Elsa executed a grand pirouette. "Well, how am I getting along?"

"Fine. If only it can all be realized!" Bob was still not entirely free from doubt.

While the two ladies went away, Bob looked up the visitors, who were now assembled after the day's work, at dinner in the so-called casino. There he put the new plans before them.

At once Römer chimed in. "You know that Grotefeldt has invented a most remarkable new auto, and I myself have a very unique idea about revolutionizing swimming races, if Vetter will help me out."

Vetter nodded.

"We could also make a mechanical change in gymnastics, without lessening the value of it as athletic performance."

The Swiss engineer at once put in a word. "I have always had ideas about this. We must erect a stadium. Then we could add electrical propulsion to soccer. Gentlemen, I am enthusiastic, it is a fine idea."

"Of course it must remain sport."

"What is sport? Good sport is the development of the physical ability and the chance to prove personal courage. That shall be permitted in the fullest measure."

"Then to work, gentlemen!"

"Did you originate this idea, White?"

"No, unfortunately; it was my cousin Elsa Dorn."

While the gentlemen were parting, not to sleep, of course, but to attack the new problems with all their might, Elsa Dorn had reached her room. She felt extremely happy, for she was aware that Cook took her seriously, and in this hour she felt akin to the creative men. . . .

THE assistant engineer, Otto Müller, who was on watch at Cabo Martino, received a message from an approaching airship: "Another stowaway on board."

"Another girl?"

"This time it is certainly a man. He had hidden himself carefully. Was only found long after leaving Frisco. Unfortunately he got by the guards."

"Is he a bad specimen?"

"On the contrary, he makes a very good impression. He is a Scotch-American."

"Land somewhere and leave him!"

"I cannot. He claims to be a nephew of Mr. Möller. His name is MacGonnor, and the fact is that the late Mrs. Möller was named MacGonnor. He claims he vainly looked for his uncle in Frisco."

"Möller was here, but he has already left again."

"The man claims to have led an adventurous life. Was long in Java, claims to have heard accidentally of his uncle, and—"

"Then bring the man along and let me see him!" decided the engineer.

## CHAPTER XIV.

### Waiting

THE airship landed. In a short time a sinewy and determined looking young man was standing before the engineer.

"What is your name?"

"MacGonnor. My mother was the sister of Mrs. Möller."

The stranger was brought to Isabella under secure guard by the engineer himself. MacGonnor was self-possessed and in no way showed that he was inwardly delighted by his successful ruse. His papers, which he had procured in Frisco, were in perfect order.

Bob White himself brought the stranger to Mr. Cook. There MacGonnor presented a few letters that purported to be from Möller himself. Of course they were forgeries, but they were so skillful that they deceived Cook completely.

"Remain here and consider yourself our guest. Mr. Möller has gone to Yokohama and will be back in about a week. Then he can decide himself what to do with you."

Cook had become more generous since he had determined to open soon the blockade of the rest of the world. MacGonnor was given a room in the so-called "hotel", a part of the central building, indeed not far from that of Elsa Dorn. Since he was here with Cook's permission and since there was no restriction established as to his movements, no one observed that he used the evening hours for looking around in the fairy city and taking long walks.

The same evening, when Bob White again telephoned Alesia, in order to inquire about the German scientists, they expressed the wish to be allowed to remain here two days longer. "We have so much to discuss, and we should like to come with definite proposals."

Bob and Cook were very well satisfied with this. In the meantime it would give the other scientists time to think out the possibilities of the athletic festival more exactly.

\* \* \*

In Puitu the conspirators had been assembled by Don Joao.

"Tonight we set out. We have word from MacGonnor. He arrived safely in the city of our enemies and is waiting for us. I have hired a swift yacht, which is anchored a few miles south of the harbor. If we set out early enough, we can be at the island of San Salvador by midnight. There we must remain concealed all day. The next night Sam will go over to the island of Santa Scientia with us and we shall again hide until the moment to strike. We can only hope that the weather is favorable."

They set out in the evening, without having aroused the suspicions of anyone in Guayaquil. The yacht was provided with weapons of all sorts, and the twenty men, who had jestingly called themselves "conquistadors" after the cavaliers of the days of Cortez and Pizarro, had determined and adventurous faces.

The trip went smoothly. They landed in a lonely bay on the coast of San Salvador. They had no need to hide, since no one was to be seen and they would certainly not be betrayed by the tortoises and iguanas, the sole inhabitants of this shore.

The sea was perfectly calm and the night quite dark, when they commenced the trip across in two large boats which they had brought with them. For years no boats had approached the coast on that side.

At midnight they landed on the steep bar which now divided the old Inca bay from the sea. Sam first crept cautiously over the rocky wall and soon returned. "Everything is all right. The motorboat which usually

lies over yonder is moored here at the shore."

The twenty men climbed up and came down on the other side. Sam started the noiseless motor. The boat glided across the little body of water and disappeared through the gate into the subterranean lake, long since widened to make a great entrance. It touched at the far shore.

"Now you wait here through the day! I shall sneak into the city and look up MacGonnor. I shall come back with him tomorrow night. Then you may act!"

The negro was right, but it was not easy for the twenty men to wait there calmly, while the boat and the black man disappeared in the distance. Only a slight shimmer of light came through the open rock gate, and then they no longer saw the boat.

"We are in his hand."

"What if he betrays us?"

"This American will not pay him any million."

Christobal laughed. "What about ourselves?"

"We have at least promised it to him."

"For how long are we provisioned?"

"For two days."

"Supposing he does not come back."

"Then we will act ourselves; but we need MacGonnor."

\* \* \*

**D**URING the next day the twenty became still more impatient. One of them, a Swiss adventurer by the name of Hospenthal, showed a determined face. "If the negro does not return, nothing is lost. There is some wood lying down there which they brought here. With it we will build a raft."

"We ought to have brought an extra boat."

They sat by the shore and saved the light of their lamps, because they did not know how long they would need it. Close before them was the black water, while above them was the dark cave, everything wrapped in Stygian darkness. The perfect stillness was uncanny. The men did not speak but simply stared wide-eyed out into the darkness. No light appeared, and no motor hummed. From time to time they turned on

one of their lights. They did not even know whether the water was rising or falling. It was damp around them, and when the lights were switched off and the darkness took possession of them, then it seemed as though demons from the lower world were groping for them with ghostly hands.

Hour after hour passed. The night was over. The day came, a day bringing no light to them. Horror was slowly creeping into the hearts of these men, who were resolved to risk their lives in battle with human beings.

\* \* \*

It was again morning. Müller was standing with Bob, and Elsa Dorn was also in the room.

Helling nodded in satisfaction. "I was worried last night. The motorboat was gone but now it is there again. I was worried without reason. Perhaps Mr. Cook used it."

Bob entered Cook's office. "Mr. Cook, did you go on the Lake of the Gods last evening?"

"No, I just went over to our natural park a little while."

Bob thought it better not to mention the motorboat. Probably one of the engineers had taken a little ride without permission.

On his part Cook asked, "Where is Mr. MacGonnor?"

"He must have been dead-tired. He went to walk yesterday, but today he seems to be still asleep. No wonder; stowing away in the ship did not give him a pleasant trip."

"Let him sleep. 'He who sleeps, sins not,' says the proverb.—"

Elsa Dorn was still in her room. On this day her work did not start until afternoon. She did not know why she felt so uneasy. Perhaps she was the only one to whom this stranger, MacGonnor, seemed an object of suspicion. He did not belong.

She went over and entered the vestibule of his sleeping room. She herself did not know why she did this. If he was in his room, she would say she had made a mistake. But the door of the room was still locked.

She became worried. Could anything

have happened to him? She pressed a button, knowing that now a loud bell was ringing in his room, which would be bound to waken the sleeper. Then she held to her ear the telephonic receiver with which she could hear any sound. But all remained still.

She repeated the bell signal and listened again. Nothing stirred. Elsa stood and reflected. She was becoming more uneasy, and she did not know what to do. Should she wait? Or should she call Bob White? She started, for she thought she heard steps approaching.

Bob stood behind her. "You here?"

"Are you thinking the same as I?"

"What do you think?"

"That there is something queer about this MacGonnor."

"Wait a minute! If I press this second button, the door will automatically open."

"I did not want to do it, because I am a girl."

"But I will."

The door opened. They saw that the bed was untouched.

"What now?"

"I was equally full of doubt. Möller never spoke to me about a nephew with a Scotch name. It is another spy."

Elsa said anxiously, "Do you think he took the motorboat?"

"I do not know. At present I shall say nothing to Cook but shall keep my eyes open. I shall tell only Helling and the assistant engineer Bollman, one of the most reliable of our new men. It is well that the German scientists are not in town today."—

### The Attack Begins

A DAY and a night had passed since the conspirators had reached the underground lake. It was again night.

"Our food is coming to an end."

"Tomorrow we will make the raft."

"MacGonnor has been caught."

"Then they would have searched the lake."

"I hope we find the landing."

"We must look for it and, if necessary, take it by force of arms."—

Midnight again. Joao seized Christobal's hand. "Isn't that a light over there?"

"MacGonnor is coming."

"Or else the enemies, searching the lake."

The light rapidly became larger. Soon the motorboat could be recognized, and the humming of the propeller sounded loud in the silent night. The men held their loaded weapons in their hands, ready for anything. A whistle, a signal!"

"It is MacGonnor."

His voice came to them. "It is I! Be ready to get on board!"

The motorboat was at the shore.

"Be quick! We must get back at once, the boat must not be missed."

They embarked and went back. Then MacGonnor called, "Here we are."

They could already hear the rushing water which fell into the turbines."

"There is the landing."

The motor was shut off. The men held their breath and got out, as quietly as they could.

"No one is here. The boat has not been missed. We are lucky."

Stepping softly the conspirators climbed up, cautiously looked about, hurried into the open country, and followed MacGonnor to hide themselves in some bushes, in the dead of the night. . . .

\* \* \*

While the conspirators were entering the territory of Isabella, Elsa Dorn lay in a restless half-sleep. This time she had really dreamed, about strange things, about secret assassins who were entering the city. She was unable to remain in bed and so got up. The next day was sure to bring plenty of work. Better to get to work now than to be sleepless and tormented by anxious feelings.

She went down to the lower hall, to fetch her papers, and sat down at the desk for a moment to go through the portfolios. Then she started. Voices were about her, soft whispering voices. Collecting her thoughts, she understood. In this room a whole system of microphones came together, so that it was possible, especially in the stillness of night, to hear from this place every sound, every conversation in the streets of the city.

"It must be done tonight."

"Tomorrow is too late."

"**C**OME, I will take you to his room." Then it became perfectly still, but Elsa was full of horror. Now she was wide awake. She ran down the stairs, trembling at every step, terrified at her own shadow, and only breathed freely when she saw Bob White, who was just about to go to his own room.

"What are you doing on the street at night?"

"I was looking for you."

"Me?"

"There are bad people, criminals, in the city."

"You have had a nightmare."

"I heard them through the microphones."

"Come in here and tell me!" Bob led her into one of the now empty offices, convinced that she had simply been dreaming.

The conspirators were a few yards away from them in another room. But now no one heard their whispering, for the room with the microphones was now empty.

\* \* \*

"What next?"

The negro Sam was the one who spoke. "First we must attend to this Benjamin Cook. I know how. In the central building we just have to look through the instruction book, turn the right lever on the car, which the number of the book tells us, and the car takes us to him."

"He will be guarded."

"No, he sleeps all alone in his room."

Led by Sam, MacGonnor, Christobal, and Joao Ferreira were whisked through the passages of the central building.

Bob White and Elsa Dorn stepped out of the room in which she had told him all she had heard.

"Go back to sleep! It all seems very improbable to me, but I shall keep watch along with Helling, who is near by. I am convinced that tomorrow you will laugh at the ghosts you thought you heard."

Elsa obeyed him hesitantly, and while Bob softly went away, she stepped into the central building. She had just time to hide behind a pillar, when four figures sneaked

past her. In one of them she thought she recognized MacGonnor. She wanted to shriek loudly, but she could not utter a sound. But then she saw two other forms, Bob White and Helling, hurrying along by the walls, with three others following, she went to her room with trembling knees.

Bob had made use of the moment which had passed after he had left Elsa. To be sure, he did not believe there was any danger, but he was cautious. He put a little whistle to his lips and blew very strongly, yet no sound could be heard. It was one of the whistles that many American police stations have. These produce extraordinarily high pitches, so that the human ear cannot hear them, but they affect very delicate diaphragms worn by those on watch.

Bob, Helling, and three other men, whom Elsa no longer could see, softly entered the government building and saw the four conspirators standing at the switchboard. Knowing what to do, they hurried through a side passage and went up in one of the cars, while the conspirators did not suspect that pursuers were already on their trail and were waiting for them in the roof garden.

## CHAPTER XV.

### Invasion!

**M**R. COOK, as always, was entirely alone. He was just about to lie down. Why should he have guards about him in Isabella? He was convinced that there were no criminals in the country of Santa Scientia.

The door opened, and three men stood before him, Joao Ferreira, Don Christobal, and MacGonnor. The negro Sam had remained outside and was watchfully hiding among the shrubbery of the roof garden.

Mr. Cook looked around in astonishment and did not understand what visitors were entering his room in the night. "So late, gentlemen?"

"We should like to say a few words to you."

"Now, so late?"

"You are not asleep."

Cook recognized MacGonnor but still did not understand. "Who brought you here?"

MacGonnor smiled. "Things are made easy for a person in Isabella. We only needed to look up the number of your room on the list. The fine car brought us here. Anyway, you are very trusting, my dear Mr. Cook."

"How so? I need no fear in Isabella."

"Undoubtedly your room bristles with hidden weapons and concealed bell-pushes?" MacGonnor laughed uneasily while asking this question.

"Absolutely not. There is no bell-push here, because when I am here I want to be undisturbed, and I certainly do not need weapons."

"Not even today?"

Cook was getting angry at the strange behavior of these people. "Please leave me. If you have some desires, I shall expect you tomorrow in my office." He kept casting questioning looks at Joao and Don Christobal, not understanding how there could be in Isabella any faces unfamiliar to him.

Now Joao stepped forward. "I am Joao Ferreira, the son of the president of Puitu. Don Christobal you must have seen from previous visits to my father. MacGonnor has already presented himself to you."

"The nephew of Mr. Möller?"

"That has nothing to do with it."

Cook was beginning to get nervous. "Well, what do you want, gentlemen?"

Joao smiled pleasantly. "A little business deal. Here is a hundred thousand dollars. Sell me for it your supposed right to the Iguana Islands and leave the city tonight!"

Cook thought he had to do with lunatics or drunken men. "Are you going to leave me alone now?"

"Oh no, my dear sir! I know that you cannot defend yourself and that you have fallen into the snare. Now we will settle our accounts."

"Get out!"

Mr. Cook was beginning to understand. He was about to go to the door but saw that it was closed, that the car was gone, and that Christobal was pointing a revolver at him.

"Hands up or I fire!"

Before the likewise closed window stood MacGonnor, also holding a revolver.

"What does this mean? Stop this comedy!"

"It is no comedy."

"What would be the use of your shooting me?"

"Enough. As soon as I fire three shots out of this window, your friends will also be dead and the machines in our hands. We are not alone, and we have dependable helpers."

"You . . ."

"Tomorrow there will no longer be a Benjamin Cook or anyone who could call himself his heir, no Santa Scientia, but the Iguana Islands will again belong to Puitu."

"Then are you cowardly pitiful murderers?"

"We are men who want to restore what foolish agreements have given away."

**C**OOK had regained his self-possession. "You are ridiculous. Why don't you shoot, if you think you can destroy my work by my death?" He reflected feverishly, thought of ways to save himself, and realized in this moment that he had been too trusting.

"Will you leave the city?"

"No."

"Very well, we are not executioners. If you will sign something . . ."

"You are murderers."

"We will give you five minutes."

Cook was perfectly calm. He sought a way of safety. His thoughts wandered. Involuntarily he lowered his eyes. Then it seemed to him as though he heard a soft sharp click. He looked up, and the room was empty. The three men had vanished without leaving a trace.

Cook stood a moment as though transfixed. Then he stepped to the window and opened it. Outside the night was as silent as before.

He stepped to the switchboard and pressed a button. After some time came the car with an operator. "Where have the three men gone, who were in my room? You must have seen them on the glass plate

which indicates the course of the cars."

"There was no car en route, and I have seen no one."

"No one?"

"Certainly not."

"Very well."

Cook was alone again. Had he dreamed all this? Dreamed that these men attacked him?

During the moments that Mr. Cook had been looking at the floor in desperate thought, while the villains with raised revolvers were thinking only of the fulfillment of their plan, the door and window had softly opened. Quick hands encircled the throats of the criminals. Without a sound they collapsed and were lifted into the car. When Cook heard the click of the closing door, which started him from his thoughts, the four conspirators—for Sam had previously been fettered—were already fastened up and were going under the guard of Bob and Helling out of the interior of the city.

Mr. Cook, who knew as little of these things as of the role which Elsa Dorn had played, opened the door, went out, convinced himself that the deepest quiet prevailed everywhere, and began to think his nerves must be weak.—

The next morning Elsa was uneasily walking back and forth in her office, when Bob entered. He showed a face of perfect equanimity. "Good morning, Elsa!"

"Thank God!" Elsa drew a breath of evident relief.

"Why say 'Thank God'?"

She perceived that he did not want to speak of the matter, but she knew that the danger was over.—

Outside the city the conspirators were shut up in an old cave, undergoing judgment. Benjamin Cook and all his fellow workers were assembled. Opposite them stood the conspirators, bound and guarded by Chinese coolies.

"What have you to say?"

Joao held his head high. "Simply that we have lost."

"At least you are not cowardly."

"Why should we deny what you have seen?"

"Why did you disturb our peace?"

"To repair what the government of Puitu has done. If the job had succeeded, Santa Isabella would now belong to Puitu and with it the Inca gold."

"You are assassins."

"Patriots!"

"And now?"

"We are at your mercy."

"We will consider your fate."

There was only a short discussion, and then Benjamin Cook said, "We should have the right to put to death at least Don Joao, Don Christobal, and MacGonnor. You wanted to murder me, but Heaven has prevented it. Today you will be delivered to the government of Puitu, and it may judge you."

The men did not reply. For a moment it looked as though Don Christobal was about to rush at Cook, but Bob held him back.—

An hour later a great Zeppelin set out for the continent. For the first time there were bound men sitting in it, men with gloomy faces. They knew that they would find no thanks at home. The revolutionist whose stroke fails is doomed.

Assistant engineer Müller was to take this human cargo to Puitu.—

### A Family Meeting

**B**OB walked silently into the government building and met Elsa Dorn. "Elsa, I thank you, you saved Mr. Cook."

Elsa blushed, jumped into a car, and sped away without answering.

In the evening the German guests were brought back from the watering place of Alesia. Bob himself was the one who conducted them. In Santa Isabella all was calm again. Except for the guards and the friends no one had suspected anything of the great danger which had hovered over them all.

"Are you refreshed? Have you talked things over together?"

"We are enthusiastic."

"Then may I ask you to give us your judgment of the work tomorrow?"

The gentlemen were again in the guest room, eating and taking walks an hour in length in the roof garden alone. No one disturbed them. In wonderful harmony the



light shone through the colored panes of the windows. Majestic in its unique beauty, the city of the future lay before them, and high up on the roofs the night wind was fanning the palms.

\* \* \* \*

The twenty conspirators were ill at ease in the big Zeppelin on which they had to make their return trip under the conduction of Engineer Müller. Still less pleasant was the moment when the airship was sinking before the capital of Puitu.

Nothing at all had actually happened to them. They had not even been fettered but they had simply been stowed in the large passenger cabin. At first they were fairly content. They spoke together in Spanish, after they had convinced themselves that Müller did not understand this.

"They are after all great fools, these so-called prophets of the future. We will wait until we are high in the air, and then we will easily settle this one man."

The Swiss Hospenthal nodded. "I have operated airships for years. First we will go to America, I mean to some lonely stretch of coast in California. Then we will be safe."

Joao laughed evilly. "I plainly saw them load in ten gold bars, quite openly, before our eyes. Probably the Zeppelin is to continue on, after delivering us. The gold is not much, but it is something."

The airship was sailing over the sea. They looked cautiously into the pilot cabin. Mr. Müller was lying in an airchair, asleep. Apparently the airship was under remote control.

"Now is the time."

Hospenthal went to the door, but when he was still about a yard from it, an inscription lighted up: "Look out! Electric current! Dangerous to life!"

For a moment they stood hesitating, but then they saw that Müller was now not even stirring in his chair. Hospenthal shook his head. "Bluff! Where would the electric current come from here? Do not be scared! He stepped further and laid his hand on the latch of the door. Immediately he slumped and hung on the door, uncon-

scious. Simultaneously there was a loud ringing of a bell.

Müller got up and pressed a lever. Hospenthal fell to the floor, and immediately the lever was moved back again, while the loud speaker of the microphone used by Müller sounded forth. "Why ridicule our warning? This time only a relatively weak current was on. The man will recover. Now I have full current in all wires. Anyone who even touches a wall from now on will be killed at once."

They carried Hospenthal to the sofa. He had severe burns on his hands, but he recovered consciousness.

With an angry gesture Don Joao threw his cigarette butt against the door. "These miserable machines! Truly, nothing can be done against these men!"

After that the twenty doomed men sat together in silent rage, watching the Zeppelin fly over the coast of Puitu and rise to the mountainous land, the center of the state.

Müller was now at the controls, and the airship swept down in elegant spirals. If the conspirators had had a last hope of being able to escape at the moment of landing, this was lost. For they saw that the whole square was surrounded by soldiers and that they are coming closer and closer together. Once they left the cabin—of course after the current had been shut off—they were taken to the city under strong guard, while the Zeppelin rose again into the air under Müller's control.

Now there was at least a little consolation for the conspirators that it was night and there were no spectators to view the miserable return of the "conquering heroes."

They were put in the state prison, a building erected on some old Inca structures. It consisted of blocks which now, after centuries, were still so solid and perfectly fitted that one could not have inserted a knife blade in the cracks.—

It was a most peculiar meeting, which the aged President Ronaldo Ferreira celebrated with his son in the grey of morning. While the president stood there with folded arms, Joao sat on his stool with a defiant mien.

"I have had to accustom myself to hav-

ing my own son for my enemy, trying to get my office, but that you should join with the assassins . . . ”

Joao sprang up. “That is not true! I wanted to . . . ”

“You wanted to murder!”

“I do not deny it. I wanted to restore what you lost to our country.”

“Nonsense! I sold a desert island.”

“With the millions of the Incas.”

“Have you seen them?”

“Not I, but . . . ”

“That is madness. We searched the island for years. We should never have found the treasures. Only that Alesius knew the way, if there was one. But you have acted like a silly boy. You have sneaked as a thief into a territory belonging legally to an American, a citizen of the United States. You will be to blame, if we have serious trouble. You were a fool. A band of adventurers is not fit to do anything good. Now you impose on me the saddest duty of my life.”

“What duty?”

“What befits assassins?”

“Are you going to . . . ”

“I always shall do what my duty dictates.”

The old man looked seriously and sadly at his son. The latter was again sitting dejectedly, his head in his hands. The president shook his head and went out.

## CHAPTER XVI

### Exiled!

**T**WENTY-FOUR hours had passed and the prisoners, who were each locked in a separate cell, had learned nothing of their fate. It was not until the next night that they were led, all strongly shackled, into a room of the prison, in which a court had assembled around the person of the president. He addressed the assembly.

“I have received a request from the owner of Santa Scientia. He wishes that these immature lads be not punished. Therefore, gentlemen, you are banished from Puitu. This very night you will be put across the frontier. Death is the penalty for any of

you who again appears in Puitu.” Without granting his son a glance, Ronaldo Ferreira left the hall. The conspirators drew breaths of relief and remained silent.

The president returning to his palace realized that he could be thankful for the activities of these rash youths. By their deed they had put him in a position to exile the leaders of the opposition party from the land at one stroke.

He made ready to receive the emissaries of the United States. Ronaldo Ferreira was not the man to forget his own advantage. The United States supported him, and the Inca gold, if it had been found again, would have ruined him.

\* \* \*

In a miserable little harbor saloon in the Colombian city of Tucuma the twenty conspirators were again assembled, the Swiss Hospenthal having his hands still bandaged.

“What now?”

“We have failed. I am going to Frisco. My generous father has left me enough to be able to travel on a coastwise ship.”

Joao winked at Christobal and MacGonnor, and they nodded. “We are coming with you.”

“And we?”

Joao shrugged his shoulders. “I cannot help you.”

“You led us into this!” cried one angrily.

“You were going to get us countless millions.”

“Why did you hesitate? Why didn’t you shoot at once and kill the American? Why did you let yourselves be surprised?”

“Are you going to heap any more reproaches on me? I lost more than all of you.”

They drank glass after glass of brandy and as their dispute became more and more heated they reached for their knives. The saloon was full of rough fellows who took sides in this drunken brawl. Suddenly revolvers were fired.

Joao leaped up from the floor, tore the lamp from the wall, and with a quick heave flung it out of the window. In the darkness Joao, Christobal, and MacGonnor utilized the opportunity to jump from the window.

They ran along the shore. Soldiers came crying, "What is it?"

"There is a fight in the Santa Inez saloon."

Shots were heard, and loud yelling, then a great crash. At once a flare of fire could be seen. The soldiers ran thither, and the inhabitants of the little city were startled out of their beds. The brawl had become a battle. Drunk with brandy, the men of Tucuma—sailors and rabble—had for some time been fighting with the strangers.

Joao, Christobal, and MacGonnor stopped to get their breath. "We are rid of them."

"You have money?"

"Enough for the three of us."

They walked out of the city and along the beach.

"Are we really going to Frisco?"

"For the present."

"And then?"

Joao's eyes shone catlike in the dark.

"We'll have the millions of Santa Scientia."

"Bravo!"

"Sam is again on the island. He will help us."

"He does not know where we are."

"I thought it all out, and our chance failure. I left him an address in Frisco, and perhaps he will send news there."

"I was a fool. Often three men accomplish more than twenty. I am going to have those millions!"

"Then let us first go to Frisco!"

**A** WEEK later the three men arrived in the port of Punta Reyes. They had meanwhile altered their appearance. Their beards had grown, they wore old clothes, and they looked like shipwrecked sailors. They had also chosen new names, and in their new characters they found a chance to work their way toward Frisco on a small sailing vessel, part of whose crew had deserted.

Even if the captain did wonder at the clumsiness of the new sailors, he found them at least willing workers, and since the weather remained favorable, the cruise was satisfactorily accomplished. After all, it had not been in vain that Joao had taken exten-

sive trips on his own yacht with his friends in former days.

In Panama they were paid off, they changed their clothes again, and a week later were sitting a little hotel in Frisco, reading the papers. A feature story told "How President Ferreira of Puitu Got Rid of His Enemies."

There was a rather mocking despatch recounting how Ferreira had expelled his son from the country, after the latter had again made himself ridiculous as a treasure digger on the desolate Iguana Island.

Another item followed this. "The rebel Joao Ferreira, who was exiled from Puitu with his fellow conspirators, lost his life in the seaport of Tucuma in a low brawl. Poor Puitu, if such vagabonds were intriguing for the presidency!"

Joao laughed. "We will give them another nut to crack. Just wait!"

The three vanished from the confusion of the metropolis. A week later, if anyone from Puitu had seen the elegant gentleman with the pointed beard, with hair a little grey at the temples, who called himself Don Miguel Almeida, an Argentine who had taken a position with a large automobile company as a racer—he would not have recognized in him Joao Ferreira. No more would anybody have noticed a similarity between the full-bearded bespectacled Scot MacIversen and MacGonnor, or between the brown-haired, now smooth-shaven Chilean Sero Argonza and the secretary Don Christobal.

The two latter gentlemen were regular evening patrons of the gambling dens in the port. The negro Sam had not been heard from.

\* \* \*

The scientists visiting the Iguana Island had known nothing of the night of terror in which a few murderous villains had nearly wrecked the work of Mr. Cook. Cook and White were as calm as ever the next day. However, they had established guard duty at the electric microphones, and in the central building a troop of armed men was always ready.

In the great hall of the central building were assembled the makers of Santa Scientia. There were perhaps fifty men in all,

besides the seven women, and at a special table of honor were the six members of the expedition.

Mr. Cook rose to speak. "We have told you, gentlemen, that we regard your visit as that of an examining commission. Here we have created quietly a new world. We have had ample means, but thus far we have anxiously avoided outside eyes. Now tell us frankly, what impression our experiment has made on you?"

As the senior of the visitors, Prof. Ortler replied first. "One question first. Here you have almost nothing but Germans. We are a German expedition, but you are an American. How does it happen that you put Germans so in the foreground?"

Cook smiled. "It would seem as though I wanted to found a German colony here. I am an American, though after all of German descent. We have thus far been working purely scientifically. Even the city plan which we have used here has rested on a scientific basis. Do you not know the expression, that Germany is destined to be called the 'university of the world'?"

"As soon as I need practical tireless workers, which I hope will soon be the case, I shall get Americans. Our athletic instructors will be English. In our model industries we shall bring in Chinese for the careful, personally managed agriculture. Japanese shall teach us the art of preparing lacquer work. More Chinese in cooperation with Koreans shall make precious paper. Italians are to open schools of painting. Persians will be at the head of our rug weaving establishments.

"From the savages of the primeval forest we will learn to observe nature and to make many plants useful to ourselves. Each nation has its particular gifts; therefore each shall utilize its gifts in peaceful rivalry in the great world university of Santa Scientia and develop them for the good of all humanity.

"We intend to make the entire world one great unit so that each respects the other and each learns from the other, so that the vast tropical forests and the boundless prairies may in the future become granaries, while industry predominates in the rest of the

temperate zones. Wars will die out of themselves, and world peace will make brothers of all men."

### Plans For the Future

D. R. Schlüter arose. "I am no scholar; I am a man of practical life. Your great work seems empty, as long as there are only men here."

"It will not be so in the future. Now may I ask you gentlemen for your judgment?" said Cook.

Again Ortler commenced. "I came hither under compulsion, with the intent to criticize. Yet I am converted. Your attempts to change barren land into fertile soil by artificial watering and mechanical cultivation have been successful, likewise your replacing of human labor by machines."

Prof. Zolling stood up. "The use of natural volcanic forces is a magnificent idea. I declare myself ready to cooperate in the attempts to make Alaska warm by such means."

Van Rhyn nodded vigorously. "You have shown new lines of development for electricity."

Gumppendorf, the young meteorologist, chimed in. "You have accomplished something astounding in the way you influence even the weather."

Frank arose. "I am eager to work with Prof. Weigand on the problem of combating old age, and I marvel at your hygienic equipment."

Zolling took the floor. "Yet all that you have done here is simply a beginning, an experiment. Now you must make the test of opening your university to the world. You must get in new minds and develop teachers. You must test on a large scale what you have worked out quietly. You must turn to the League of Nations. It must recognize you as a miniature nation. For it is necessary that this world university, which is never to be involved in two things, politics and war, shall not belong to any existing nation but be an organic whole of itself."

Cook arose. "I thank you. In two months Santa Scientia will be opened to the

world. Miss Dorn, as the youngest among us, will you present your plans to these gentlemen? I have the pleasure, gentlemen, to present to you the National Woman's Club of Santa Scientia, the only woman's organization in the world which can boast of containing all the women of a state. In these seven young women, of whom Miss Dorn alone is unmarried, you see all the feminine inhabitants of Santa Scientia."

Now Elsa Dorn stood up. Every eye was turned to the young lady. At this moment the six professors saw her for the first time; and Bob White was rather worried as to how his young cousin would take her new position.

Unconcernedly Elsa looked about. "The conclusion which I reached was perfectly natural, because I have just come from the outside world. Santa Scientia is to be shown to the world. How can this be done? Shall we attract here through the travel bureaus several hundred thousand tourists, who will stare at us with lorgnettes and monocles as though we were strange animals, say 'Very nice,' and then depart?"

"Shall we steal more talented people and be suspected of peonage or slavery? Shall we ask the governments to send tiresome commissions to us? This would be nonsense. We must make the whole world talk of Santa Scientia all at once.

"I am thinking of an athletic festival, a joyous gathering, a festival to which only people come who have strong bodies and clear eyes of vision. Yet it is to be a sport festival of a unique sort. Our sport shall show the world in play what we can do technically. Our guests will see Isabella, the model city. They will live in our glass houses, they will breathe the air of our roof parks, and the wearied ones will recover in our sanitoriums. Our expresses will take them through the sea. Our network of lines and our automatic trains will carry them through the island.

"There will be no tiresome going about as in a museum. Our guests will experience all that Santa Scientia means for a week and then return home, having the feeling that they have spent a week in the future. Then they will make comparisons, and thousands

will seek admission here, and we shall choose. Men and women will be welcome, and the best will fill our now empty industries, to work under the sound of our industrial music, and the world university will be opened." Elsa had spoken with enthusiasm.

"A sport festival? Not a bad idea!"

Now Bob White stood up. "May I tell you what we call sport, what we want to do in our great arena?"

He gave a long talk. Every kind of sport was involved. Occasionally he had one of his friends explain, Vetter or one of the engineers, and the longer the talk went on, the more desirous the scientists became to hear more.

Now Cook stood in the middle of the hall. "I thank you. Tomorrow we shall send out invitations to all the world. On our own or on hired ships we shall bring to Isabella in a single day a hundred thousand guests from all parts of the earth. We will however make the condition that the League of Nations grant us the right of selection and our own independent management, uninfluenced by any power."

"And if it does not?"

Cook spoke very seriously. "I have pledged myself to use the Inca millions only for the purpose of benefitting humanity. Our arrangements give us the possibility of forcibly removing the island from any outsider. Below the treasure chamber, in which our possessions are stored, is a great quantity of explosives. At the moment that they would force me to give Santa Scientia and the Inca money to avarice or to selfish politics, I would press a button and blow myself and the whole island into the air. But it will not come to that."

## CHAPTER XVII

### Preparing!

WHEN Mr. Cook had ended, the six professors came forward to press his hand.

"Then you will remain as our guests till the great sport festival?"

Van Rhyn shook his head. "I ask to be permitted to help."

"I too."

"And I, with all my heart."

That very day the six gentlemen were received into the community of Santa Scientia.

Dr. Schlüter then asked: "What can I do?"

"There is a very important post for you, Doctor. During the period when we shall have the presence of great crowds we shall need something which hitherto did not come into our plans and which I hope we can dispense with in the future. May I ask you to take a number of dependable men from our workers and create a police force for Santa Scientia for the festival week?"

Dr. Schlüter was delighted. It was no trifling task to be the guardian of public order in an assemblage of a hundred thousand people.

An hour later Cook called Elsa Dorn to his office. He was again quite brief and businesslike. "You will undertake the advertising?"

"Yes."

"In the next three days you will invite the hundred thousand guests, print the prospectuses, send them, and hire the ships for transporting the people?"

"Yes."

"You can do that?"

"Yes, Mr. Cook."

"Whom do you need for help?"

"Here, only Mrs. Helling, and in Frisco, Mr. Möller."

"Good."

All this would have seemed incredible to a stranger, but here it was perfectly natural. A young girl was going to perform, with the help of a single young woman, a task which ordinary human judgment would have considered necessitating an army of aids. Elsa Dorn knew what she was promising. She did possess this army of aids, only these were machines, not people who tired easily.

The new converts to Santa Scientia however, had other work. Machines under their direction had been at work for some days,

converting into a gigantic arena an incredibly huge piece of land, which hitherto had been only a lava waste. It was not levelled, but it was ploughed up, and strange electric fields devised by Vetter and Van Rhy were built in and great moving bands constructed. Others again were at work night and day under Grotfendt and the Swiss in performing other startling things in the subterranean "Lake of the Gods", while still others were preparing a second place for the soccer games.

From Frisco came shiploads of machine parts. Day after day the submarine railway carried freight trains of furniture, rugs, and all the things intended to make into a hotel city the buildings of Isabella.

One person however was secretly sneaking about with open eyes and listening ears, able to elude the observation of Schlüter: the negro Sam.

Elsa Dorn had to work feverishly to carry out the task which she had imposed on herself. She had a strange office. A number of helpful spirits were about her, yet not a single human being. There stood huge machines, remarkable automatic typewriters. She only had to speak into their tubes, and at once the vibrations of her voice, received by selenium cells, made the keys operate. Moreover, these keys again activated ingeniously devised typesetting machines, so that every word which she spoke, which she of course did with due consideration, immediately appeared as a completely typographical unit, which was automatically printed by a printing press.

Mrs. Helling, for some time her assistant, operated this press. She had only to press keys, and at once the impression was automatically made, and thousands and hundreds of thousands of copies came from the speed-press, were counted, enumerated, and arranged. Another pressure of a button, and the completed printings slipped into mail tubes, were forwarded by compressed air to the great airship port. Barely a few minutes after Elsa had spoken, the advertising sheets, on which even illustrations had already been printed in the workrooms, were flying over the ocean.

BESIDES the use of these machines, which kept up the work of the new advertising bureau, Elsa Dorn had another task, which had been given her previously and which she likewise managed all alone: the mail. Each day there were of course many letters to dispatch, and the number was now growing larger and larger. It constantly delighted the professors of the expedition to look at this girl at work. She worked steadily, until finally, after eight hours of the most intense labor, mental, of course, clear siren whistles announced over Isabella and at the same time over all Santa Scientia the hour of rest, when all the machines automatically stopped.

While attending to the mail Elsa sat in a comfortable armchair and had before her an apparatus looking like the keyboard of a typewriter, but which was in reality made up of a countless number of buttons governing electric circuits. About her she had a whole arsenal of machines. Clear up at the left was a funnel-like arrangement out of which letters fell one after another on a moving belt. Of course with every invitation, likewise with any other correspondence received, only a standard sized envelope was used. A little knife descended, and the letter was opened. Two springs seized it, and it was unfolded. Now it appeared on the first of the glass plates on the wall, strongly illuminated and magnified by a lens. Now Elsa's work began. Without any trouble she read the letter, pressed a button if necessary to turn it, and read on the other side. Otherwise she connected another wire and the letter began as it were to demand its answer automatically, in case Elsa did not press the button marked *Wastebasket*.

If Elsa pressed the button marked *Answer*, the letter glided along the moving belt to the typewriter, and the latter lighted up. Elsa, still sitting in her chair, dictated the reply, which the typewriter took down. A new pressure of a button, and the completed letter slipped into the machine for folding and putting in the envelope, while the carbon copy and the answered letter passed through a date stamper and went according to the alphabetical files. The envelope machine

put the letter under a second typewriter, Elsa dictated the address, and the letter went off at the right on the inclined plane to the postoffice.

But if they were letters to be answered by an invitation, other moving belts came into play. After the letter had been read behind the glass plate, it was provided with number and date and then moved to the listing machine, which at Elsa's dictation wrote the name and address in the list of visitors; the number of the invitation always appeared above it in large characters. Then an envelope with the invitation card and the ship card fell out of a container, went to the folding and typing machines, and was sent out.

Elsa had nothing to do but sit in her comfortable chair, read the large writing on the wall, and press the various buttons. A mistake was impossible. If she ever forgot one of the mechanical steps, then the whole confusion of belts and wheels, which much resembled a railroad train stretched along the wall, simply stood still and a buzzing sounded until the point neglected was attended to.

Each letter had to be dealt with exactly in the order of its arrival, and none could be forgotten or overlooked. Without overworking or having to rely on the dependability of others, Elsa always had exact knowledge of the state of all correspondences. Only letters which she could not act on herself were sent along a special belt to another container. Then, in the presence of the official responsible, it was again put through the system of belts and machines. Each of the officials who had a department of Santa Scientia's activities under him possessed such a box, and there was a special mail day set for each, on which his correspondence was sent out.

At first, of course, the correspondence was limited to what was sent to Mr. Möller in Frisco, for as long as Santa Scientia had been anxiously protecting its boundaries, correspondence with other people had been impossible. But there were often hundreds of different questions to be settled, hundreds of orders to be handled. Now Weigand needed the latest scientific books, and now shipments of instruments from Zeiss in Jena

were required; or from the various factories, chemicals, machine parts, and lenses of special kinds were needed.

Then it was also Möller's duty to keep the Santa Scientia scientists informed about all that was done and discovered in the world in their specialties. For this purpose Smith & Co. in Frisco, known as a great export house for Asia, had in its offices hundreds of men, who had not only to inspect, register, and pack, but also to read all the newspapers of the world and to arrange different articles by subjects. But these men had no idea that it was not thousands of customers they served, but merely Santa Scientia.

### The World Awakens

WHEN the letters were completed in the mechanical mail office of Isabella, in which Elsa Dorn alone did the work for which Smith & Co. would have needed more than a hundred employees, they went through a machine which affixed the postage stamps. There were so many letters that, in order to save time, they were directed in Isabella to overseas or American firms, under the name of Smith & Co. in Frisco. Provided with the necessary American stamps, because they were apparently sent from Frisco, the letters automatically fell into mailbags, which were shut and sealed. They glided, five hundred to a sack, each sack being labelled with the name of the country to which it was going, along moving belts to the submarine railway. On the island of Cabo Martino they were either put on ships or sent by Zeppelin to Smith & Co. at Frisco as their first stop.

Now all this was changed. All invitations and all replies to questions went directly from the island, bearing for the first time a stamp having on it an owl, the bird of wisdom, and having the postmark "Santa Scientia."

While all the world in astonishment raised the same questions: What is Santa Scientia? Where is Santa Scientia? How was it possible for Santa Scientia to originate without mankind's noticing it?—while this was going on, postage stamp collectors also got greatly excited, and the stamps with the owl

brought high prices at all stamp sales. This too was a remarkable matter. Stamps from a country of which no one knew anything! Formerly, as has already been remarked, letters were never sent directly from Santa Scientia. Even now, at least, a stamp of a known country would have to be put, but of which country? Santa Scientia no longer belonged to Puitu, for it had been sold to Cook. The use of an American stamp would have been equivalent to recognizing a higher authority. So Mr. Cook had deposited a large sum of money with the central office of the International Postal Union and had made his application to the League of Nations to be recognized as an independent state. In embarrassment as to what to do, the Postal Union in view of the money deposited, allowed use of Santa Scientia stamps until the League of Nations should make its decision.

While the uproar was daily increasing all over the world, Elsa Dorn again had peaceful days. The invitations had been sent. A hundred thousand ship's tickets had been mailed to those whom Elsa had selected together with the Festival Commission, composed of Bob White and Mr. Cook.

Now there were only replies of regret to send out to the unsolicited applications to attend the festival which arrived daily, and for this even Elsa Dorn herself was hardly necessary. All these letters were answered with a stamped reply, at least all that went directly, for most applications came via Frisco.

In Isabella, however, work was being quickly accomplished. There was an incredible amount to be done. Iron cranes moved their giant arms, to surround the arenas with grandstands and to built into the roads the strange machines, in whose putting together and testing Prof. Vetter was vying with his colleague Van Rhyn.

The orders received by Smith & Co. were strange and different from previous ones. "Please deliver five hundred first class cooks and a hundred perfectly reliable waiters. Within ten days one hundred thousand brass beds with all the fittings. Fifty thousand kegs of first class oysters. A million pounds of meat of all kinds. Twenty thou-



sand hundredweight of butter. A million cans of preserves of all sorts." There were fabulous orders, and before Cabo Martino it looked as though a naval fleet were at anchor. The ships came so fast that only the ingenious loading machines avoided great loss of time.

The only ones unaware of the entire hub-bub were the physicians Weigand and Frank in quiet Alesia. While Weigand had charge of the sickrooms increased a hundredfold in size, Frank, now chief surgeon of Santa Scientia, was busy getting everything ready for any surgical cases which might come up. He established for operating a hospital such as he might have imagined in dreams but certainly had never expected to realize.

**M**R. COOK, always accompanied by Bob, showed himself a clever organizer. The Chinese occupied newly erected barracks, and all the houses of the city were changed to hotels, while in the basements giant kitchens were installed, operated, of course, with electric power. For each trade a model establishment was set up. After the years of creating Santa Scientia in a retiring scholarly atmosphere this sudden change was like a refreshing bath, and the whole island was in a whirl.

While the cooks were arriving and the entire personnel was being trained in electrical operation under Mr. Möller, Elsa Dorn had a new idea. She asked Bob: "Did you think of the music?"

"The music while working?"

Elsa laughed. "That also, but I was thinking of dance orchestras."

"Dance?"

Bob looked at her in surprise, and she laughed. "Do you want the hundred thousand to get bored in the evening? Don't you know that dancing is a sort of sport?"

Suddenly it seemed to Bob as though he saw a vision, he saw himself dancing. It seemed to him like an almost forgotten reminder of long past days. Elsa was standing before him, humming a melody. Involuntarily his feet twitched. "Right, Elsa, we must dance, too."

A telegram went to Frisco. "Ten picked orchestras, deliverable at once."

They arrived, but there were no orchestra rooms for them in the arenas. The sound-proof transmitting rooms were arranged in a building, in which the orchestras played. These were specialized orchestras, so to speak, one just for marches and such inspiring compositions, another a violin orchestra with soloists, another a jazz band, a waltz orchestra, a gypsy orchestra, an orchestra for wind instruments, and so on.

Now it was easy, both for the foremen in the work rooms, and also for the athletic directors, the recreation leaders, and the hotel directors. Out of the various loud speakers the music could be brought anywhere by just pressing a lever. Suitable music could be chosen for any occasion. On the other hand, by alternating the orchestras a varied concert could be made up.

Thus Santa Scientia prepared itself with all its might for its great festival.

## CHAPTER XVIII

### On To Santa Scientia

**O**N one and the same day there was a sensation in the cities of America, Europe, Asia, Africa, and Australia. There were huge advertisements in the papers, immense advertisements in public squares, and men carrying through the streets great placards with colored pictures.

"Isabella, the newly arisen city on the Iguana Islands, is opened to the world!"

"The greatest sport festival in the world in Isabella, the capital of Santa Scientia!"

"The city of knowledge and the home of scholars invites you!"

"Championships of the world will be decided at the Olympic Games in Santa Scientia!"

"Santa Scientia, the city of the future!"

Every advertisement was adorned with fantastic pictures. In them could be seen immense skyscrapers of glass, towers which radiated a fairy light into the world, wild desolate landscapes with giant iguanas and an electric power plant as well; grottoes with fairy lighting, containing shining stalactites and crystal-clear water in which swimmers were competing; strangely made

railroads going through the desert; flying autos and moving streets; and motion pictures showing a desert which before the eyes of the spectators became covered with luxuriant groves of palms, while a city visibly grew out of the wilderness.

All this was Santa Scientia. Was it a miracle or a vast swindle? The whole world spoke of nothing else. At the same time all sporting organizations of the whole earth received invitations.

"The greatest sport festival since Nero!"

"An arena, in which a hundred autos start side by side!"

"The greatest soccer competition!"

"Flying meet!"

"Sport of the future!"

"Flying men and autos!"

From all sides questions were asked, and the answer was always the same: "In fact we have no detailed knowledge as yet, but we are ourselves going to Isabella."

It was advertising such as the world had never seen. Wireless messages sped across the ocean. Telegraph officials sent them with doubtful shaking of the head, and in a few hours the replies came back.—

The League of Nations held a meeting in Geneva. There was a man present whom no one knew, a simple "Mr. Möller", the emissary of Santa Scientia.

"Santa Scientia is the citadel of the world peace. It is invincible and centuries ahead of the world. It desires no war but will always help any nation that guiltlessly suffers."

"Where is Santa Scientia?"

"In the Iguana Archipelago."

"Then it belongs to Puitu?"

"No, it is an independent state."—

The following notice appeared in all the newspapers on earth: "The League of Nations has resolved to send a commission to Santa Scientia. The sport clubs in London, Berlin, Paris, Brussels, Rome, Calcutta, Bombay, New York, Chicago, San Francisco, Tokio, Sydney, Hongkong, Madrid, Lisbon, and Cape Town have decided to take part officially in the Santa Isabella festivities. The automobile factories of the whole world are working feverishly."

A week later new placards and advertise-

ments were to be seen. "Forty thousand guests reported. Who is coming to Isabella?"

Another week it read: "Sixty thousand guests reported. On to Isabella!"

What a city that must be! Sixty thousand guests! Were these actually guests of the country? What city could lodge sixty thousand guests, unless it was great and powerful? Everywhere doubtful faces were seen. Was it an incredible bluff?

New reports came. "One hundred thousand guests. The lists are closed. All the steamers of the North German Lloyd, the Hapag, the Woerman Line, the English, American, and Japanese companies have been hired. For two weeks or more all other ocean travel will be suspended. All steamers are going to Isabella, that is, those that have first class accommodations. A hundred thousand persons from all over the world are to arrive on one and the same day. A million made application, and one hundred thousand of them were selected, prominent men and women from all circles, who have given proof of their personal ability—statesmen, merchants, scholars, mechanics, and also especially able workmen.

"In the seaports there is great crowding. Each one who received an invitation card has free maintenance in a first class hotel and a free ticket for the ship. Isabella is the sole topic of conversation on earth. The times for departure are given exactly. A special luxurious yacht is carrying the representatives of the League of Nations and the European diplomats. For weeks the name of Isabella has displaced all other interests in the world."

**O**F COURSE the remarkable advertisements of Santa Scientia had appeared in San Francisco as well, and here in particular a general uneasiness had taken possession of the people. How was it possible that on the desert Iguana Islands, which after all were not so far from California, such a sport undertaking could have been arranged, without anything having been known of it? And just why was the place called Santa Scientia? After all, what had sport to do with "Sacred Knowledge"?

Many steamers altered their courses to approach the Iguana Islands. But as soon as they came near, they had the experience of the airships which tried the same thing: they were simply turned away by distant control. Their steering apparatus refused to work. Now it was as though the island were a magnetic mountain, which repelled everything which wished to approach it.

Other notices appeared and were distributed especially in all the seaports of North, Central and South America. "There is urgent warning not to try to enter Santa Scientia and the city of Isabella before the day of our festival. No uninvited persons will be permitted to land."

Day by day, as all this aroused the idea that there was some mystery about the whole affair, the more curious everyone became, although most people were still convinced that at the last moment the whole Olympiad at the Iguana Islands would prove to be a great hoax. There were three people in Frisco who had their own ideas: Don Joao Ferreira, who under the name of Don Miguel Almeida was an incredibly rash auto racer; MacGonnor, now named MacIversen, and Seroa Argonza, into whom Christobal had changed himself. The latter pair, as a matter of fact, had sunk by degrees and were making their living in the harbor saloons as notorious bilkers and cheats.

But Don Joao had still preserved some of his former polish, and his ambitious heart had not yet given up his plan of returning to Puitu and of playing a prominent part there. Therefore he did not entirely give up his connection with the two comrades who had so come down in the world. After all, in the case of a bold stroke, every keen knife was welcome.

In the evening, after the first high tide of astonishment as the Santa Scientia advertisements had reached Frisco, Joao met the two. "Did you read it?"

Christobal shrugged his shoulders. "What is that to us? Now everything is too late."

"Or perhaps it is not."

They walked along the shore outside the city, not far from the rock from which the

Cliff House shone down with its bright windows.

Joao had looked around several times, and MacGonnor asked, "What is the matter? Are you seeing ghosts?"

"It seems to me as if somebody were sneaking after us."

"We are all alone."

"Not entirely, gentlemen."

The three started, for suddenly a person was standing beside them. He had appeared so suddenly from the rocks that they could not help trembling.

"Good evening, gentlemen."

"Sam?"

"Of course."

"How did you get to Frisco?"

"Over the water."

"Have you been here long?"

"Since yesterday. I came as a stowaway. It wasn't at all easy to travel over the ocean for eight hours under the hull of a Zeppelin, just swaying between some ropes."

"What are you looking for here?"

"You, gentlemen."

"What is up?"

"Now is the time."

"For us?"

"Yes, if you still have courage. Yesterday I hoped so, and to-day I know it."

"At the so-called sport festival?"

"All Isabella is in a whirl."

"And now?"

"Not now, but at the festival. Don Joao, yesterday I saw you at the great auto race. I have a plan."

"Don't tell me here. We will go to my room."

### "We Are Ready!"

THE four sat together, and Sam revealed his plan. "I have sharp eyes. I got your letters, but I did not want to write. Nobody will recognize you in all the crowd. Here I have what we need. Here are four invitation cards, which I stole along with the tickets. They are for four different steamers, one leaving from Frisco, one from Panama, one from Lima, and one from Los Angeles. You have nothing to do but be at the piers at the right times."

"Good; that is how we get to Isabella. But what are we to do there?"

"I know, since I saw you in the race. This Bob White, who is now all powerful in Isabella, is starting in the auto races. He actually is a fine driver, but you are better and bolder, and I know that also Mr. MacGonnor and Don Christobal are fine drivers and have probably not forgotten their skill. Besides, you have three weeks to train."

"But what good is this?"

"All three of you will take part in the auto race. You will draw lots—one of you is to crash into Bob White's car. Certainly that one perhaps may lose his life, but Bob must be destroyed."

"What good will it do, if Bob White is killed?"

"There will be a great excitement. It will be easy to stab Cook in the confusion. Bob White always carries the key to the treasure vault, and he will not leave it off even in the race. Don Christobal and MacGonnor will rush to the site of the accident—that is, in case Don Joao is the one driving, otherwise the two who are not taking part. It will be easy to get there first, because only these two will know what is going to happen. While I kill Cook, the others will take the key from Bob, cry out for doctors, mix in with the crowd, and run to the treasure vault. I know the password; I heard it.

"Of course I shall be there too, and during the excitement about the accident, in the general confusion, nobody will of course pay any attention to us or to the treasure. We will take what we can, filling our pockets with gold and jewels, taking the cash which is kept there in great sums and fill our suitcases. Then we will quietly go back to our rooms and wait to see what happens. Even if one of you comes to grief, I mean the one who runs into Bob White, nobody will suspect you, since nobody will know that you three belong together, for you will not see one another in Isabella.

"Probably the games will be stopped and the strangers will leave. The more quietly you behave, the less suspicion will fall upon you for leaving also. There are no cus-

toms inspections, and so no one will investigate your baggage. If we are clever, we can secure millions. Yes, we can perhaps return there again later. The Santa Scientia project will be destroyed for Cook and White are the soul of the whole thing. I myself will disappear and come to you; I will find you all right, just as I found you this time."

Don Joao looked up. "The plan is not bad."

MacGonnor shook his head. "I have not driven a car for months."

Christobal made the same remark, adding, "I don't think I would be skillful enough."

Joao smiled contemptuously. "We need not draw lots; I will drive. I think I am a better driver than this Bob White. I will drive into him in such a way that his car will be hurled out of its course, without anything happening to me. It will look as though, through some mechanical defect, I lost control over my car. I won the championship of California here and I am not afraid of Bob White."

Sam nodded in vigorous approval. "I knew that."

Joao went on, "I am risking my life, and you only have to steal. Probably you can do that all right."

"Senor!"

The two stood up, but he waved them back. "I do not need you. Five parts for me, two for Sam, and one and a half for each of you."

"That is . . . ."

"That is fair. I risk the most. Sam brings the plan. If you are not willing—well, trash like you I can find where I will."

Christobal nudged MacGonnor. "After all, we are risking little."

"There is much to be gained."

"I will do it."

"*Madre de Dios*, it is cheating us, but I am ready."

Joao saw the two exchanging glances, but Sam nodded to him. "I have them in my hand."

"All right, so be it!"—

The same night Christobal travelled to Lima, MacGonnor to Los Angeles, and Sam to Panama. It was decided that Joao should

quite openly take part in the Olympic Games as the California champion Almeida.

**I**N ISABELLA the feverish excitement was increasing from day to day. Elsa Dorn went about with a smile of proud satisfaction. She was really the originator of all this new activity.

The engineers were working everywhere. Actually, the many new arrivals, the cooks, waiters, and musicians, were rather disappointed. When they wanted to watch the preparations, they found all the arenas fenced off in a wide circuit by wire network, with warning signs everywhere: "Danger! Electric current!"

They also had little time, for the cooks especially had to learn their art all over again. However, they were enthusiastic about the kitchens. They were relieved of the real work. They had the strangest machines and devices: water, which automatically flowed into kettles; kettles, which pushed themselves onto the electric heating plates; current, which shut itself off as soon as the water came to a boil; cocoa, which at the appointed time and with the right amount of sugar flowed into the water without human attention; stirring spoons, which descended into the liquids and agitated them; and many other things.

The foods requiring no sampling and tasting, they mixed themselves all alone. Of course bread was automatically mixed and baked. Then it was pushed onto moving belts, which took the loaves to machines which sliced them. The slices moved on, until other machines buttered them and still others put on the automatically-cut filling for the sandwich. There were likewise moving belts which fetched from the cellars bottles of wine indicated by pushing buttons, uncorked them, and put them in coolers. How else would it have been possible for so few cooks to provide all the meals for one hundred thousand people! Moving belts also carried the food to the long tables and replaced most of the waiters.

In the meanwhile the previous inhabitants of Isabella, who aside from their scientific activity had always gone in much for athletics, were divided up and apportioned for

the different competitions. Bob White was to take part in the auto racing. He was at the great arena almost all day, practicing with the car which Vetter and Grotfendt had manufactured in accordance with a bold idea of Cook's. The young assistant engineers played soccer, practiced gymnastics, and formed a swimming team. Elsa Dorn drilled the six other young women for feminine parts in the activities.

It was strange that in the practicing of each of these forms of sport either Vetter or Van Rhyn or one of the younger electricians was always present, testing out extremely and peculiar apparatus, constantly changing and making improvements, as though there were great and difficult problems of science to be solved here.

The nearer the festival came, the more content all the faces became. Now the most intelligent of the Chinese had to learn to carry on the industrial processes for a time. They were already accustomed to do their work to music. A "foreman" sat at the control buttons choosing the music in the loud speaker for each work according to the proper tempo. It was astonishing how this music affected even the Chinese with their oriental calm.

Meanwhile Möller had returned to Frisco. Dr. Schlüter had organized a regular police school and was training five hundred Chinese as guards. But Mr. Cook was the brain of the whole thing. He hurried from one place to another, saw what was lacking, tirelessly sent telegrams to Frisco, and kept the offices of Smith & Co. working hard, until at last the final evening came.

Ready! A tour of inspection took place. The six newly-arrived gentlemen, who had now become inspired adherents, the former founder of Santa Scientia, and the women, among whom Elsa Dorn was of course one, had made a general try-out of their parts in the program. Now, in a mood of approaching success, they were walking through the roof gardens. These had become a huge park,—a park high in the air, in which brooks fed by pumping stations flowed under the palms and between blooming orchids and other tropical plants. Up from the palm groves rose everywhere the

glass halls of the uppermost recreation rooms, which here looked like pavilions on level ground, though they actually were the eleventh stories of buildings.

There was a magnificent look to the street crossings, at which ornamental bridges spanned the spaces between. Particularly the great space before the central building was immeasurably beautiful.

They looked down at the glass fronts of the rows of houses. Street lighting would have been useless, for everywhere the light shimmered from the space between the double windows, spreading equal brightness within and without. The colored windows, which had hues according to the work to be done in the rooms, had been so arranged that there was a wonderful symphony of color.

From the roof gardens the brooks plunged over gaily lighted glass cascades in magic waterfalls, collecting again below in lakes and brooks. The arising moisture and the constantly flowing stream of ozone gave to this night a delightful freshness; while a few kilometers away on the nearest islands there existed an intense intolerable heat.

When the gentlemen had finished their walk, Mr. Cook said with a contented smile, "We are ready. Now let our guests come!"

## CHAPTER XIX

### The Landing

**T**HE great day dawned, the day which was to bring a hundred thousand guests and the commencement of the festivities.

Most of the guests had been skeptical of the whole thing up to the last moment, but had changed their opinions only when it was stated in the papers that all trans-Atlantic sailing was suspended for two weeks. The most beautiful and the greatest steamers of all companies were chartered by Santa Scientia. Each of these, of whatever origin, flew in addition to its native flag a gold banner having in the center an owl, the symbol of knowledge, and the inscription "Santa Scientia."

Even now few knew exactly where Santa Scientia was, and no information was pro-

vided. The times of departure of all the ships were so arranged that every steamer must arrive at Cabo Martino at exactly a predetermined time on the same day.

The excitement of the passengers was indescribable. After they were on board, after the journey was actually commenced, after they had been most magnificently attended by stewards wearing golden sashes with the arms of Santa Scientia, there could be no more suspicion of an American bluff. These very ships must have cost vast sums.

It was a great sight when whole fleets approached Cabo Martino at the same time from all directions. On the leading ship, a luxurious yacht, could be seen the banner of the League of Nations beside the flag of Santa Scientia.

There were amazed and disappointed faces, when nothing could be seen but a bare reef with wild surf tossing about it.

"Then is this all a swindle?" asked the guests.

The ships stopped. This produced new mysteries. The captains and other officers, who of course were initiated into the secret and knew that novel electrical apparatus was installed beside their engines, left the bridges.

A cry of horror went through the crowds. The ships, seemingly without control, again began to move, gliding nearer and nearer to the rocks. Many ran to the life belts, but the captains showed smiling faces. "We are in the sphere of the distant control of Santa Scientia." Yet even the sailors viewed with anxious faces the approaching reefs.

Now there appeared on the reef a single man. He had belted on a balloon filled with helium, as is frequently done for sport at American athletic festivals. With it he sprang into the air and in a bold leap he reached the deck of the foremost ship.

"Welcome to Santa Scientia!"

"Is that Santa Scientia?"

There was general wrath. But the man called through a megaphone, "Just wait! This is only the harbor."

Two hours later the first forty thousand were entering the giant arena. The first ten steamers, of which each had brought

four thousand guests, had steamed back upon the high sea to make room for the next ten. And these forty thousand people, who were looking about with enthusiastic faces, as though they were transported into a new world, had experienced so much in these two hours that they were hardly able to collect their thoughts.

The excitement of the guests reached a climax. Ever new throngs passed out of the wide-open gates of the cars. Ship after ship was landing passengers in the harbor at Cabo Martino. The submarine trains went back and forth incessantly. In the outer roads lay more and more new steamers, bringing guests. In amazement they looked at the great boats which silently and without crews glided to the sides of the ships. Soon all were getting accustomed to the marvel of the automatic distant control. How smoothly it all went! One boat waited for another. Incessantly the glass plates lighted up: "Get in!—Please stop!—Full!"

Automatically the doors of the cars opened and shut again. The number of those who might enter was always counted exactly. There was nobody present to look after the crowds. Machines regulated the vast traffic—but not really the machines, rather Helling, who was their heart and brain. He sat in a little subterranean cell. Continually the glow lamps and inscriptions lighted up before him.

"Train en route."

"Five hundred in the cars."

"Five hundred more landed."

"Five hundred left steamer."

Everything moved with perfect regularity. When a steamer was rid of its passengers, then a signal sounded. In answer to a lever pressure the ship moved aside, and another came on. Not an anchor fell. Shaking their heads, the captains had to obey the orders given them by the engineer who was on board. Each time a ship was emptied, the captain got back his command and could seek an anchoring place under his own power. The engineer however pressed a button on his leather suit. Behind him a large balloon swelled out, filled with an extremely buoyant gas, which at the proper

moment was formed from chemicals in the interior of the casing through a new discovery of Van Rhyn. A moment to test it, and then the man, supported by this balloon, sprang to the amazement of the on-lookers from one steamer to the next behind it, which was already obeying distant control and was moving to the stopping place of the one before it. Here he again took over the command, as though his leap were the most natural thing in the world.

**H**ELLING conducted as though on a typewriter the landing of the thousands, who had to obey the commands of his machines.

Five hundred went down in the elevator. Automatically gates were opened. A hundred could go through one of these. Each person entering set a calculating device in operation. When there was a full hundred, the door gently closed, making entry impossible for others and moving the next ones on a gliding belt toward the second gate. Each hundred found itself before the open door of the car, and each found a seat in the car.

At once everything was understandable. It would not even have required the voice of the loud speaker, which kept calling warningly: "Enough! Please take the moving belt to the next door!"

In half a minute the five hundred were settled. The train slipped into the tunnel, and immediately another stood ready behind it. Five hundred emerged from the gates, another five hundred entered the elevators, another five hundred were landing, while yet another five hundred were leaving the steamer. In a single hour thirty thousand people sped through the tube of the submarine railway to the city of Isabella. In three and a half hours the hundred thousand guests were there. Now everybody understood why it was so arranged that the steamers arrived at exactly the same time, why no one was allowed to land earlier. It was the first victory of Isabella. A hundred thousand guests, and not a single person who gave orders to them, except one man who gave instructions on board.

The huge grandstands about the vast race

track were filling with guests. Each time a train came in the doors opened. In a few seconds the people were arranged on the moving bands. The first hundred were already going on them up the oblique passages, while the last ones were leaving the cars, following the instructions of the loud speakers and the routes indicated by signs.

A half minute stop, and then the five hundred had left the train. This went on a turntable and reached the tunnel going back, while its five hundred passengers were riding up the moving bands to the grandstand gate and the seats intended for them. They saw nothing of Isabella, only this mighty race course, which was arranged to be readily seen from everywhere. Of course they had to wait and spend the first two hours in their seats. But what there was to see in these two hours! Moving bands went past their seats, carrying refreshments, fruit, sandwiches, cakes, fruit juice. Programs were in every seat.

It was approaching evening. Round about towered the high glass structures, these glass towers forming the upper stories of the factories. They were giving out light as bright as day. The air was pleasant, not too warm, not too cold. Was this the desert of the Iguana Islands?

All of these many thousand, who had come from all parts of the world to dedicate the stadium of Isabella, felt as though there were something miraculous about it. Still nobody had appeared. No solemn speeches were heard, only strange music resounding, equally strong everywhere, yet without an orchestra in sight.

Even the great race track was perfectly empty.

Bob stood in his stall, dressed in a close leather jacket and wearing goggles. Inwardly he was somewhat excited, though he was outwardly calm. In vain his friends had asked him at the last moment not to start.

The hundred auto racers from all parts of the world, who were to enter the great race with him, were already guests of the city, though they had not seen it. They occupied hotel rooms under the grandstands, where their garages were also located, and

they were allowed to practice on the track at will, only the city was closed to them. They were picked auto racers, champions of all the countries on earth.

A remarkable race was to begin. There was no examination of machines, and there were no restrictions. Each driver was allowed to have two mechanics, and each might use any car he preferred.

Don Joao had also arrived with his friends. None of them had seen the others, though each of them had seen Sam and spoken with him, learning that all three were ready.

Don Joao was deadly pale and had a gloomy determined face. The last two weeks in Frisco he had hardly left the track and had made wild records. He had run into no less than ten cars in his uncanny trips, without anything happening to himself. He was certain of his success. Now it appeared to him almost a special triumph that here, in the presence of the whole world he could take his revenge for the disgrace that Cook had imposed on him.

\* \* \*

Elsa Dorn made her way through the crowd and reached Bob's stall. He was ready to start and had a gay smile on his face.

"Bob!"

"You here? I have no time now."

"You must listen to me."

"After the races."

"Then it will be too late."

He saw that she was excited. "What is it then?"

"You must not start."

"Why not?"

"It will be your certain death and the ruin of Santa Scientia."

"You are imagining things."

"Don Joao is here."

"The former assassin?"

"The same."

"Impossible. You gave out the tickets yourself."

"He is here and is starting in the auto races. He certainly plans evil. He is the leader of the California group."

"Nonsense! I know definitely that he is the noted racer Don Miguel Almeida."



"Almeida is Don Joao. He is disguised and has a different beard, but I made his acquaintance too clearly before. He is Don Joao."

"You are mistaken."

"I swear it."

"Does Dr. Schlüter know about this?" asked Bob calmly.

"First I wanted to tell you, so . . . ." Elsa could not continue.

"Schlüter is to watch him."

"You must not start."

"I am going to. I am not afraid of him. Since when has my cousin been so timid?"

The howl of a siren shook the air. Simultaneously the great door opened, and before her stood the auto in which Bob was to start, a most remarkable car, shaped like a torpedo and yet different from any known model.

Bob stepped up. "All ready?"

Van Rhyn, who was himself beside it, nodded. Bob swung himself in, while Elsa rushed off to seek Schlüter.

"All right. God be with you!"

## CHAPTER XX

### The Great Race

A HUNDRED thousand spectators were sitting in the grandstands, making a most impressive sight. Far before them stretched the track. In its center was a little lake in which water lilies were blooming.

A murmur of astonishment went through the thousands. The huge racetrack was beginning to divide into a hundred individual circles, each rotating independently. The first or inner one, the smallest circle, remained motionless. The next moved slowly. Meanwhile an explanation for this sounded from the system of loud speakers which was spread all over the track:

"It is a failing of all racetracks that the conditions are not equal for the different drivers. While the one on the inside travels perhaps one hundred meters, the driver on the inside course, to reach the same destination, must go one hundred and fifty. Not so here. The moving bands are exactly syn-

chronized to one another. The velocity of the individual bands increases with their length, so that the outside one rotates fastest. Accordingly when the inside driver travels one hundred meters, the outside driver has to go only a hundred meters to reach the same goal. The track therefore permits a hundred drivers to start at the same time under perfectly equal conditions. The collision of two drivers is completely excluded, for now there is no reason for an outside driver to take an inner lane."

Now came the starting shot. The hundred drivers entered and first drove a trial lap, each having a speedometer in his hand. The cars were of the most varied sorts.

At the very outside, in the largest ring of all, Bob was driving. Most of the field glasses and the most inquisitive eyes were on him.

"That is the right hand man of the owner of Isabella."

Bob's car was different from the others. Not merely that it displayed in a golden yellow brilliance the colors of Isabella—but that it was moved by a propeller placed at the front. This gave it a strange look and called forth criticism. The first lap was ended, and each driver had travelled the same number of meters.

At the innermost lane Don Joao was driving his car. He had got this place in the drawing of lots, and was satisfied with it.

Lap after lap was covered. There were to be one hundred laps, each ten kilometers in length. All was deathly still, and a hundred thousand people held their breath. Nothing was to be heard but the sound of the motors and the moving of the wheels—not a word from anyone. Only when rockets were sent up at the finish line and the numbers of the cars victorious in each lap were thrown in luminous writing against the night sky was there a murmur through the crowd.

The first elimination was over, and nothing untoward had happened. There was a sigh of relief from Elsa Dorn, who was sitting in extreme anxiety in the stand reserved for the committee, her hands clutching the rail, her heart beating wildly.

Luminous writing appeared in the sky.

Forty drivers had done equally well in the first elimination. Don Joao and Bob were among the forty. Positions were drawn for again. Now the sixty outer rings stood empty. Bob and Joao were ten rings apart. Once more the cars raced over the track.

"Third race. Twenty drivers left!"

The drivers were used up. This time fifteen machines gave out during the race. Fainting men lay in the stalls. It was exhausting work. No changing of machines was permitted.

Another start! This time there were only four who came to the starting line.

"Final race! Don Almeida of Frisco, MacIversen, Scotland, Louis Aubert, Paris, Bob White, Santa Scientia."

Don Ferreira, the President of Puitu, had a pale face. He could not get rid of the idea that this Almeida was his son Joao, whom he knew to be living in Frisco as an auto racer.

The starting shot was fired, and the four cars sped along the track, this broad track of which only four rings were now rotating. The men sitting at the wheels were covered with sweat—at least three of them, for Bob still seemed as calm and unemotional as ever.

Joao's breast was heaving violently. Every nerve of his body was tense, and his eyes were starting from the sockets.

In the midst of the course the Frenchman lost control of his car, and it skidded. But now the excellence of this track was again displayed; in an instant, before the car could tip over, it was seized by the distant control, and it stopped, and the fainting driver was carried out of the arena.

**O**NLY three cars left! There were ten laps to be done. On the seventh MacIversen gave out, hanging almost lifeless in his car, and was carried away.

Two cars left! Just Bob and Don Joao. They were alone on the track—driving with perfect control. Everyone stood up; a hundred thousand people captured by feverish excitement.

"Hurrah, Don Almeida!"

"Hurrah, Bob White!"

At the ninth round, Bob hung back a

trifle, so that Don Joao was a length ahead. Joao's breast heaved, his face deathly pale, yet the sweat ran from his brow. For a moment, carried away by excitement, he forgot his intended collision.

Now Bob puts on full power, and his car seems to fly.

There is a cry from the stands, a mad cry from a hundred thousand throats. The two drivers, side by side. Suddenly Joao twists his wheel and drives straight at Bob. In a second a frightful thing is bound to occur. The two cars come together at a speed of three hundred kilometers an hour. Has Joao gone crazy?

Then—a miracle happens. At both sides of Bob's car there emerges wings which had been folded together like those of a butterfly. They are slanted for rising. The car seems to rear up and rise into the air. It not merely leaps over the other car: it remains in the air. Joao's car races up the slope, turns over, and comes down on top of the driver. Bob has risen in his strange flying auto somewhat over the track. He dives into the middle of the lake, and disappears.

There was a moment of horrified excitement.

"He did it on purpose, driving into him."

"A villain."

"A miserable murderer, no sportsman!"

"But how could the auto fly?"

"Didn't you see the wings which suddenly sprouted?"

"An aerial auto?"

"Where is Bob White?"

"He is drowned in the lake."

"Search the lake!"

The crowd seemed ready to flood down onto the track. There was wild shouting and shrieking.

Suddenly there came from thousands of voices:

"Look—there! There!"

They stared at the lake. In reality hardly two minutes had passed since the mad leap. The lake was stirred by waves—There—the heavy car floated. Slowly it came to shore.

"An air, water, and land auto!"

There were wild cries of jubilation.

"Isabella has won!"

"Hurrah for Santa Scientia!"

At one point an inclined plane led down into the water. Nobody had noticed it. Now the auto came up it onto the land. It was battered and dirty, dripping with water and weeds, but Bob was able to drive back to the starting place, though somewhat slowly. He got out and collapsed into the arms of his friends.

Elsa Dorn sobbed and screamed hysterically. . . .

President Ferreira was standing with serious expression and bowed head by the stretcher on which rested his son. "No sportsman does such things." Slowly and with weary steps he followed the stretcher.

Again came a signal. Amid the shouting of the spectators Bob White again drove onto the track. The shining golden car had been cleaned again. Choosing a moderate speed, so that everyone could examine thoroughly the strange torpedo-car, Bob drove it around the track. Then he put on speed and raced around the track twice.

### Beneath the Earth

THERE was a cry of astonishment. Like lightning something came out and unfolded: the wings of a plane. Another control was operated, and the car—which had become a plane—flew low, so that all might see, around the track. It rose, went lower, did sideslips, and then very gently floated down on the great basin of water.

A ship's propeller appeared. A special mechanism had covered the wheels of the auto with plates of light beryllium. This had already happened during the flight, and these plates coming down obliquely closed together and formed a keel.

The flying auto, now become a motorboat, shot like lightning over the water, while the onlookers were wild with delight.

Again the auto rose, its keel was again drawn in, the plates went up, and the propeller vanished; the car glided along the track.

The jubilation became almost a pandemonium, but the loud speaker sounded above everything else: "Silence for Bob White!"

His voice was transmitted through many loud speakers. "I declare Mr. MacIversen the winner of the auto race."

Amazement and contradiction. "Bob White is the winner!"

"No, I am not. It was an auto race, but I won it by changing my car into an airplane. Likewise Don Ferreira, who is seriously hurt, has no right to the prize. MacIversen was the last to give up. MacIversen has won the prize of one hundred thousand dollars."

In this moment Bob indeed had no idea that MacIversen was also one of the assassins who had once attempted the life of Benjamin Cook.

MacIversen approached slowly, staring at Bob and not understanding. There was a mighty shout, not for the Scotchman, but for Bob who had won all their hearts by declining the prize.

Elsa Dorn had left the arena, when the danger was past. Now she lay weeping in Grete Helling's arms.

\* \* \*

In the general confusion no one had noticed that while the racing was beginning a black figure had sneaked softly onto the stand in which Mr. Cook was sitting. The intruder's task was all the easier, since Cook had declined to take a prominent part at the festivity and was occupying a concealed and curtained box alone.

The negro, who was no other than Sam, had sneaked in and was standing behind Cook. He had already drawn a long dagger, when two sinewy arms seized him. Schlüter himself had observed him and had followed him and now pulled him back. At the same time two powerful Chinese thrust a gag between his teeth and dragged him away. Since all this took place just at the time when Joao tried to ram Bob's car, not even Cook noticed anything of what occurred. When the crowd was cheering Bob, there was none to notice that some Chinese were carrying away a lengthy object wrapped in blankets. They took it to a room which was equipped as a prison.

Bob White, with a victorious smile, was taking his car back into his garage.

In the night sky there appeared over the

lake an inscription: "In an hour the swimming matches begin."

As yet no one knew his way about in Isabella. The crowd arose, already accustomed to follow blindly the directions of the loud speakers. They went down the grandstand steps. The doors to the gliding bands were shut, but there stood open the gates of elevators, corresponding to the grandstand exits.

A hundred entered each and were carried down into the depths. What did this mean? They had thought they would be carried to the lake in the auto race track, but now they were being carried far down, apparently deep into the earth. In Isabella things were always done differently than elsewhere!

The indicators on the doors of the elevators showed a drop of almost forty meters when they stopped.

The spectators stepped out and were extremely surprised. Were they really in the prosaic world? Or had they entered a fairy land? A monstrous body of water, so large that they could hardly see its limits, spread out before them. But no sky was to be seen, for a vast grotto was arched over the water. Yet it was not a uniform dome; they were rather in a huge cave, whose roof now extended to form a great dome.

The people who left the elevators in throngs found themselves on islands in this incredibly large grotto. On every island was a grandstand. A circle of such artificial islands limited a part of the apparently infinite lake in this gigantic cave and made it a swimming racecourse.

Bob and his friends, now in tuxedos, accompanied President Ferreira and the guests of honor, the representatives of the League of Nations, the special emissaries of Germany, America, England, France, and the other great nations, to a special stand of honor, erected in the middle of the lake.

The entire subterranean district was lighted as bright as day, without any source of light being visible. The brightness came from above, from the uppermost point of the dome, and everywhere, as far as the eye could reach into the distance, light flooded from concealed cracks and showed the in-

credible expanse of this cave and subterranean lake.

President Ferreira walked beside Benjamin Cook. For a few moments he had forgotten his injured son, now being bandaged under the hands of the physicians and Dr. Frank. Like all the other guests, he was amazed by this underground marvel.

Bob White said quietly, "Gentlemen, you know that the dryness of these islands is produced by the fact that the soil is too permeable to retain the rain, even in the best watered districts. The waters therefore, collect in a huge subterranean basin, which we have bored our way to and which you see here."

## CHAPTER XXI

### More Miracles

A SHOT resounded through the subterranean hall. The swimming meet had begun. The lake was incomparably splendid with the white gleaming stalactites and the reflection of the water on the grotto roof. Now came a new surprise. From the depths below a seemingly unreal light shone up over the water, now red, now blue, now pale green.

There were a hundred woman swimmers, who came on at the same time; picked swimmers from all countries, including notables who had swum the English Channel and the Straits of Gibraltar. Elsa Dorn, from whose breast a great weight had been removed and whose heart was filled with a most extraordinary sense of happiness, was among the six ladies who appeared in the golden yellow colors of Santa Scientia.

The bodies of the swimmers were not, as is usually the case, covered with a thick coating of grease. Giant electric heaters, which were located everywhere in the basin, had so raised the temperature of the water that it was like a pleasant sea bath.

The signal sounded. With a mighty leap the girls began the race. At first they were almost all in a row. Then a cry of amazement came from every throat. The six swimmers from Isabella coming into the lead,

cut the water with their arms and shooting almost ten meters ahead at every stroke.

"A miracle!"

"That is incredible!"

"Why, nobody can do that!"

A whispering and murmuring went through the crowds. While the other contestants struggled with all their might, the six shot across the water like arrows, almost as fast as a motorboat. The first to reach the shore was Elsa Dorn, who was followed shortly afterward by her companions, almost at the same time. Not a hand stirred to applaud. The six stood smiling on the shore, resting and appearing perfectly fresh, while the real contest was being waged by the other ninety-four. A great inscription was flashed over the water: "The six ladies of Isabella are not competing."

The signal sounded for the finish. Edith Ekklund, who had already twice tried the swim from Gibraltar to Africa, emerged from the water the winner. She received loud acclaim.

Now all eyes were again turned to the six Isabella girls.

"An exhibition by the six swimmers of Isabella."

They stood on a raised platform, where everyone could see them. They were in bathing suits, with curious belts about their waists, and thousands of eyes viewed their limbs.

"They are hanging on a rope," a number remarked.

From each grandstand a spectator was invited to the springboard. No rope was to be seen, nor anything at all surprising.

A shot rang through the grotto. The six made a high dive into the water. For a moment they were all in a row. Then a strange sport began. They actually flew through the water, passing one another. They swam figures, dove under one another, rose high up from the water and passed over one another, dove in again, and carried on play as unique as it was fairy-like. At the same time they swam without effort, not appearing to tire, and when they bobbed up from the waves they showed laughing faces.

The longer the game lasted, the faster the six sped through the water and the more

excited the crowd became. Yet no one could understand it.

Then the swimmers landed. There was endless applause. They were not at all exhausted but stood on the stand in their gold-colored robes and laughed.

The loud speaker announced, "More Santa Scientia sport!"

Now ten young men stepped on the springboard, also in the golden colors. They were muscular figures, bare except for swimming trunks. They jumped into the lake and repeated the play of the girls, only faster and more hazardously.

"Impossible!"

"There is something wrong about it!"

"A miracle!"

A loud speaker sounded through the hall, after the wave of excitement had lessened and the swimmers were again on land.

"A combination of strength and science, the water sport of the future. Each of the swimmers wears a belt with the apparatus necessary. Crude strength is not needed. Skill plus science affords and opportunity for unique pleasure in the water."

Then real competition occurred, and the ladies and gentlemen of Santa Scientia showed that they could outmatch the others even without any mechanical aids, such as must have been on the belts they wore.

Midnight! The second part of the program was also over. "Assemble in the arena tomorrow at ten o'clock!"

**A** GAIN the grandstands emptied. Cars stood ready. They sped away through subterranean roads. Everyone was full of excitement. After coming up in elevators, they reached a great open square of vast dimensions. Before them rose skyscrapers, gigantic houses of glass and iron with walls of shining dull glass, illuminated from within by various colors. The square itself was surrounded by palms and lofty eucalyptus trees; gay flowers in handsome beds formed the edge. The square was entirely covered with green turf.

The gentlemen of the League of Nations stood together. They were still too much excited to sit down at the table reserved for them.

"Mr. Helling, a word!"

"What is it, sir?"

"What was that strange business with the swimmers? The flying machine was ingeniously devised. After all, that would not be impossible. But the swimmers—was that a fake?"

"Absolutely not," Helling assured the president.

"What then?"

"Perhaps not regular sport, I agree, but a pastime, if you wish."

"Well, how is it done?"

"The swimmer wears under his suit next to his body two concentric rings. The inner one is of lead, and in this lead is embedded radium. A great number of wires of a certain alloy, very fine wires, are soldered together at the points, reach into the radium, and come out from it in the form of a W. They come out of the lead ring and are connected with coils, with a spiral, a hundred at each end. The second or outer ring is filled with water and has holes everywhere.

"The water cools the wires which come from the radium, producing an electric current which heats the spiral. The water in the second ring becomes steam, which comes out at the back and propels the swimmer like a rocket, while at the front a system of very fine capillary tubes admits more water. The wires producing the current consist alternately of antimony and bismuth. I think, Your Excellency, if you investigate, even this apparatus will no longer seem to you to be a miracle."

Shaking their heads, the gentlemen went to their tables, which were placed in long rows on the square.

Each elevator, which came up from the bosom of the earth with guests, had a number, each table also. No one had more than a few steps to go. They saw no persons to direct them, but each at once found the number of his seat.

A hundred thousand people were sitting at these tables, staring in amazement at the finely shaded colored light of the glass palaces. In their centers the tables had a

rising section filled with food and drink, a cold supper which arose continually from an invisible kitchen, consisting of rare delicacies. While the hundred thousand ate and drank yet amazed and speechless at the marvels which encountered them in incessant succession, a tuneful music sounded from some invisible source.

In the middle of the square was a stand. A shot rang out. Benjamin Cook was now standing up. His voice, amplified by loud speakers, called out over the square: "Welcome, my guests, welcome to Santa Scientia, the city of knowledge and genius!"

There was a cheer from the hundred thousand people, who thought they were dreaming, as they stared up at the glass walls of the houses, at these waterfalls, and at these gardens high in the air. They did not understand it all but only marvelled and joyfully attacked the delicacies which the dumbwaiters brought them in inexhaustible amount. They felt as though they were part of a story of some paradise. In these hours they suspected nothing of the work involved in this undertaking.

\* \* \*

Don Ronaldo Ferreira quietly entered the hospital in which his son lay. That morning—the morning after the auto races—he had expressed into the telephone the desire to visit his son. At once there appeared on the glass plate the message: "In five minutes the car will be at your door."

There were no formalities in Isabella, even for the President of Puitu, but there was silent prevision and care. It had been torture for the president to have to attend the swimming meet and the public dinner afterward. But during the swimming match a light shone on the grandstand of the diplomats, and in a glass box which he had hitherto not noticed and which had also lighted up, was a letter for him.

He tore it open, thinking he knew what was in it. Perhaps it was his expulsion because of the crazy attempt of his son. But in it was a quite different message: "Operation successful. Don Joao out of danger. Visit not possible until tomorrow. Dr. Frank."

## Ferreira and Cook

ONLY now it occurred to him that Bob himself had conducted him to his seat, charmingly and in perfect equanimity, not at all like a man whose murder had been attempted by the son of his guest.

The hospital lay in the midst of a great park, which extended over the roofs of the whole city, though it gave the impression of lying on level ground on a hill in a fine palm grove.

It was a hot day. Even the artificial clouds which were always above the city could not check the heat. But scarcely had the open car come near the hospital, when a pleasantly cooling breeze played about Ferreira. Large noiseless ventilators blew a current of strongly ozonized ice-cooled air toward the building, which cooled the air to make a comfortable mild wind.

Refreshed, Ferreira breathed easier and went up the few marble steps. There was no one here, though to be sure, he was expected.

In the anteroom stood Dr. Frank, who responded seriously and evenly to his greeting. "Things have gone well. Compound fracture of arm and leg but fortunately no injury to the brain. If the wounds have remained quite without infection, it is due to our air which is practically free from bacteria."

"Doctor, you have saved my son's life by the operation."

Frank did not take the president's hand. "I did my duty. There is the room."

"May I speak to my son?"

"He is entirely free from fever."

Ferreira entered. Joao lay there, very pale and wrapped in bandages. He looked at his father with a perplexed gloomy glance. Ferreira took a seat by the bed and silently looked at his son for a long time. He was happy and at the same time sad.

Finally Joao broke the silence. "It is no use. It would have been better if I had died."

"Shame on you, Joao!"

"Because I failed or because I am alive?"

"Because you could resolve on such a thing."

"I hate this man. I hate Isabella. I hate . . ." Since Joao had come out of the delirium of fever, he had again persuaded himself that he had risked his life not for himself but for Puitu. This weak character, who fluctuated between noble aspiration, boundless ambition, and greed, was now pleased to play the part of a martyr to his country.

"Fool that you are! We should never have found that gold, and if we really had discovered it, it would long ago have been spent. But here something has been created which all the world can look at with satisfaction and pride. But you, my son, have a second time become a criminal. One of your aims you have attained; I shall resign today. The forty years of endeavor your father has given to his country are wiped out by one act of his son. Did you want to save your country? You have injured it most terribly. It is your fault that I must beg Mr. Cook for your life."

"No, never! Sooner . . ." Joao acted as though he wanted to tear off his bandages.

Then the father weakened. I forgive you. Get well and come with me. I feel that this man, who provides the best physicians in the world to save the life of an assassin will be generous enough not to destroy me entirely. Give me your word that you want to get well and begin a new life."

Joao remained silent. Now the great pain of his father was not without an impression on him. "You rejected me."

"Recover and stand at my side! Perhaps it will be believed that you acted from noble motives. In San Francisco you were at least a man who faced life. I have always kept my eye on you, and now also I will care for you."

Ferreira knelt down beside the bed. That was the only way in which it was possible for him to embrace his son. Then he silently went out, got in the car again, and went back to the hotel.

\* \* \*

"May I see the President of Santa Scientia?"

The telephone replied: "Mr. Cook is waiting for the President of Puitu."

It was the most difficult step of Don Ferreira's life, to now enter the elevator which was to take him to Cook.

He entered the large chamber, a great room full of bookcases, in which the maker of Santa Scientia was sitting at his desk and performing his duties just as calmly this day as any other.

Twelve corridors arranged radially left this room. One led to the great station, the others to the offices of the officials. Each section of the building surrounding this main office was filled with automatic registering and secretarial devices.

Cook arose and came to meet his guest.

"Mister President!" faltered Ferreira.

"If you please, simply Benjamin Cook! There are no titles in Santa Scientia."

"Mr. Cook, as President of Puitu and as an unhappy father, I have to beg your pardon for the fact that my son in misdirected patriotism has a second time been involved in a damnable crime."

Cook looked at him calmly. "I know of no crime."

"My son . . . ."

"Say no more, President! You know as well as I that an attack with ineffectual means is not punishable. No one was in danger. Besides, we were prepared for such a thing. Our means of protection are invincible, and I simply did not think it worth while to take cognizance of dangers. Perhaps I am more to blame than your son. I knew what must happen. I have blamed myself that it might have caused his death. If I had warned him, it would not have been necessary to demonstrate the invincible might of Santa Scientia. But I had to risk his life, to keep all others from hasty acts. Be glad that all happened thus, and be silent about it! It is past, and I shall never refer to it again."

## CHAPTER XXII

### The Play Goes On

IT was a difficult moment for Ferreira. There he stood, the representative of Pui-

tu, and had to receive a gift from the hand of Mr. Cook. He knew that this gift was no sign of weakness and felt that this man was generous enough to forgive an attempt at murder.

Cook however felt with his guest and suspected his thoughts, without knowing them. He rose again and said in an unconcerned manner, "Let us be glad that your son is recovering from the accident. It is too bad that it robbed him of the otherwise richly deserved prize. I think you will not want to miss the great soccer match and the international gymnastic competition. Please excuse me until then. I intend to take part in the gymnastics myself, and first I have some pressing matters to settle."

Ferreira bowed and went to his car. Again he had a feeling of humility. Yet he could not help being grateful to this man who addressed him not the president of a great nation but as man to man. A charge brought against his son for attempted murder during the games would have cost Ferreira his position. The proud grandee silently abased himself to Cook and left the room.

In the great soccer field outside the city a hundred thousand spectators were waiting. No, there were only ninety thousand, for ten thousand of those who yesterday had been spectators were now down on the field as representatives of the different clubs of the world, ten thousand players at the same time. The arena was an immense half-circle, an expanse divided into ten smaller fields, and in each field a thousand players were to meet, five hundred on a side: England against Germany; France against India; Belgium against South Africa; the United States against Australia; Italy against Holland; Brazil against Norway; Sweden against Argentina; Denmark against Spain; Mexico against Hungary; Czechoslovakia against Canada.

Twenty nations had each sent its five hundred best soccer players, only Isabella itself was not represented. The playing surface was peculiar, a mighty sheet of metal, covered with a rough leather layer, so that the players might not slip. In each of the ten fields, which together composed the whole



expanse, stood the two goals, with the judges' stands in the middle of each. A great glass wall separated the spectators from the field of play, but it was a wall of optically polished glass, which had a magnifying effect. Without using field glasses one could look over the whole of this immense field from any place in the stands.

The starting signal was fired. At the same time ten thousand muscular young forms rushed toward their opponents. Each of the goal-tenders was a noted player. Above the field hung dense artificial clouds. Ventilators here also blew a cooling wind. Every time one of the teams made a goal, the flag of the scoring country appeared in shining colors in the sky while loud speakers announced the scores. It was a match such as the world had never seen.

Then another shot was heard. Ten nations had won. After half an hour there were to be return matches to settle the final victories, and then the ten winners were to play one another, until the championship was settled.

Again a giant writing appeared. "The men of Santa Scientia will play, but not in competition." There were only a hundred players, but the hosts scorned to compete for prizes. The hundred almost were lost to view in the middle of the vast field. At first it seemed to be an ordinary game, indeed, on the part of good players, but nothing extraordinary. The spectators were almost disappointed. They had already become accustomed to seeing amazing and wonderful things.

A new starting signal was fired. Suddenly the men divided, fifty withdrawing to one end of the great oval, fifty to the other.

Questioning murmurs arose. Were these hundred men going to play over the entire monstrous field, which was several kilometers in extent?

There was no time to think about it. Again a shot was fired. The ball flew into the air, with one of the players after it. A kick—and there was another miracle: the ball shot high up, several hundred meters above the field, came to the ground, and like lightning the players sped behind it, far

faster than a man could run. Another kick—six hundred meters!

This was quite unbelievable. Again the almost flying men appear. Now they are at the enemy! A gargantuan struggle is going on, like the war of giants. Men go at automobile speed over the field, kicks soar half a kilometer high through the air.

A WILD and yet regulated rushing to and fro ensues. The whole field belongs to the hundred players. After half an hour of struggle the victory is decided. One side has won. The hundred players stand together smiling.

"An illusion!"

"A deception by means of motion pictures!"

"Some kind of swindle!"

A second time the teams come on. A second entirely similar contest takes place. On one of the grandstands Helling is beside Van Rhyn. "How is that possible?" asked the latter.

"Very simple. It is the result of our effort to make science serviceable to sport. It is not to replace human courage but it is to give it greater aim. Wasn't it a fine spectacle to see these young men rushing across the field and to see the ball travel as though hurled by a giant's foot?"

"Quite right, but how is it done?"

"The field consists of metal and is made into a single electric field by a great number of built-in electromagnets. Since the field is divided in two parts, the electric pulling force goes from both side toward the middle and as on a backgammon board the projections of the field extend in each case far into the opponents' field.

"Each player has a boot with a split copper lining and a system of wires ending at a contact in his belt. Now if the player runs over the field without switching on this contact, then it does not affect him, and it is the same as though he were playing on an ordinary field. But if at the moment his boot meets the ball, he puts in the switch and closes the circuit, then he is immediately pulled forward by the electric field. The impact of the human foot muscles is multi-

plied a hundred times, and the ball flies an immense distance.

"The player, who wishes to follow it, glides after it on one foot, which by means of the switched-on copper shoe acts like a motorcar. Believe me, great practice and much skill are needed for this. The player must close the contact at the right moment and must know when playing in the opponent's territory exactly where are the strips of the electric field which impel him forward. If he gets on the wrong track, so to speak, then he is in the same instant seized by the reverse force and hurled backward. We had many a bad fall and many a broken bone, before our players learned the game. But see the eyes of the men! They have the sense of being giants. Even electricity can serve sport."

In a flash the great arena was covered with gymnastic apparatus. Ten thousand young men and women came on for gymnastics. Again the colors of all countries were represented. The dancing games were splendid, as were the exercises with wands, and the rhythmic dances, which were executed in perfect unison by ten thousand beautifully developed bodies at the orders of the loud speaker.

At first all the countries in the world joined in this mighty display of rhythm, and then the crowd divided into groups. Hundreds made mighty leaps with long poles, others threw the javelin and the discus, while still others performed on the bars or the horse or made giant pyramids in their native colors, pictures of strength and beauty.

In the center an elevated platform arose. On it were a number of horizontal bars. Now ten young men stepped up, who wore the colors of Santa Scientia. Before each bar was a slope leading down to the bar, and at the upper end of the slope was a platform, on which the men stood.

Again a shot rang out. The ten ran down the slopes, jumped high, and clutched the bars, in the underhold of course. At once they began a lightning giant swing, which kept them whirling around the bars again and again in endless circles at high speed.

"The bars are turned by a motor!"

"That is no art, that is not really sport!"

"On the contrary, it requires tremendous strength to counterbalance with the muscles of the arms this mighty centrifugal force."

With mighty swings which sent them far from the bars, the ten gymnasts at the same time let go, turned beautiful somersaults, and stood upright, side by side, though with red flushed faces.

### A Strange Visitor

THE games went on. Again the lake below was brightly illuminated. This time there was a wide course through subterranean tunnels and mighty stalactite grottos, where the crews of Oxford and Cambridge competed for the championship with those of Germany, France, America, and other countries.

Then followed the sailboat competition in a strong wind. Of course it was an artificial storm, mechanically produced, which blew across the lake, which was ashine with many-colored lights.

Meanwhile the race course was prepared again on the surface. This time it was not autos but three thousand jockeys from all over the world, speeding around the track on the finest horses. Again the bands moved, and each had only the same distance to cover.

Again the great arena filled up. This time the lake in the middle, into which Bob had plunged with his car, had vanished. Instead there shone there, in spite of the heat of the sun, a smooth white sheet of ice. Thousands of skilled skaters of all countries displayed their art. Nearby, on a grassy meadow, the world's championship in tennis was settled, while skillful riders were racing over the turf in a polo game not far away.

The visitors were taken through the city in groups, through the green streets between the palaces of glass. They saw the cycling roads, the illuminated auto roads, the railways which extended far out, and the express lines lower down. A hundred thousand persons were impressed by the might of this city and felt that they had been transported to fairyland.

While the guests were still sitting at the long tables, which again on this second evening were lavishly supplied with all the delicacies in the world, Mr. Cook was at his office to get a telephonic report from Mr. Möller. He looked up and started involuntarily. Now, as many weeks before, when the surprise attack on him had occurred, a man had silently entered.

Although Cook recognized in his present visitor the Scotchman MacIversen, who had received the first prize the day before in the auto racing, he felt reminded of one of the would-be assassins of that former visit. It was also incomprehensible to him how MacIversen could have got in here unannounced, at a time when Schlüter had special police at his disposal. He turned to the man. "If I am not mistaken, you are Mr. MacIversen?"

"Yes, sir, and I beg your pardon for intruding here. I must ask you to listen to me, quite alone."

There was something strangely determined about the man. Around his mouth a hard line was unmistakably present. Every moment he looked more and more like one of the three former intruders, yet he did not give the impression of planning any harm. He rather seemed to be suffering from some strong emotion.

Cook pointed invitingly to a seat. "How can I serve you? We are alone."

"It is about the prize which was given me yesterday."

Cook was amazed. "Isn't everything all right? Didn't you receive the check? The hundred thousand dollars will be paid you immediately in Frisco in cash. Or are you short of money and would you prefer bills?"

The Scotchman looked down and said hesitatingly, "All my life I have been a poor devil, and I never let myself dream that a person could honorably win a hundred thousand dollars. A hundred thousand dollars, that is wealth, that is . . ."

Cook smiled. "Then I am the more pleased that you won the prize."

MacIversen stood up and now appeared completely decided, though his face was very pale. "Mr. Cook, I cannot take the prize. I herewith return you the check."

Cook was amazed. "But why? You deserved it, for Mr. White with his flying auto was not in the competition, of course, and Mr. Almeida was disqualified. So you won without a question."

"Still I cannot accept it," continued the Scotchman.

"But why?"

"Because I am a scoundrel, because I came here, not to compete honorably but—" he groaned and sank again into the chair.

Cook seemed to see a veil fall. "You have come to confide something in me. We are entirely alone. Speak frankly, and I tell you beforehand, you are no scoundrel, or else you would not be here before me now."

The Scotchman straightened up and looked fixedly at Cook. "Do you know who I am?"

At this moment Cook understood. "You are the Scotchman MacGonnor, who tried to murder me eight weeks ago."

"You know that?"

"I just recognized you."

"Then you will understand that a man who came to Santa Scientia to steal and who was ready a second time to commit a crime cannot accept the prize. Take the check and do as you wish with me!"

Cook looked at him. "How strange are the ways of fate! You came with dark purposes. Perhaps your conscience would not have troubled you, if you had taken by force what you have now honorably earned. Now your conscience is awake. Mr. MacGonnor, I will hear nothing of your intentions or whether you were in league with that unhappy young man who lies in the hospital."

"Travel away happily, Mr. MacGonnor! Take the check, which you have honestly earned, and if you want to take with you a bit of advice for the whole of your life, do not squander this money. Become a good man! I will ask Mr. Möller in Frisco to help you to invest this money so you may live on the income."

"Use this money to become a useful member of humanity, and if I ever hear that you have fulfilled this wish of mine, then I shall

be convinced that the first prize awarded by Santa Scientia has done real good."

MacGonnor did not reply. He sat in the chair with his hands over his face, sobbing.

"Be a man!"

The Scotchman straightened up. "And—my crime?"

"No one knows of it but you and I. It was no crime for neither formerly nor now have you carried it out. Thank God for that, and now become a good man!"

## CHAPTER XXIII.

### Hate and Despair

AT this moment Dr. Schlüter entered and looked in surprise at the two.

Cook said with a smile, "Mr. MacIversen considered it necessary to thank me again for his well deserved prize. Good-bye Mr. MacIversen! I shall be glad to hear good news of you."

MacGonnor was unable to answer, but Cook could not prevent the man's kissing his hand before MacGonnor left with the cheek, his steps unsteady, as though he were now experiencing a real miracle.

He walked through the streets and sat all night in his room sunk in thought. The MacGonnor who finally stepped out into the streets full of people, holding his head high, was now seeing and understanding clearly, his whole soul was filled with sacred emotions.

Cook looked at Schlüter. "Have you something to report to me, Doctor?"

Now for the first time Schlüter told of the murderous attack of the negro and his imprisonment.

Cook nodded. "That was to be expected. I think I know everything now. Let us say no more about it. This negro is certainly the cause of all the trouble."

"What is to be done with him?"

Cook reflected. "I do not know myself, and the question is hard to answer. As yet we are actually nothing; we are not an independent state and do not know how the League of Nations will act on our application. A week ago no one could have prevented our doing as we wished. Now we

must observe public opinion. But let us not disturb these fine days with such matters!"

"Yet we cannot . . ." Schlüter began.

"Keep the man in custody! Nothing has happened, but we must protect ourselves from any repetitions. When the festive days are past, we shall see. Is there anything else?"

"Nothing. Everything has gone on perfectly."

Cook considered. Formerly there had been three men in league with the negro. Two of them were now here with him. The third—was it Don Christobal? Should he ask about him? Then he could not help bringing to light MacGonnor and Don Joao and the entire conspiracy. "Thank you, Doctor. I think the negro whom you locked up will harm us no longer."

The criminologist left. He could not help agreeing that Cook could hardly have acted otherwise and that it was in any event clever of him not to disturb the festive joy by the news of an attempted crime. Sam was secured, in the rocky cave, with a great iron gate guarding the entrance.

Dr. Schlüter went out again to make a nightly tour through the city of Isabella. He now had a Chinese band on guard in the central building, in case of emergencies. He really did not understand how it had been possible for the Scotchman MacIversen to reach Cook without being seen by his watch. Yet it was possible that Cook himself had sent for the man by his own car. Of the connection between Don Joao, the negro Sam, and the Scotchman he of course knew nothing.

Schlüter had scarcely left the main building when he encountered Dr. Frank.

"I was looking for you, Doctor," said the latter.

"Have you observed anything special?"

"I must speak to you alone."

Frank had a serious face. They went back into the building and entered one of the consultation rooms.

"What has happened?"

"Nothing, fortunately, but I consider it my duty to tell you my observations. You

know, I operated on this Almeida, who is actually the son of the President of Puitu."

"Yes, I know."

"At first he was delirious and raved. One cannot put much stock in such ravings, of course, and besides it is the duty of a physician to keep still about them. Yet some strange things came out in this confused raving. It seems that there was a conspiracy, in which a negro Sam, a Scotchman MacGonnor, and a certain Don Christobal had parts. There were also some unrecognizable names. I know nothing definite. Since Mr. Cook has determined, out of consideration for the President of Puitu, that Don Joao's murderous attack is to be regarded as an accidental skid, we can do nothing. I simply ask you to look out for this negro and those other two persons, whom I of course did not know were in Isabella, and to do so without disturbing Mr. Cook."

SCHLUTER nodded. "Here is a confidence in return. This negro attempted at the moment of the intended collision, to murder Mr. Cook. I came in time to arrest him and to jail him unobtrusively."

"And the other two?"

"I knew nothing of them, and I shall double my watchfulness."

\* \* \*

During these days there was one man who did not share in the general joy in Santa Scientia. This was the Chilean planter, Serao Argonza, under whose name Christobal was a guest of the festival. During the auto racing which he had refused to take part in he had sat apparently uninterested.

When the deciding race occurred, he had jumped up with the others in the general excitement and had managed to stand almost directly opposite the site of the collision. But when Bob emerged from the accident quite unharmed and Joao was carried away badly hurt, he made himself inconspicuous again and watched all the more keenly the box in which Sam was to kill Mr. Cook. That also had failed, and Christobal swore when he saw that it was Mr. Cook who awarded the prize to the Scotchman MacGonnor.

Christobal wandered around and paid no attention to the sports. He looked for MacGonnor, but could not find him. Sam also was not to be seen. Had he really made the attempt on Cook? Had he been captured? Christobal became uneasy; at every moment he felt a sword hanging over his head.

Timidly he looked at each of the Chinese police, and at the same time he was inwardly full of hate and rage. Probably Joao was dead, but MacGonnor had a hundred thousand dollars. Why should Christobal actually steal? Perhaps Sam had hidden himself and was stealing on his own account. And he, Christobal, was every moment in danger of being arrested, for he did not know what Joao might have betrayed. He had no opportunity to leave the island, and he had no money. He was full of hate for MacGonnor, full of greed, full of despair.

It was night, the same hour in which the hundred thousand guests were eating for the first time at the tables. Christobal was also hungry, perhaps hungrier than any of the others, for in his excitement at the impending blow at Cook, he had not eaten anything. Yet he would not have ventured to sit at the festive table of Isabella. He went out into the night, walking along the shore, glad to be alone. Constantly he saw the light of the searchlights which swept over the whole island and the sea. He sat down on a stone and reflected. Something had to be done. His coming here could not be useless. But what could he do? Should he steal table silver? Ridiculous! Or commit a purposeless murder, just to still his inner wrath?

"Good evening, Senor!"

Christobal started—and then looked into Sam's face.

"Quick, come with me!" The negro seized his hand and climbed down the cliff with him down close to the water, while the searchlights swung away. "In here!"

Christobal forced his way into a crack in the rock. It was perfectly dark, but now a small lamp lighted up in the negro's hand, and through a narrow winding path they

arrived at a cave which seemed to be equipped with all possible food and supplies.

Sam grinned. "This is my domain. If the asses of Isabella ever dreamed that I live so near the city! These fools—this doctor, who came at the last moment, when I was going to kill Cook, and locked me up! As though I did not know all these grottos and passages better than they! Nobody knows that out of the cave, before which they put a lock fit for a bank vault, a very narrow and excellently hidden passage leads into the open and that the bird had flown out again before his jailers reached the supper table."

Now the negro was entirely changed. He brought out all sorts of delicacies and some strong wine and told about the failure of the attack on Cook.

Christobal took one of the thick-bellied wine bottles and drank down its contents in greedy haste.

"Not so fast, sir! We must keep our heads clear."

"Why so now?"

"Because tonight we are going to visit the Inca treasure vault."

Christobal was electrified. "What about MacGonnor?"

Sam laughed. "A man who has a hundred thousand dollars does not need to steal. Never mind him. Here is my plan! Bob White does not stay at the table. He is too much excited. Every evening he walks for several hours by the shore. We will watch for him."

"And what if he does not come?"

"Then we will wait until the next night. It will not matter."

### In the Cave of the Incas

**A** HALF hour later the two were crouching between the rocks. Christobal had to recognize the negro as the leader. He himself lay between the stones, while Sam sneaked about on the watch.

Hours passed. Still the enchanted light lay over Isabella, and the murmuring of the hundred thousand people, still discussing eagerly the events of the day, blended with the roar of the waves. These were hours

in which every nerve in Christobal's body quivered. Suddenly he started. Sam was standing beside him, whispering, "Here he comes."

"Alone?"

"Bob White is always alone. We will not kill him. One never knows how such a thing comes out. He does not know you. I will give the signal. Until then you lie out of sight. Then jump up. Pull off your shoes, run silently behind him, pull him down, and I'll be there at once. I have what we will need then."

Sam vanished, and it seemed to Christobal that he heard approaching footsteps.

The hoarse cry of an iguana sounded, the signal agreed on.

Christobal sprang up. He saw a man standing on the shore, looking out to sea. It was Bob White.

An instant later there was a brief cry. Bob lay on the ground, Sam knelt on him and pressed a cloth to his face, and Bob no longer stirred.

"The chloroform is acting. Now be quick!"

Bob was tied up, and a gag was put in his mouth.

The men hurried to the city. Now Sam was wearing Bob's suit, and he had a pair of blue spectacles on his nose. Christobal followed him at some distance, imitating the gait of a rather intoxicated person and even passing a police watch, the negro managed to get into hiding places and to escape being seen.

"Here!" Sam pointed to a little back entrance. They were in the dark, but they knew they were fairly high up, since they were on the level of the streets for pedestrians. Sam evidently knew his way perfectly. He opened a door, and they entered an elevator. Silently they went down and reached the lowest story of all. They listened. All was quiet here. Carefully, keeping to the walls, they hurried on.

"Here, these stairs!"

They stood in a little grotto, with the mighty iron gate of the treasure chamber before them. Sam turned a few switches.

"Careful, now, for Heaven's sake! I have not spied here for days in vain. I am shut-

ting off the electric alarm." Sam drew out the key which he had taken from Bob. "I even know the keyword."

Again they listened a short time. Then the lock turned and the great door opened.

Once more they listened. For almost a quarter of an hour the two stood holding their breath. It was after all possible that there were still other signals, of which Sam knew nothing. Yet this was evidently not the case. In Santa Scientia they obviously did not consider the possibility that robbers might come.

They entered the vault and pulled the door to. The flashlight shone on treasures which nearly dazzled them. On stands there were the finest works of the art of the Incas. There were great heaps of shining ingots of gold. In large boxes were precious jewels.

The intruders were actually intoxicated. With greedy hands they seized the valuables and stuffed their pockets.

**T**HEN they came out again, with beating hearts. They listened and thought they heard steps, voices—the watch!

Quickly Sam switched on again the alarm bells. Then the two crouched close together in a corner, covering themselves with some old sacks that were there.

A man came and examined the locks and the bells. "All in order." Some Chinese guards passed very close to them, so close that the men in hiding felt the impact of their feet. Then it became quiet again. Still they remained lying there for some time. Then they hurried back the way they had come.

"How shall we get through the city with this full sack?"

Sam chose a different route. They reached one of the subterranean rooms in which the autos were kept. They got on one and went noiselessly, as all the machines in Isabella did, along the now deserted speedway. Soon they were out in the open, far outside the city. Only the fact that the negro had been able to study the layout for months made the escape possible.

When morning dawned, Christobal and Sam were again in their hiding place, count-

ing the spoils. Then they emptied bottle after bottle of strong wine and fell intoxicated on the blankets with which their cave was covered.

\* \* \*

That night Dr. Schlüter did not sleep. With Elsa Dorn, who was glad to help him, he again compared all the sailing lists. Almeida and MacIversen were properly announced as members of the California Racing Club. Of Sam he found nothing. Then Elsa Dorn said, "I do not understand. Here is a Chilean planter, Serao Argonza. The name is unknown to me, and it does not occur in the lists which I received of guests from Chile."

"Perhaps he has made an exchange."

"Or this Argonza is Don Christobal."

"The devil! It almost seems to me as though Dr. Frank mentioned a name like that."

"Which room?"

"12,753."

An hour later the doctor already had his information. The room of the Chilean had not been used, and he had been neither at the festive supper nor at the dance. His chair had been empty at meals. He had attended the auto racing but nothing else.

Schlüter nodded. "This person is Don Christobal. We must have him. He is hidden on the island."

While the hundred thousand guests were sleeping in their rooms, dreaming of the wonders they had experienced, armed patrols were searching the whole island.

## CHAPTER XXIV

### Last Hours

**A** NEW day dawned. In great groups the guests were conducted through the streets, but not into the work-rooms. It would have been quite impossible to give such a throng of visitors a real insight into the scientific work of Santa Scientia.

At noon the conclusion of the sport festival took place. In the great arena in which the auto racing had occurred there were now a hundred planes ready to fly. They were strange machines, some quite like

the ordinary planes, others with the propeller on top, and still others with no propeller at all. But the strangest thing was that there was no flier in any one of these planes. In the center of the arena, on a platform set high above the middle of the lake, stood a great mechanism like a gigantic typewriter.

Vetter himself now took his place at the keyboard. The starting shot sounded, and the loud speaker announced: "The air maneuvers are beginning, which exhibit the remote control system of Santa Scientia."

It almost looked as though Mr. Vetter were playing the piano, but each touch of a key resulted in a marvel. The planes left the ground, some describing wide circles, others, with the propeller on top, flying straight up from the ground. Then there began in the air over the heads of the breathless spectators a mad game. In squadrons the planes shot toward one another and seemed about to collide. At the last instant they stood still in the air, flew under one another, did bold trick flying, and executed a wild dance in the air, while the giant loudspeakers gave forth loud music.

To the music of a jazz band they raced past one another, so that they looked like an inextricable swarm of flies. They hovered to the tones of a waltz, formed in battle squadrons to the melody of a military March, and rocked to the melting harmonies of an orchestra of violins.

If at first many were anxious lest at any moment planes might have accidents and fall on their heads, the perfect security of these maneuvers soon afforded a tremendous spectacle, and the manner in which one man at his keyboard moved all the planes as though by electric connecting wires, like the marionettes of a children's theatre, produced tremendous enthusiasm.

This too came to an end. Obediently the hundred planes descended and stood in order, as before the flying.

A new starting signal sounded. This time ten planes without propellers rose into the air. Apparently they were moved by magnetic forces sent out by a number of large

Zeppelins. These could be seen high up in the air above the arena.

Again the loud speaker made itself heard: "The rocket ships, the future travellers of space."

From the exhausts of these planes, which to be sure were operated by pilots, shot fire, and they began to circle, faster and even faster. Already after a few seconds nothing more could be seen but ten fiery circles, speeding above the arena at a velocity surpassing comprehension. The circles went through one another, forming all sorts of geometrical figures, and plainly showed that even rocket planes were perfectly controllable by these pilots.

A shot sounded again. The rocket ships now came down in perfect order.

The loud speaker called out: "This ends the sport festival of Santa Scientia. Dinner begins in an hour, and embarking starts at four o'clock. At eight the last guest will have left Santa Scientia. It is at present not possible to give consent to the thousands of requests to immigrate here. For now the meeting is over. Santa Scientia thanks the thirty-five different nations of the earth for coming here. Each of these nations is requested to select from its numbers five representatives—a member of the government, a newspaper man, a scholar, an industrial leader, and an engineer. Santa Scientia will ask these gentlemen to remain a few days as guests. Now that the time of the great games is past, we will show the chosen ones as well as the representatives of the League of Nations our serious work and explain and demonstrate the economic and cultural significance of Santa Scientia."

**T**HE embarkation commenced. There were thousands of disappointed faces, but Mr. Cook remained inexorable. All except the chosen must go. The departure took place in the same fashion as the landing three days before. Again the entire sea around the half forgotten Iguana Islands was covered with veritable fleets. On them were people who still thought they had been dreaming, who did not comprehend what they had experienced in these few days, and felt that they were returning from another



world into the ordinary prosaic universe.

Never before had the ships' radios been so busy. They were used constantly by the representatives of governments and by newspaper reporters, for nobody had been allowed to telegraph from Isabella.

At eight in the evening Helling announced from Cabo Martino: "Ninety-nine thousand, eight hundred and thirty-three guests, together with the cooks and waiters, have left Santa Scientia. There have remained behind one hundred and seventy-five representatives of the thirty-five nations, also Don Almeida, Don Sero Argonza of Chile, and the envoys of the League of Nations."

Almeida, who was in reality Don Joao, was still in the hospital. President Ferreira of Puitu, who did not want to leave his son, was among the government representatives.

\* \* \*

Dr. Schlüter entered Cook's room.

"Do you know, Doctor, what has become of Bob? I have not seen him all day."

"I have something very serious to announce to you. Mr. White is at present in Prof. Weigand's clinic."

Cook sprang up. "Has he been hurt, seriously hurt?"

"He will be all right tomorrow. I have performed my duty badly. Last night Mr. White was found by one of my patrols on a lonely shore road. He had been robbed of his clothes, attacked and chloroformed."

"Was this done by our guests?"

"Certainly not. Don Christobal, who sneaked into our city under the name of Sero Argonza, is the perpetrator—he and the negro Sam, who in some inexplicable manner escaped from the locked jail."

"Incredible!"

"I also found out about MacIversen, whose real name is MacGonnor. It seems to me impossible that he took part in the attack, so I let him go. It has come out that the two robbers got into the treasure vault by means of the key which Mr. White was carrying."

"Did they steal anything?"

"At a rough estimate, half a million dollars worth of jewels."

"And the criminals?"

"They can under no possibility have left the island. I had the checks doubled at the departure. Besides, I know that from the moment I saw MacGonnor talking with you until his departure on the first steamer, he left his room only in company with Mr. Möller, who arrived in Isabella yesterday. It has actually turned out that Mr. MacGonnor is a remote relative of Mr. Möller. He is accordingly cleared of complicity in the attack."

"I know."

Mr. Cook had already talked with Möller, had told him the entire "MacGonnor affair", and had asked him to do his best for the man.

"What is to be done now?"

"It is proved that the two criminals cannot have left the island. It is quite impossible that they have got by the guards. Besides, when I arrested the negro Sam after the attempted murder, he remarked with a scornful laugh that he had lived on the island for months."

"We must talk with the gentlemen who made our electric plants. It must be strange if electricity, which can do anything, cannot procure us these criminals as well."

"What do you think?"

"I don't think anything. I simply have an idea, just as formerly I imagined that it must be possible to build an auto to go in the water, on the ground, and in the air. Then Grotefendt planned and built it. Now I imagine that it must be possible to smoke out criminals from the crannies of an island. How that can be done is a matter for the engineers."

"Do not grow any grey hairs, Doctor! You could not count on such matters, and as long as the stolen property is still on our island, it is not lost. Perhaps it would be well to interview Don Joao cautiously. Even if he was not present himself, he may perhaps know something about the negro Sam's hiding places."

### The End of a Career

MR. COOK had a talk with President Ferreira and then asked the latter to accompany him to Don Joao's bed.

In front of the hospital Dr. Frank was waiting for him. "I have very sad news for you."

"A new misfortune?"

"During the last festivities the attendant left Don Joao's room, and he took advantage of the moment to electrocute himself. There is no doubt that his touching a high voltage wire was intentional."

Ferreira looked fixedly at the doctor, unable to speak.

"He left this letter," the latter went on.

There were only a few words. "Forgive me, father! This is the best way for you, for me, and for Puitu."

For a moment the old gentleman stood horror-struck and covered his face with his hand. Then he straightened up and said, "Perhaps he is right." With firm steps he approached the couch on which the dead Don Joao had been laid. Out of respect to his father it had been decorated with palms and orchids.

For a long time the old man stood in silent thought. Then he said, "My son was a very gifted man. He could have helped his native land. Now I must thank him and especially you, that I can take him home honorably. I should like to leave today, if you will be so kind as to provide me with an airship."

"Gladly, Your Excellency. Only, much as I respect your feelings, I must ask you for another interview first."

Ferreira was again sunk in the contemplation of his dead son. "In an hour I shall be ready for you. Now let me have some moments to collect myself."

While the old president remained by the bed of his dead son, Cook and his companions went into the consultation room of the hospital.

"Don Joao has shown himself courageous. After all that had happened, it was the only way out. He took this course bravely. It seems to me a proof that the young man, in spite of his excessive ambition and unbridled passions, had decency in him. He had no part in the theft."

At Cook's wish the engineers were telephoned, and in a short time they were as-

sembled about him, also the two professors, Van Rhyn and Vetter.

There was a long consultation, and it ended only when President Ferreira asked for Mr. Cook.

Then the two gentlemen sat together for a long time. Ferreira had become entirely composed by the time the Zeppelin rose into the air, in the dead of night, with the quickly-prepared coffin of Don Joao, as well as the President of Puitu on board. He even held his head high again. Finally he turned to the pilot, who at his request was accompanying the airship. "Have you a wireless on board?"

"May I ask you to send a telegram to Washington?"

"Surely."

Ferreira wrote a few lines on the paper: "Situation changed. Puitu no longer needs American money. Wish to withdraw from the negotiations."

The statesman had taken the place of the father, and Ferreira was glad that he could disarm the greatest reproach which his enemies uttered: that he was delivering Puitu over to the United States.

Meanwhile Mr. Cook had returned to his room, by no means showing the face of a man who has lost a half million dollars.

## CHAPTER XXV

### Thieves Fall Out

**N**OW the guests were conducted about. First they went into the completed buildings and into the workshops, in which the individual industries were being operated to the accompaniment of industrial music.

Then there was explained to the visitors the operation of the central building, the railroads, the auto roads, and the cycling streets. They were shown the colors of the glass walls and their ability to let through all the sunlight, without absorbing the vital rays. Finally they went into the natural park, into the artificially cultivated places, and into the great plant for the sterilization of air, and into the clinics at Alesia. Here there were especially interesting things to

be seen, for of course so many sport activities could not go on without injuries.

Dr. Frank, who now felt himself completely an "Alesian", proudly displayed his invalids. One had had a new knee joint put in, to replace his own which had been smashed in an automobile accident. Another even had a new kidney. A third had received a new collar-bone from the collection of live parts possessed by Dr. Weigand.

"You see the immense importance of blood tests," explained Frank. "When every boy and girl, say at the second school vaccination, has a blood test taken and the group of blood types is registered, then the work of doctors will be greatly lessened in the case of illness."

Dr. Schlüter, who was present, nodded. "The work of the criminologists, also. If we can already distinguish human and animal blood, this blood test, which henceforth every person would have to carry about with him, indicated on his passport, would at once determine whether any bloodstains came from his blood, or from the victim of a crime, or from some third person. This presupposes, of course, that there is not the strange coincidence that a suspect and a victim belong to the same blood group."

These visits consumed a whole day, and the visit to Alesia ended it.

Cook took the floor. "Ladies and gentlemen, I should like to make you the same proposal that I did to the gentlemen of the ocean expedition seven weeks ago. I want you to remain here in Santa Scientia by yourselves two nights and a day. Recover from all that you have seen. Each evening our mechanical reader will operate in the great hall and inform those who wish to hear about the origin of Santa Scientia."

The rooms which were provided the gentlemen and ladies in Alesia were exactly like the others, having the same telephone booths and dictation machines. When, in the evening, the much admired reading apparatus began its lecture, naturally not one of the guests were missing.

Meanwhile an important conference was taking place in the main offices in Isabella. Professors Weigand, Frank, Vetter, Van

Rhyn, Ortler, Zolling, and the engineers Römer, Goldner, and Grotfendt had asked Mr. Cook for an interview, exhibiting serious faces. Likewise Bob White was at the conference, a bandage still about his neck.

Professor Van Rhyn began. "We have been discussing matters together, and I as the eldest have been chosen to speak. We have very serious doubts whether the course we have chosen is the right one. It is not to be denied that it is purposeless to live shut behind a sort of Chinese wall. The world must participate in the work of Santa Scientia. Therefore people will constantly come here in great numbers. They will study in our institutions and fill our workshops. Quiet Isabella will become a city with lively people, with women and children. Is it not possible that in so small an island as Isabella the real scholars, the scientists, who owe their results to seclusion and peace, will not find their required atmosphere in the future? Will not the noise of the world, which is now to enter even here, hinder our reaching their real goals?"

Mr. Cook smiled. "If I had not considered that, I should be a poor observer and a bad executor of the heritage which the scientist Alesius left to me. Permit me to postpone answering you until tomorrow, at the great assembly. I must still wait for a telegram, but please be confident that I will always be true to the main aim of Santa Scientia."

\* \* \*

**A**T length Christobal and the negro had waked from their drunken sleep and were crouching in their cave.

Sam had even made a brief attempt to leave it. During the night when the majority of the visitors had left, he had sneaked into the city and had nearly fallen into the hands of the guards. Returning, he said, "We must wait."

"How long?"

"Days, even weeks perhaps, until the air clears and our enemies conclude that we have left the island. Then it only remains to steal a boat and do just as we did in our first attempt, row over to San Salvador. From there we will move on further."

They crouched in the cave. Before them

lay the stolen property, the jewels of the Incas. Time passed with infinite slowness for them, and both became nervous.

The two companions had long since dropped all formalities. They began to divide their booty again, from sheer boredom. This led to quarrels. Each wanted the main part. The eyes of the negro shone with greed. "I did it all. I led you to the treasure vault."

"I knocked down Bob White, when you were too cowardly."

"I cowardly?"

They reached for their knives. The old hatred between the white and the black was making its appearance. Christobal despised the negro and thought it ridiculous to share with him, and Sam was on fire with the lust for gold.

Hours passed, during which they made mad plans.

"I shall go to England and live as a rich man. No, I shall open the largest gambling house in Frisco," said Christobal.

"And lose everything again. I shall go to Africa and become president of a negro republic. I have gold," said Sam.

Then their alcohol-disturbed brains again became heated. For hours they crouched opposite each other, each taking cover in the rocks, knife in hand, with the booty between them.

Again hours would come in which both felt an unconquerable thirst for air and the open, and moments when Christobal longed to be back in Frisco in the bunk-house, back in the gaming dens with his pals. Sam would think of his cave at the summit of the mountain, where he had so long lived and gazed out to sea.

The provisions were running short. There was no more wine and brandy. Now came hunger and thirst.

"You must go into the city; we must eat and drink," said Christobal.

"Why I?"

"Because I do not know the way about."

"Tomorrow night."

Sam had to go. He had to enter the city and leave Christobal alone with the gold. He turned around again. "Come along! I am not going alone."

"I should give us both away."

"You go alone!" An idea suddenly flashed across Sam's mind. If Christobal was caught, he would be rid of him.

But then the negro jumped up. "Stay! I'll go." He had reflected that if Christobal were captured, he would certainly betray him and the hiding place.

The negro sneaked away, and the other one listened and waited, hour after hour. Sam did not return. Christobal felt pleased. Now he was alone, and all the jewels belonged to him. He spread out the treasures and revelled in them. At the same time an anxiety came to him: Supposing Sam betrayed him!

### A Bold Plan

HE could no longer endure it in the cave. Out he crept, on all fours, like a beast, and crawled behind the rocks. He saw the searchlights, the sea with the artificial surf, and the lights of Isabella. He felt weak from the days and nights in the cave, whose alcohol-laden air he had breathed. Christobal lay trembling, with a feeling of an imminent fever. He thought he heard voices about him and started up, clutching his dagger. The searchlight swept a cliff above him. On this rock sat the devil, the devil incarnate—monstrous, with a great head and serious eyes and a wild jagged topknot, which stretched along the creature's back. A devil! A dragon from prehistoric times!

The giant iguana, the beach dragon, which still lives attains a great size only in the Iguana Islands and which the outcast had never seen before, sat perfectly motionless and gazed fixedly with its glittering eyes. In its rigid calm it looked mighty and terrible. Christobal, whose ideas were slowly becoming confused, thought that this beast was looking right into him and that it was reading his soul, like a judge in the lower world. He found himself actually kneeling and stretching out both hands to the iguana, as if in prayer.

He opened his eyes and saw Sam in front of the cave. In an instant he was relieved but he kept quiet and watched him. The negro threw down a bag, listened at the

mouth of the cave, sneaked ahead, and came back. Now his face was turned toward Christobal. His eyes stood out of his head, his teeth were bared like a tiger's, and his whole body revealed blood-lust. "He is asleep!" he murmured softly to himself, while foam appeared at his mouth.

Christobal understood. Sam now intended to murder him in the cave. Involuntarily he sprang up. It was only three paces to the steep drop into the sea.

The negro threw off his upper garment and turned his back. Christobal leaped on him with all his might, encircling his throat, as he had done with Bob White, and throwing him to the ground.

Sam was overcome with surprise only for a moment. Christobal had underestimated the strength of his enemy. At first the negro thought it was the police, but then he looked into Christobal's eyes.

A fearful struggle began. Each held his knife in his hand, and each was striving to hurl his adversary over the cliff.

A shrill whistle sounded. Both relinquished their holds. Somewhere a light flashed.

"Into the cave!"

They carried the sack together, and seizing the cast-off clothes, vanished into the cave, crouching down in the dark. The steps passed by up above. In their common danger they had forgotten their hate. Sam lit up and built a fire for cooking. "We are like children," he remarked.

They seized the contents of the sack and ate and drank, pouring the wine down until they were again drunk. In stupor and exhaustion they sank against the rocks and finally went to sleep. Now both had been made defenseless by the alcohol. They had forgotten everything. There they lay, each with an empty bottle in one hand and a knife in the other, in uneasy sleep, while the slowly dying light of their fire shone on the jewels of the Incas, which lay between them. . . .

After all had taken their places, Mr. Cook opened the meeting. In the spectator's seats were also the seven ladies of Isabella and all the engineers.

"Ladies and gentlemen! Santa Scientia awaits the judgment of the world."

The foreign minister of Portugal, as the eldest, the dean of the commission of the League of Nations, spoke first. "May I ask you to tell us first what you plan for the future?"

"We intend to become the university and technical school of the world. We want to give to every genius, every man who thinks he can make a new discovery or invention for the benefit of mankind, a quiet place to convert his ideas into reality and try them out. But we want to carry on no theoretical knowledge, only the practical kind. We intend to leave it to other universities to determine the different kinds of deep sea fish and to undertake bold explorations at the North Pole. We welcome knowledge which benefits mankind, which teaches it to utilize the forces of nature; we want to free man from menial toil, to develop his mind, and to widen his powers. Therefore this university is to be joined to a technical school, which at once makes real and evaluates what the scientists work out.

"If someone has a plan for a ship to travel interplanetary space, he shall build it here. If someone knows new ways to store up the solar rays and their heat and to utilize it in cold regions, he shall try it here. If a physician discovers new cures, then his clinic is here. There are only two things which may never be mentioned in Santa Scientia: politics and war. Therefore Santa Scientia may never belong to another state, so that it may never out of prejudice prefer one nation to another. prejudice prefer one nation to another."

"Thus the highest law of Santa Scientia must be that its scientists may never set about making war machines. The great world university of Santa Scientia is to serve the universal peace of mankind, the welfare of the dwellers on our earth, and the complete and peaceful utilization of our planet in a common endeavor."

**I**N the great hall of the central building of Isabella the guests were assembled, the members of the League of Nations and the representatives of thirty-five countries.

"How will you accomplish all this on this little island?"

"The day before yesterday I made a new agreement. Today I received the sanction of the government of Puitu. By a purchase the terms of which are my private concern, I today have bought all the Iguana Islands. This also removes the worry of our learned men, as expressed yesterday, that the coming of outsiders might disturb their quiet. Now we have six larger and a number of smaller islands. These islands are useful. Here in Isabella, where our city is now built, the entire government will remain in the future. Also the factories with the model shops for all industries will be here, as well as the lecture rooms of the university. This is the only place where outsiders will live.

"Perhaps we will erect the institutions for research in pure science on San Salvador. Such scholars as need complete solitude will have at their disposal the islands of Marchesa, Espanola, Santa Maria, Santa Cruz, Pinta, and Jenovesa, along with many very small islets, while Fernandina we will keep for all time as a natural park. Of course, this apportioning is still subject to alteration. Certainly all scientists and inventors will find peace and quiet, and here on the large island of Isabella will be established the communication point, so to speak, between us and the world."

## CHAPTER XXVI

### A New Nation!

"**T**HEN you never intend to leave the vicinity of these islands?" the Portuguese minister asked Mr. Cook.

"Only if the world wishes us as teachers. But we will work out great plans. You have already heard of our first work, how we used the volcano, to generate electric power for ourselves. Mankind is wasting the earth. It has the false idea of adapting itself to nature, instead of making nature serviceable to it. We carry on agriculture in regions which hardly promise success, and we leave the tropics to the primeval for-

est and the wild beasts, simply because we can do nothing there by human power.

"We dig into the earth and see with horror the slow decrease of our coal supplies, but the ever constant power of the sea waves remains unused, though it could operate our electrical plants. Millions of people die of illnesses, yet we have infinitely great areas almost free from bacteria, in which they could be cured.

"What have nations done before us? Just think that the Incas, to whose civilization we owe our treasures, knew how to convert the present desert and unfruitful mountainland of Peru and Ecuador into one blooming garden. Let us devise together, with the aid of the studies of the world university of Santa Scientia, a plan for a magnificent utilization of the whole earth! Let us show the way, work out the plans, and be leaders!"

Cook had finished. On all sides questions were asked, which the individual scientists answered in detail. Stenographers were superfluous at this meeting, for all the speeches were automatically recorded and sent by wireless to transmitters, which in the lower rooms of the central building dictated them through loud speakers into typewriters. At the same time there sat in these rooms a whole army of translators, whose translations of the proceedings were again given into loud speakers. Thus a few minutes after the conclusion of the session everything which had been dealt with was translated into all the languages on earth, printed and sent by radio to all countries.

The League of Nations withdrew for discussion. A whispering went on in the room. The representatives of the individual countries did not wish to express any opinions, until the gentlemen from Geneva had spoken. Mr. Cook, who was to receive judgment on his work at this time, was perfectly calm.

The gentlemen of the League of Nations returned, and again the Portuguese Foreign Minister spoke.

"Mr. Cook! I address you as the owner of the Iguana Islands, to which you have given the name Santa Scientia. We are merely envoys and can only make proposals to the League in Geneva. Let me read to

you what these proposals will be!

"We, and if we are not mistaken, the ladies and gentlemen of the thirty-five attending countries have recognized that in Santa Scientia serious and fruitful work has been done for the benefit of mankind. We have seen here things which border almost on the miraculous. We are enthusiastic about all that has been done and about the physical and intellectual excellence of your work."

The speaker was interrupted. The room was filled with shouts of approval. The bell was rung for silence.

"We shall recommend that Santa Scientia, the personal possession of which Mr. Cook gives up, be made a permanent university and technical school for the whole world."

"Bravo!"

"We shall recommend that Santa Scientia be regarded as an independent country, to be neutral in time of war, with its own government and the right to admit only those whom it deem worthy, with the one condition that Santa Scientia shall never give preference to any one country."

"Bravo, bravo!"

"**S**ANTA SCIENTIA must pledge itself to serve always and at all times the work of science, peace, and reconciliation of all nations. The scholars of Santa Scientia must always be at the disposal of the world with counsel and action and give us the benefit of its skill, if it is a question of bringing their plans to realization in any place. Santa Scientia must never become a business enterprise, and all its inventions and discoveries are to become the possession of the entire world free of charge."

"Bravo!"

"Mr. Cook, are you ready to accept these proposals?"

"With all my heart. At the same time I speak for my fellow workers."

"Then I may tell you something more. Yesterday we telegraphed to Geneva, and the answer has already arrived. We have full power to guarantee you what we proposed."

At the great table in the center of the hall the representative of Portugal, as the eldest, signed the document which ensured Santa Scientia, the scientific state, its independence

for all times. The representatives of the thirty-five governments, who all had received authorization by telegraph, crowded up and proudly signed the strange document, which had as its first signature simply the name "Cook".

A last joyful meal united the participants in this important meeting. In the evening hours these guests left Isabella, and with them went almost all of those injured in the sport festival, who had hitherto been cared for in the hospitals.

The first to leave the harbor was the yacht with the members of the League of Nations. Then followed the great Lloyd steamer, which was to take the other guests to Frisco. This time, though none of the guests noticed it, care was taken that there should be no opportunity for escape on the part of the two criminals, who were still in hiding on the island.

Meanwhile there appeared in all the newspapers of the world the accounts and pictures of the sport festival in Santa Isabella. At first they were laughed at and considered good jokes. Those returning home were furious, because nobody believed them. It was only when the reports of the government representatives and the conclusions of the League of Nations became known that the stories of the visitors to the Santa Scientia Olympiad got credence.

The universities treated the whole affair coolly. They rejected Weigand's experiments in the transplanting of living members, which were preserved in nutrient fluids. "Those are nonsensical things, already recognized as impossible during the war," academicians said. The preservation of physical youth by renewing the glandular secretions was as much ridiculed as the transplanting of monkey glands in Dr. Voronoff's clinic had been formerly.

Then one day there appeared in Berlin two men, who both came from Santa Scientia. One claimed that he had a new knee-joint, the other a new kidney. Both had testimonials with them, signed and sealed by Dr. Frank, who was still very well known in Berlin, and by the representative of the German government at the Isabella Olympiad. These documents stated that Frank

had operated on the two men by Weigand's process and had provided them with new organs. The men were examined and X-rayed, and it was concluded that the operations had evidently occurred. A cold shudder was felt by the gentlemen, who hitherto had doubted everything. But then they shrugged their shoulders again. "One case proves nothing. Frank was always an optimist. For years Weigand has been out there among those dreamers. Who knows what trick was played on honest Frank!"

The agreement of the League of Nations and the enthusiasm of the guests had given the people of Santa Scientia a feeling of security, which together with their former successes put them all in a still more joyful mood.

Now there was something else to be done. Mr. Cook and Bob White, who was again perfectly recovered, were working secretly with the chemists and Prof. Van Rhyn in the laboratory. Although a whole week had passed since the theft, no trace of the thieves had been found. The engineers were inclined to believe that they had managed to escape from the island, in spite of all the precautions, if new thefts had not occurred twice in this week. Both times, though at different places, food had disappeared without a trace.

## CHAPTER XXVII

### A Man Hunt

**D**R. SCHLUTER was angry for he had really been on the watch for the thieves. With his guards, for a troop of white volunteers had joined the Chinese, he had watched every passage. Two times the bold thief must have stolen very close to the guards and had then been swallowed up by the earth.

Finally the chemists finished their work in the laboratory. Now masons went to work. With great iron beams the entrance gate into the cavern with the "Lake of the Gods" was divided up, and each of the divisions was sealed airtight with plates of glass. Those of the whites and Chinese who did not know what was going on shook

their heads. Before the openings of the cave were entirely sealed, electrical apparatus was put in. The place had already been wired at the time of the sport festival, and now great amounts of the secret chemicals made in the laboratory were sunk in the water and set up on the rocks in great containers. Then great apparatus similar to immense boilers were left in the water.

Now the cavern was hermetically sealed from without. The entire population of Santa Scientia, white and Chinese, was assembled, and Mr. Cook made a speech. "My friends! It is certain that two thieves are on our island, defy our attempts to catch them. One of them is the negro Sam, the same one who formerly appeared here from time to time."

"He who has lived on the island much longer than we, is acquainted with subterranean caves of which we know nothing. It is however necessary that there be no secrets from us. It is probable that all these passages, which are certainly connected with the extinct volcanic system, are connected together. Now we are going to make a sort of artificial volcano. In the subterranean lake we have made arrangements for the production of vast amounts of vapors. The gases will by no means be poisonous, but they are dark colored and are mixed with material having such a smell that no human being can remain in the vicinity. Now we will spread the population of Santa Scientia over the whole island and start a hunt, a smoking out.

"Your task is to watch wherever vapors come out of the earth, from cracks or little caves. These exits of the great subterranean cave network are those then that are connected with the grotto, and all these places are to be exactly marked with stakes, so that our geologists and investigators can examine them.

"It is probable that very soon our two thieves will come out of one of these openings. If this happens, they are to be caught and brought to me, of course without injury to them. To calm our Chinese colleagues, I add that a real ghost does not care about smelly gases. If the negro appears, this will prove that he is a human being."



THE preparations were completed. First a strong light was switched on in the large grotto, of course from the outside, and then the current was sent into the electric boilers. It was an interesting sight that was witnessed by Cook and his friends, who remained before the glass at the entrance. In a short time the water began to boil in the "Lake of the Gods".

At the same time the chemicals dissolved, and clouds of green and yellow gases filled the great cavern and darkened the light. It looked like a regular witch's kettle that was boiling up there and sending up clouds to the natural dome of the grotto. A whole system of telephone connections had been run all over the island, and Elsa Dorn and the other six ladies were operating a temporary central station in front of the entrance to the cave, while individual reports of importance were announced by loud speaker.

Two hours passed without any report. The gases had first to find the passages. Then it started.

"Gas east of Mt. Atahualpa."

"Gas coming out close by the city."

"Gas west by the shore."

If anyone had now entered the island of Isabella, he would have believed that a new "Valley of Ten Thousand Smokes" had formed here. It was amazing at how many places the gases came out. The whole island was evidently traversed by a network of passages, and the cave investigators were most eager to examine all.

All day long dense masses of gases were created, until the chemicals were used up. There appeared to be uncommonly interesting geological conclusions to be drawn from the branching of the volcanic passages. But the main thing had not occurred—nowhere had one of the thieves come out of any of the cracks.

The power was shut off. The water cooled, and the gases slowly passed off.

"Then they have surely fled?"

"Or else there are other cave systems."

Bob White sprang up. "Why not make another try with the prison? This must also have underground exits, even if we could not find them."

Schlüter nodded approvingly. "Of course, for the negro fled through them."

Chemicals were again brought, and while it was becoming evening, a great fire was built in the prison cave. Of course oxygen had to be supplied artificially to this, so that the door might be closed airtight. Otherwise the fire would have been stifled too soon.

Again the posts were assigned, all over the island this time, for no one knew how far the passages might run.

Cook himself turned on the electric ignition of the fire in the cave. This time of course they could not watch the fire and the evolution of the gases through the iron door. Cook and his friends climbed the little hill in front of the city and stood there chatting.

They did not need to wait long. After a quarter of an hour had passed there was a loud burst of laughter. Close before them, almost exactly at the spot where Bob had formerly been attacked this laughter grew to a regular hurrah. Out of a split in the rocks close to the sea, which nobody had observed before, staggered two figures, two tattered helpless drunken men. With both hands they convulsively clutched their noses, while behind them escaped from the cave a yellowish green gas with a frightful stench.

That very night the two men were brought before their judges. There was still no regular court in Santa Scientia. In fact there was no intention to found one. Mr. Cook had simply assembled all the whites and acted as chairman himself.

The two villains looked pitiful. Their bodies were bleeding from the wounds which they had given each other, and their faces were hollow and sunken from their stay in the cave. Silently they stood there, denying nothing, merely awaiting their fate.

Mr. Cook asked his friends, "What is to be done with them? They have stolen, but they have not got any of their booty. The negro has attempted murder, but he did not succeed."

Bob White arose. "Let us expel them from the island. They will not again try to steal in Santa Scientia."

No one opposed this. The next day a plane for Japan took along the negro Sam, to leave him to his fate in Nagasaki. Another one left Christobal in Frisco.

\* \* \*

A ship landed at Cabo Martino. It brought the wives, sons, and daughters of Professors Van Rhyn, Ortler, and Zolling. It brought sisters and fiancées of the young engineers, and also the fiancée of Dr. Schlüter.

In the next few days there was great activity in the little church of Santa Isabella. The engaged couples were married, and youthful loves who had nearly forgotten one another were reunited. But even the entrance of these women was on the condition that none might come to Isabella who was not physically and mentally sound.

The gentlemen of the ocean expedition, who had now lived long enough in Santa Scientia to feel at home, determined to remain. The woman's club of the seven ladies was, as it were, augmented by the addition of the intelligent older women, the wives and co-workers of the professors.

The islands were apportioned. Mr. Cook remained in Isabella. Bob White was the inspector and "chief minister", who went everywhere and saw that all went well.

Elsa Dorn remained as manager of the postoffice and again had much work to do. In the following year the lecture halls and workshops were to be filled with students and mechanics desirous of adding to their

knowledge. There was the question of testing the applicants and of selecting, out of the hundreds of thousands who wanted to come, two thousand students and eight thousand craftsmen.

Dr. Schlüter also had a position. He had been selected mayor of Isabella and police chief of all Santa Scientia.

Work was being done on all the islands, and Weigand and Frank were together constructing the great rejuvenation establishment on San Salvador.

The hardest job was to choose the worthy among the many who wished to try out new discoveries and inventions and who desired for this the quiet of the little islands and the financial help of Santa Scientia.

Shaking his head, Ortler said to Cook: "After all, our great plan remains a fragmentary thing. We too must choose and test. We too will consider much to be foolish and childish, which perhaps is great and ingenious. We too can only make tests, and we must refuse admission to many, perhaps to the best ones."

Cook looked at him seriously. "Yes, we are but human beings. Still, we shall keep our eyes open and do what we can."

On all the islands great work was being done, day after day there was planning, discovering, inventing, and testing of everything that was to contribute to the welfare of humanity and the realization of the ideals of the world university of Santa Scientia.

THE END

## What Is Your Science Knowledge?

### *Test Yourself By This Questionnaire*

1. What is the Bohr theory of the atom? (Page 19)
2. What is the relation between the surface gravitation of earth and Mars? (Page 25)
3. What is the hugest magnetic field that we know of on earth? (Page 36)
4. What effect has a magnetic field on light rays? How has this been proved? (Page 36)
5. What could be the practicable method of interplanetary communication? (Page 46)
6. How is it possible to equalize the distances travelled by auto racers on a circular track? (Page 103)
7. How is an electro-soccer field possible? (Page 111)
8. What is one great unused source of power at present? (Page 123)

## The Eye of Two Worlds

(Continued from Page 53)

He had to admit it would be better to save that time and trouble in going down to San Francisco to withdraw the million.

"All right then. But let's hurry. We've got to meet Vender in Kraupuk before that message gets through. Get a wax impression of his finger prints, and Rolvaag you learn to forge his name, so we can get this ticklish business over at the bank. Then we'll take him into the interior of fever-infested Brazil, and leave him there for the jungle to take its toll. Everyone will think he's gone off with the million; that will clear us."

The three men were nervous, and worked hastily to make a quick getaway, though guarding Fran. He seemed more cheerful than usual. He stood very still, and a calm, collected observer might have said he seemed to be listening intently.

"Come on, let's see your signature!" Rolvaag half snarled at him.

Fran picked up the pen. He had already made his finger print impression on wax. There was a lull in the confusion of preparations, and in contrast came the faint drone of highspeed motors throbbing at their utmost. It came rapidly closer.

"The aero-patrol!" Lorentz and Troën cried in surprised alarm.

THE END.

## In the Spacesphere

(Continued from Page 33)

without warning. In the sudden state of weightlessness my captors, startled, dropped their weapons; and were unable to recover them, as a slight muscular motion was liable to send one flying all over the room most ludicrously. I, on the other hand, obtained in a second my small weapons from my sleeve-holsters, and when, very soon, normal gravitation returned, I was well-equipped to keep my captors in a state of complete docility. And how did you fare, my friends?"

"It's a long story," said Captain South, "but you may thank these three gentlemen.

In the sky hurtling toward the mountain lodge were two white, flashing demons of the air lanes. There came a brilliant flash from the nose of one of the airplanes, and the space torpedo seemed to melt to the ground like a snow man in a furnace. Another flash finished the sleek, racy Lynx.

"All right, up with 'em!"

Fran stood in one corner of the room wielding a flash gun at the trio, too shocked by the sudden and effective appearance of the police to notice his deft movement in getting the weapon out of a drawer.

A violent oath came from Lorentz, and he made as if to throw a glass ball of liquid at the youth. A greenish-violet flame streamed from the end of the sharp needle on the gun. Lorentz's arm dropped, the end of it a mere blackened stump.

Rolvaag glowered: "I'd like to know how you tipped 'em off, you dirty rat!"

"Let's see, how does that ancient saying go? 'The best laid plans of mice and men gang aft a-glee.' From where you are in front of the televisior now, Rolvaag, you can see yourself in the mirror on that wall opposite you. So could Bruce when I stooped over to get that card. And he saw Lorentz and Troën, too. Then he had someone get busy with a direction finder on you pronto," Fran explained affably.

Their remarkable services brought about the overthrow of Zon Scarna."

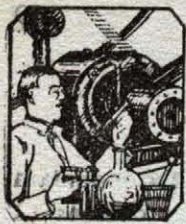
"They shall be very generously rewarded."

Dick Dubrocq took a step forward. "Kee Scarna is innocent of the crimes of her father. Please withdraw her sentence of exile."

For a moment the wise old Martian looked into the eyes of the Earth-giant. His voice was low. "It shall be done, my son."

The blood-red planet cast a ruddy light into the chamber through the thick windows of the spacesphere.

THE END



# Science Questions and Answers



THIS department is conducted for the benefit of readers who have pertinent queries on modern scientific facts. As space is limited we cannot undertake to answer more than three questions for each letter. The flood of correspondence received makes it impractical, also, to print answers as soon as we receive questions. However, questions of general interest will receive careful attention.

## ASSOCIATE SCIENCE EDITORS

**ASTRONOMY**  
**Professor Samuel G. Barton,**  
 Flower Observatory, University of  
 Pennsylvania.  
**Dr. Clyde Fisher, Ph.D., LL.D.**  
 Curator, The American Museum of  
 Natural History.  
**Professor Willem J. Luyten, Ph.D.**  
 Harvard College Observatory.

**ASTROPHYSICS**  
**Donald H. Menzel, Ph.D.**  
 Lick University, University of  
 California.

**AVIATION**  
**Major William A. Bevan,**  
 B.S., M.S., M.E.  
 Air Corps Reserve, Professor Aer-  
 onautical Engineering, Iowa  
 State College.

**Professor Earl D. Hay,**  
 B.S., M.S., M.E.  
 Head Department Mechanical and  
 Industrial Engineering and Pro-  
 fessor of Aeronautics, Univer-  
 sity of Kansas.

**Professor George J. Higgins,**  
 B.S. Aero. Eng.  
 Associate Professor Aeronautical  
 Engineering, University of De-  
 troit.

**Professor Felix W. Pawlowski,**  
 M. & E.E., M.S.  
 Department of Aeronautical En-  
 gineering, University of Michi-  
 gan.

**Professor John E. Younger,**  
 B.S., M.S., Ph.D.  
 Dept. Mechanical Engineering,  
 University of California.

**BOTANY**  
**Professor Elmer G. Campbell**  
 Transylvania College.

**Professor Margaret Clay Ferguson,**  
 Ph.D. Wellesley College.  
**Professor C. E. Owens**  
 Oregon Agricultural College

**CHEMISTRY**  
**Professor Gerald Wendt**  
 Dean, School of Chemistry and  
 Physics, Pennsylvania State  
 College.

**ELECTRICITY**  
**Professor F. E. Austin**  
 Formerly of Dartmouth College.

**ENTOMOLOGY**  
**William M. Wheeler**  
 Dean, Bussey Institution for Re-  
 search in Applied Biology, Har-  
 vard University.

**MATHEMATICS**  
**Professor C. Irwin Palmer**  
 Dean of Students,  
 Armour Institute of Technology.  
**Professor Waldo A. Titsworth, S.M.**  
 Alfred University.

**MEDICINE**  
**Dr. David H. Keller**  
 Asst. Supt.,  
 Pennhurst State School

**PHYSICS AND RADIO**  
**Dr. Lee deForest, Ph.D., D.Sc.**

**PHYSICS**  
**Professor A. L. Fitch**  
 University of Maine.

**PSYCHOLOGY**  
**Dr. Marjorie E. Babcock,**  
 Acting Director, Psychological  
 Clinic, University of Hawaii.

**ZOOLOGY**  
**Dr. Joseph G. Yoshioka**  
 Yale University.

These nationally-known educators pass upon the scientific principles of all stories.

### Gaining a Day

Editor, *Science Questions and Answers*:

If an airplane travels westward at the rate of a thousand miles an hour how long would it take to go around the earth? As the plane travels faster than the sun it would seem as though the pilot would arrive back before he left? Would you untangle this?

Howard Sherer,  
 Flat Creek, Ala.

(Theoretically, Mr. Sherer is correct. Assuming that the plane were started in the neighborhood of New York, (latitude approximately 45 north; the circumference of the earth at that latitude is approximately 17,500 miles,) the plane would make the round trip in 17½ hours, the sun in 24 hours. Now if the plane started from New York at noon, with the sun overhead, it would arrive in San Francisco before noon, local time, and therefore have arrived in Frisco earlier than it left New York.

But the presence of the International Date line spoils that little time-stealing scheme. The crossing of this date line, which cuts the Pacific Ocean pretty nearly in half, puts one abruptly into another day. In other words, our pilot would arrive at the date line, some 5,400 miles away from New York, 5½ hours after his start. In five and a half hours the sun has traveled but 4000 miles and is nearly two hours behind the plane. At the date line therefore it is a little after ten o'clock in the morning of the same day. But when the pilot crosses the date line he is plunged at once into the next day. So if he starts his journey at noon on Monday, since he gains six and a half hours on the sun, he would arrive in New York, with-

out the date line at five-thirty in the morning of Monday. But the date line throws him over into Tuesday and so he returns at five thirty Tuesday morning. Which makes it just right.—Editor)

### Constructing the Hypnobioscope

Editor, *Science Questions and Answers*:

I was greatly interested in again reading of the "Hypnobioscope", as described in the April issue of *WONDER STORIES*. I read about it, of course in "Ralph-124C41-1" and recognized the system as used in teaching the code to embryo radio operators. It might be of interest to you to know that among radio operators of the old school it was a well known fact that one might safely go to sleep while on watch, trusting that any signals that were of interest to the operator would automatically wake him while any other calls that might be heard on the calling wave would not disturb him in the least. I can vouch for the truthfulness of this statement, from several years of personal experience.

I would greatly appreciate the detailed information necessary to construct one of Mr. Gernsback's "Hypnobioscopes", if such information is available. Of course if this information is held as a commercial secret I cannot expect it to be sent me, and will have to work it out for myself, but, as I intend to have one of the machines for my own use, and soon, any help I can get would be vastly appreciated. By this I refer to the hook-up used for best results, and the type of instruments.

I believe the use of the telegraphone was first made public by Arthur B. Reeve, in his Craig Kennedy stories, years ago. I can perhaps get the latest details

on this instrument from a friend of mine who is connected with our local branch of the Telephone Company.

Donald G. Reed,  
1054 N. Western Ave.,  
Los Angeles, Calif.

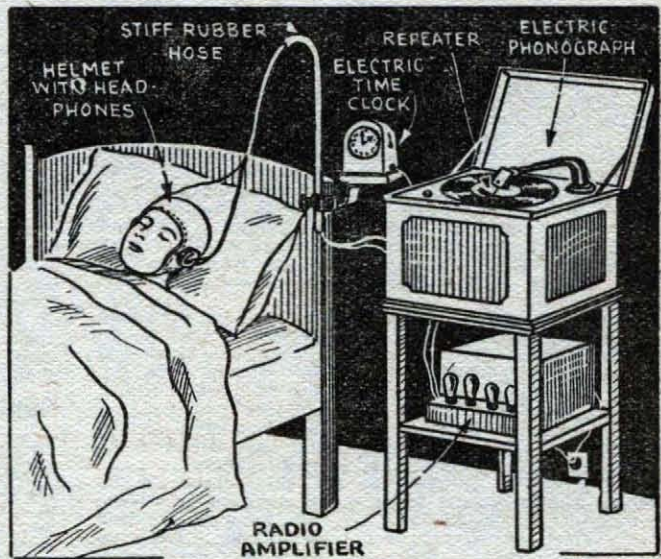
(Mr. Hugo Gernsback has given us the following information:

His Hypnobioscope is not sold as a commercial article today, although we understand that a number of manufacturers intend to put out an instrument of this kind.

The simplest Hypnobioscope that can be made by anyone is as follows:

It is nothing more or less than an electric phonograph with an ordinary record of any subject—music, lecture, talk or otherwise—which is rotated continuously by means well-known, and the record is automatically played over and over as long as desired. By means of a clock (of the type known as a radio clock, now on the market) the phonograph can be set in operation at any pre-arranged time. The clock can be set so that the phonograph starts operating,

The illustration herewith shows how one might learn while sleeping, by the Gernsback "Hypnobioscope". The circuit consists of an electric phonograph, a radio amplifier; a repeater, an electric clock and a helmet with headphones.



let us say, at 2 A. M. in the morning, and keeps on operating until 3 A. M., or any other time selected. The subject uses a so-called aviator's helmet, with a pair of headphones, which is attached to a magnetic pickup or phonograph pickup. This headgear is preferable because it is not likely to get out of place when the sleeper turns around in his sleep and changes his position.

It is necessary for the subject to wear the attachment for several nights without any attempt to operate it in order to become used to the headgear; the first two nights, as a rule, the user does not sleep very well.

By means of a small amplifier, the electrical pickup system illustrated amplifies the sound to any pre-arranged strength, and the sounds thus reach the sleeper at any pre-determined volume.

Of course, any sort of phonograph record may be used; and Mr. Gernsback suggests that a most practical use for the Hypnobioscope today is in the learning of foreign languages. By means of suitable records, the language can be learned while the subject is at sleep. It is merely a question of repeating the record over and over again, in order to drum the lesson into the subconscious mind. After a few trials, the sleeper will quickly determine how long it is necessary to play any particular record. Some sleepers require a repetition of the record for one hour, others more; the average perhaps being about three-quarters of an hour for a 12-inch record. It is not advisable to use the records for more than one full hour during any one sleep period, as otherwise the nerves of the sleeper might become affected.

We shall be very glad to hear from those who have tried the Hypnobioscope described.—Managing Editor)

## What is Gravitation?

Editor, Science Questions and Answers:

If, as Einstein's latest generalization seems to imply, gravitation and electro-magnetism are more or less similar forms of the universal energy, is it to be assumed that there may be surrounding every material body or group of bodies a gravitational field somewhat allied to the magnetic field adjoining a magnet? If so, may it not be that gravitation extends only a measurable distance beyond our and other galaxies and is, therefore, *not actually universal* in space?

I do not know that there is any objective evidence or proof that mutual inter-relations exist between our Galaxy and other "Universes" myriad millions of light-years distant in the void.

There seems to be some evidence that our solar system is moving as a unit among the stars and, perhaps, that our Galaxy is turning on an axis of its own. Maybe it is a gigantic gyroscope forever whirling in one plane in one corner of "Space"!

W. S. Varnum,  
La Habra, Calif.

(We believe that there is much to substantiate Mr. Varnum's view that "universal gravitation" as we perceive it, may be only the way that the attraction between material bodies manifests itself in the neighborhood of our earth, that is in our solar system. We have very little evidence that the inverse square law of Newton holds throughout the entire universe.

Science has not yet been able to explain the basis of gravitation. Assuming that interstellar space is empty, science has not explained why two bodies can attract each other across this gulf of emptiness. The ether was invented some years ago as a device which might explain gravitation. That is, assuming there was an ether, the force of gravitation could be exercised by disturbing the ether in some unknown way.

The latest and most interesting theory of how gravitation acts is contained in "The Dynamic Universe" (Scribner's) reviewed in this issue. Mr. Mackaye, the author, contends that there is an ether filled with radiations of so short a wavelength that it pervades all matter. Nothing can stop it. This radiation, like light, exercises a pressure in all directions. When it passes through a material body however part of the radiations are changed and some of them lose their pressure-producing power. Now if there were only one body in the universe, nothing resembling gravitation would occur for the change in radiation would be the same in every direction. But given two bodies as the earth and moon the space between them is filled with a great deal of the pressureless radiations. Inasmuch as both bodies have pressing on them the pressure producing radiations there exists a tendency for the bodies to draw together. This tendency Mr. Mackaye calls gravitation. Although this theory is open to many arguments it is an approach to an understandable gravitational phenomenon that might act universally.—Editor)

# The Reader Speaks



**I**N this department we shall publish every month your opinions. After all, this is your magazine and it is edited for you. If we fall down on the choice of our stories, or if the editorial board slips up occasionally, it is up to you to voice your opinion. It makes no difference whether your letter is complimentary, critical, or whether it contains a good

old-fashioned brick bat. All are equally welcome. All of your letters, as much as space will allow, will be published here for the benefit of all. Due to the large influx of mail, no communications to this department are answered individually unless 25c in stamps to cover time and postage is remitted.

## Better Than These

Editor, *WONDER STORIES*:

Indulging heavily in listing the stories that they deem good, not so good, or bad; praising or knocking the contents of *WONDER STORIES* and pointing out button-holes in the authors' science, social, and general facts, the readers overlook much choice material that they should have included somewhere in their letters—even if in a postscript. For example, the tendency among the authors to forget their own past stories. If we readers can't set them right, perhaps they could go back to last year in one of their hypothetical time-machines, re-read their stories of that date and then return to 1931 with corrected data.

Take one Edsel Newton. He wrote a story containing one heroine with one christian name. Then he wrote another story, injected the same heroine in it, and altered her name. I forget the name myself now, so can't say just how it was changed. If it had been *Helen* in the first story, it'd have been *Ellen* in the sequel. This same author, by the way, misstated that "Harold and Wilbur Wright invented the airplane."

And "The Rescue from Jupiter." You need not purchase a time-machine or a memory course to recall that Nina, heroine of that story, was black—as tar—albeit suppositiously beautiful. But in "The Return from Jupiter," the same girl has *slim, white hands*, according to the author. Mayhaps she was wearing gloves, or the scientists of Neina had wonderful bleaching agents. Gawain Edwards could have divulged the secret for the benefit of his colored readers . . .

And seriously, I wish to say this. There is no reason whatsoever for keeping the standard of science fiction low in the common dirt, all the while bending every effort toward raising it to popularity. The matter of the wild-west covers and the pulp-paper is now quite hoary and I, who have read science fiction since Hugo Gernsback inaugurated it as periodical, have given up hope of having a white paper science fiction magazine. That is reserved for future attainment; 1940 may bring such prosperity that pulp paper will be obsolete.

But contents of said magazine, that is entirely different. Must you need print such tripe for producing nightmares as "The Terrible Monster," "Great Green Things," "The Dome-headed Men from Pluto," and the like? It is not science fiction. Why not more—and more really entertaining and informing stories of electromagnetism, chemistry and medicine, biology ("The Man who Evolved" for a good model), and mechanics; instruction that is not vague reference to "rays," "electrons," or not even that. Intrigue between scientists, inventors, people of other worlds. Only a few of your authors handle it with mature skill and interest. Most have their characters common adventurers—Tom, Dick, and Harry—and at times a "Sally." Gawain Edwards and Von Hanstein are the best writers you have; D. H. Keller can write well, too, when he feels like it.

Your stories of the future inevitably reveal that men of the future are pugnacious enough to battle with the heroes. As suggested by others, why not give preference to those stories that are both futuristic and afford food for thought. Stuff like Wells', upon whose work most modern science fiction is based. Social, economic, as well as political, and personal (sexual) developments of the future make interesting reading.

The editors, I think, are sided with the negatives in the "Love? Yes-no" controversy. At any rate, when a heroine trots into a story, she is always beauteous and her sole purpose, seemingly, is to be an object

which the hero may embrace, utter a few words to, or be pursued by a lustful villain. You believe that a large majority of your readers are young students—men. Then why the discarding of "Science"? A large percentage of your large majority are women students. We may be as interested in science and invention and social problems as we are alleged to be in sports.

Cheapening and masculating (don't think that I want an "e" prefixed to the last word!) the magazine means that we change our minds while the other patrons of newstands look on, and take a movie or "true story" magazine instead . . .

And despite this, I sometimes wonder if any of the three most popular five-cent weeklies would deign to print a science story unless Sir Arthur Conan Doyle wrote it! And certainly the young readers of these publications, rich or poor, are no more advanced intellectually after perusing them than after reading such a "science" story as "The Terror of Aryl".

The former, stories of rich bourgeoisie and their love affairs, people who indifferently accept the fruits of scientists and inventors . . . Take a census of the science knowledge of the white paper readers: more information about racketeering and movie idols than of Einstein and the vastness of the universe; more about the prices of diamonds and how to get them easily than of the allomorphism of carbon; less facts about the probable destination of civilization than of the etiquette of eating, drinking, dressing, petting. "Science Fiction" is at least better than these.

(Miss) K. E. Wright,  
Northfield, N. J.

(Miss Wright throws a challenge into the face of science fiction that it cannot well ignore. We admit in all truthfulness that there is much to be said for her indictment; and we have been conscious of it for some time. We admit that science fiction cannot grow by merely feeding on "wild west stories of the future". Our caution to authors has always been to inject into the story a background that will point out a lesson, provide food for thought, stimulate the mind.

Naturally, it is not always easy to do this. The art of writing these stories is young, in fact the editor of *WONDER STORIES* started the first science fiction magazine in the world only as far back as 1926. Before that the only science fiction known consisted of the Wells, Verne and Conan Doyle classics, a scattering of novels by other writers who took a temporary fancy to a scientific theme, and an occasional, a very occasional magazine story.

We are sincerely trying to see in what way science fiction can most fulfill its purpose, and we are trying to train authors to an enlightened viewpoint on it. Naturally all of this takes time. But the progress is gratifying.

The work is beginning to bear fruit, here and there young writers are emerging who show true ability—a generation of truly effective writers are growing up who will challenge Wells and Verne for their laurels. It is our aim to seek out these writers and to encourage them.

Meanwhile, as we improve each issue to make it better than the last, we are conscious as Miss Wright states that, confronted with the magazines of "eating, drinking, dressing and petting," that we are better than these.

We invite further comments from Miss Wright indicating how science fiction may be improved. Incidentally, we call to Miss Wright's attention von Hanstein's "Utopia Island" and the exploits of Elsa, who certainly is a fulfillment of modern womanhood. —Editor)

(Continued on Page 134)

MY PATENT  
LAW OFFICES



JUST ACROSS  
STREET FROM  
U.S. PAT. OFF.

# PATENTS

**INVENTORS**  
Write for these  
**FREE BOOKS!**

All drawings and specifications are prepared in my offices.

Above is a view of my drafting and specification offices where a large staff of experienced experts are in my constant employ.

## Protect Your Ideas

**TAKE FIRST STEP TODAY — ACTION COUNTS**

If you have a useful, practical, novel idea for any new article or for an improvement on an old one, you should communicate with a competent Registered Patent Attorney **AT ONCE**. Every year thousands of applications for patents are filed in the U. S. Patent Office. Frequently two or more applications are made for the same or substantially the same idea (even though the inventors may live in different sections of the country and be entirely unknown to one another.) In such a case, the burden of proof rests upon the last application filed. Delays of even a few days in filing the application sometimes mean the loss of a patent. So lose no time. Get in touch with me at once by mailing the coupon below.

### Prompt, Careful and Efficient Service

This large, experienced organization devotes its entire time and attention to patent and trademark cases. Our offices are directly across the street from the U. S. Patent Office. We understand the technicalities of patent law. We know the rules and requirements of the Patent Office. We can proceed in the quickest, safest and best ways in preparing an application for a patent covering your idea. Our success has been built on the strength of careful, efficient, satisfactory service to inventors and trademark owners located in every state in the Union.

### Strict Secrecy Preserved—Write Me in Confidence

All communications, sketches, drawings, etc., are held in strictest confidence in strong, steel, fireproof files, which are accessible only to authorized members of my staff. Feel free to write me fully and frankly. It is probable that I can help you. Highest references. But **FIRST**—clip the coupon and get my free book. Do THAT right now.

**No Charge for Information on How to Proceed.** The booklet shown here contains valuable information relating to patent procedure that every inventor should have. And with it I will send you my "Record of Invention" form, on which you can sketch your idea and establish its date before a witness. Such evidence may later prove valuable to you. Simply mail the coupon and I will send you the booklet, and the "Record of Invention" form, together with detailed information on how to proceed and the costs involved. Do this **NOW**. No need to lose a minute's time. The coupon will bring you complete information entirely without charge or obligation.

**CLARENCE A. O'BRIEN**  
Registered Patent Attorney

Member of Bar of: Supreme Court of the United States; Court of Appeals, District of Columbia; Supreme Court, District of Columbia; United States Court of Claims.  
**PRACTICE CONFINED EXCLUSIVELY TO PATENTS TRADEMARKS AND COPYRIGHTS**



## Mail this Coupon NOW

**CLARENCE A. O'BRIEN**

Registered Patent Attorney

4864 Security Savings and Commercial Bank Bldg.,  
Washington, D. C.

— OR —

Suite 1106, Dept. L-7, Woolworth Bldg.,  
New York City

Please send me your Free Book, "How to Obtain a Patent," and your "Record of Invention" form without any cost or obligation on my part.

Name \_\_\_\_\_

Address \_\_\_\_\_

(Important: Write Plainly and Address Office Nearest You)



**\$5,000 WILL BE PAID TO ANYONE WHO PROVES THAT THIS** is not the actual photo of myself showing my superb physique and how the Ross System has increased my own height to 6 ft. 3 3/4 inches.

Hundreds of Testimonials. Clients up to 45 years old gain 1 to 6 in. in few weeks.

No Appliances. No drugs. No dieting. First in 1907 Ross System Never Fails. Fee Ten Dollars Complete. Convincing Testimony and Particulars 5 cent stamp. "Allow time for return mails across the Atlantic." G. MALCOLM ROSS, Height Specialist, Scarborough, England (P. O. Box 15).



**WE MATCH PANTS**  
To Any Suit!

Double the life of your coat and vest with correctly matched pants. 100,000 patterns. Every pair hand tailored to your measure; no "readymades." Our match sent FREE for your O. K. before pants are made. Fit guaranteed.

Send piece of cloth or vest today.  
**SUPERIOR MATCH PANTS COMPANY**  
115 S. Dearborn St. Dept. 581 Chicago



**Big 3ft. Telescope** Five Sections. Brass bound. Powerful Lenses. 10-Mile range. Special Eye Piece for looking at the sun, included FREE. Can be used as a Microscope. Guaranteed. Big value. Post-paid \$1.75. C. O. D. 15c extra.

**BENNER & COMPANY, T-76, TRENTON, N. J.**



**The TRANSMITTER UNIT**  
with 100 Uses


SKINDERVIKEN MICROPHONE BUTTON—Powerful Speech and Phonograph Amplifier—Detectophone, etc., etc. One unit 95c—two, \$1.75, with 12-page booklet of experiments. Sent C. O. D. in U. S.; foreign—cash with order, PRESS GUILD, INC., 16 Murray St., Dept. A-631 New York, N. Y.



**LONELY HEARTS**

LET us arrange a romantic correspondence for you. Meet your sweetheart thru the world's foremost high-class social correspondence club, a club for refined lonely people. Members everywhere; strictly CONFIDENTIAL, efficient and dignified service. We have made thousands of lonely people happy, why not you? Write for FREE Particulars. EVA MOORE, BOX 908, JACKSONVILLE, FLA.

**I HAVE A SWEETHEART FOR YOU**



**Book Covers**  
Ex-Libris-Book Plates

LATEST series of OLD MASTERS book-plates, reproducing antique woodcuts and engravings. Unique creations for book-lovers who appreciate the unusual. Write for illustrated catalogue and specimen, enclose 10 cents for mailing charge.

**WRITE FOR CATALOGUE**

ISKOR PRESS, INC., 19 Park Place, Dept. A-631 New York, N. Y.

**PATENTS** Write for Free Guide Book, "HOW TO OBTAIN A PATENT" and Record of Invention Blank. Send model or sketch and description of your invention for our Free Opinion whether it comes within Patent Office Rules. RADIO and ELECTRICAL Cases a Specialty. Prompt, Efficient Service.

**PAYMENT OF FEES IN INSTALLMENTS**

**VICTOR J. EVANS & CO., 923 9th, Washington, D. C.**

## THE READER SPEAKS

(Continued from Page 132)

### The American Interplanetary Society,

Editor, *WONDER STORIES*:

It may interest your readers to know that the American Interplanetary Society has just completed its first year of existence, and looks forward to a most energetic second year in pursuing its aims.

The Society has practically completed the first lap of its research on the possibilities and uses of the rocket, and intends to continue this research for another year before publishing a complete report, which shall be the first extensive survey on the rocket in English.

We plan also to extend the size and scope of our monthly *Bulletin*, to make of it a real magazine that shall publish all the news, both of America and abroad dealing with developments in astronautics and rocketry. It will also contain the reports of the Society's members on the rocket, as well as interesting general articles on the various phases of interplanetary travel.

Plans are also maturing for a campaign of actual experimentation on the rocket which we shall be ready to carry out before the end of this year. The Society is also completing plans for the formation of an International Interplanetary Commission which shall coordinate the work of the national societies and plan to solve the problems of astronautics on a world-wide basis.

While the growth of the Society during the past year was very promising, we hope to extend during this year the scope and field of our activities and membership. We have members now in thirty-six states, in Canada, Mexico, France, and Russia. To your readers we offer our active and associate memberships, giving to lovers of science fiction a chance to assist in the bringing to realization of the dream of all interplanetary travel.

The officers elected for the coming year were David Lasser, president; G. Edward Pendray, vice-president; Laurence Manning, treasurer; Nathan Schachner, secretary; and Dr. William Lemkin, librarian. Information about the Society and the classes of membership can be obtained by writing to the secretary at the address below.

Nathan Schachner, Secretary,  
AMERICAN INTERPLANETARY SOCIETY,  
113 West 42nd Street,  
New York.

(The growth and influence of the American Interplanetary Society is extending very rapidly, and is becoming a real force for the development of astronautics. We extend to the Society our cordial best wishes for the success of its second year. The meeting of the Society on the 27th of January at the American Museum of Natural History in New York, by which it brought before America the splendid German film, "By Rocket to the Moon," and which will be the cause of the sending of the film to every American city, alone makes it worthy of America's support.—Editor)

### The Earth's Tail

Editor, *WONDER STORIES*:

In regard to Mr. W. E. Wilson's inquiry about a tail appended to the earth, in his letter in the last *WONDER STORIES*, let me make this suggestion:

The *Gegenschein*, or counter-glow, which is a faint light in the sky, directly opposite the sun—as a comet's tail always is—has been explained as a possible tail of the earth. It is very faint, but is said to be perhaps ten degrees in diameter. I have never been able to see it. The Milky Way makes it invisible during the middle of the summer and the middle of the winter. It has been suggested also that the counter-glow is akin to the Zodiacal Light, an illumination in the plane of the ecliptic, extending to perhaps 90 degrees from the sun, and probably caused by a very tenuous cloud of cosmic dust, whose particles may revolve about the sun in orbits similar to that of the earth, mostly within the earth's orbit, reflecting sunlight.

If the counter-glow is really a tail like that of a comet, it would seem that the other planets near the sun should possess them, which they have not been observed to do.

With cordial best wishes for the continued success of *WONDER STORIES*.

Jack Williamson,  
East Star Route,  
Elida, New Mexico

(Continued on Page 136)



# H. G. WELLS depicts life! AN EPIC

*forever to be remembered*

## THE SCIENCE OF LIFE

*The Story of all Things Living*

Most Startling Truths About—

A BIRD WHO "SETS A STAGE" FOR HIS OWN WEDDING

THAT HUMAN BODIES CONTAIN SEVERAL GYROSCOPES

THAT HUMAN BEINGS HAVE FISHES' GILL AND MONKEYS' TAILS

THE FROG THAT HAD NO FATHER

A HYPNOTIZED CRAYFISH

THE AGE OLD CHIN OF KING ALFONSO

THE THIRD SEX OF SCIENCE

AN OLD MAN AT 13

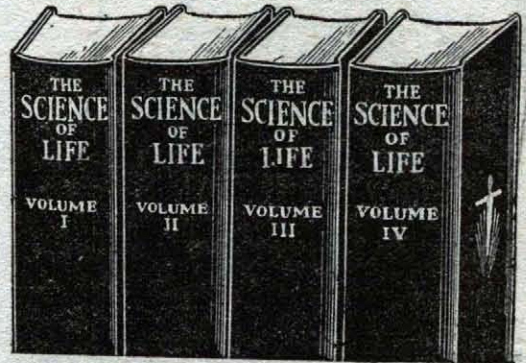
THE ROOSTER THAT LAYS EGGS

and hundreds of other phenomenal discoveries are unfolded in this thrilling drama—

**R**EVEALED to us by H. G. Wells are the profound mysteries of science—narratives of nature's life that for the longest time have never been disclosed. Finally, in amazing truths, the riddles of life—of living things, plants, reptiles, mammals, fish, insects, man, etc., that have puzzled scientists through the ages are dramatized by this world-famous author.

A reading of each volume is thoroughly convincing that the chapters are unforgettable; you will enjoy and understand these books—find them helpful and most enlightening.

Your library should contain "The Science of Life," in 4 volumes—H. G. Wells greatest works since his famous Outline of History.



### 4 Epoch-making Volumes

The Science of Life is published in 4 Volumes, 6 1/2 x 9 1/2 inches, durably bound in black vellum cloth with gold stamped cover. The entire set contains 1548 pages, profusely illustrated with diagrams, charts and photographs. This stupendous work contains more than 600,000 words, printed on an excellent quality of paper with type that eases reading and prevents eye-strain. This set of books will last a life-time.

**Complete in 4 Volumes**

### RUSH COUPON TODAY

GREN PARK COMPANY WS-6  
245 Greenwich Street, New York, N. Y.

I enclose herewith \$6.00 for which you are to send me, postage prepaid, H. G. Wells latest works, "The Science of Life," complete in four volumes, the price for which is \$12.00. Within the next 30 days I will send you the balance of \$6.00, making a total of \$12.00 for the set. If remittance is sent in full, 10% may be deducted.

Name .....

City .....

Address .....

State .....

# FREE!

A 98-page book containing the classic  
Interplanetary Story of all times. . . .

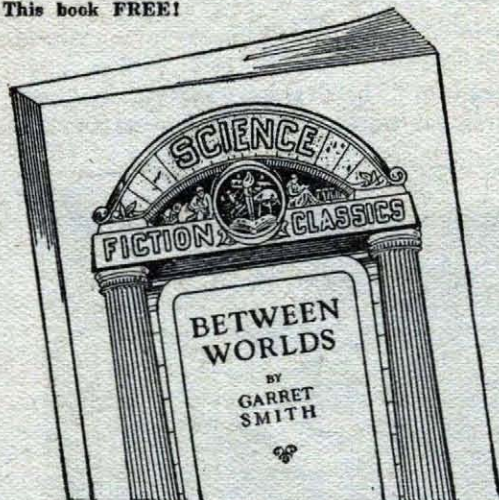
By GARRET SMITH

FROM a selection of many famous old classics, there has been selected the most fascinating, and perhaps the greatest classic of interplanetary stories, and reprinted in modern book form with flexible covers. This wonderful volume, entitled 'Between Worlds', should be included in every library, and the opportunity to get it FREE is yours if you act quickly.

To readers of WONDER STORIES, both new and old, this handsomely bound book will be given with one year's subscription to WONDER STORIES. Regardless of when your subscription expires, you may renew it at this time and get this book for your library.

Simply clip the coupon below—mail it with your remittance and you will receive WONDER STORIES each month for the next year.

This book FREE!



WONDER STORIES  
96-98 Park Place, New York, N. Y.

WS-631

As per your special offer, I enclose herewith my remittance of \$2.50 (check or money order accepted) for which you are to enter my subscription for one year to WONDER STORIES, and also send me absolutely free, by return mail, a copy of 'Between Worlds'.

Name .....

Address .....

City ..... State .....

## THE READER SPEAKS

(Continued from Page 134)

(We are very glad to present Mr. Williamson's explanation to our readers. We understand that a discussion of *Gegenschein* appeared in the March, 1931 issue of the Scientific American.—Editor)

### The Supreme Qualification

Editor, WONDER STORIES:

Just a note of appreciation for the new form of WONDER STORIES, but, appreciation especially, for one of the stories published in the March issue, "The Synthetic Monster" by Francis Flagg. Flagg's stories are so realistic, that the reader can't help but live them. They absorb one to the point of cutting away all workaday ties with this busy world. And believe me, that is the supreme qualification needed by the writers of science fiction, in putting their work across to the reader.

Flagg's stories never fail to do this. Another point to his credit, is, whenever he makes reference to technical or scientific data, he does so with such fine skill that these technicalities are read as avidly as if they formed part of the action of his stories. Too many stories by other writers are spoiled to me, through the unskillful introduction of tiresome technical details that provoke skipping, and often one discovers that this skipped technical matter bears directly on the plot and one has to go back and wade through passages that might have come out of a college textbook.

However, whenever I begin to read a Francis Flagg story, I know right away that I will not have to skip any passages, because every one of his stories I have read has been so masterfully constructed, that I have never failed to read every word he has written. Give us more of Francis Flagg's stories in WONDER STORIES.

John Tibbets,  
401 So. 33rd St.,  
San Diego, California.

(We can only say "correct" to Mr. Tibbets' remarks.—Editor)

### Not Published for 69 Years!

Editor, WONDER STORIES:

The April issue of "our" WONDERFUL magazine has just arrived.

The cover is fair. I can't say that it makes my heart palpitate madly (which would show, as I am only human, that I was excited) or anything of the sort. It's just medium.

But the stories!—they make up for my lack of enthusiasm over the cover. Welcome back to "our" magazine Miss Leslie F. Stone, welcome back! It's been a long while since we've had one of Miss Stone's remarkable stories grace the pages of WONDER STORIES. "The Conquest of Gola" is one of her very best. I should like to see a sequel to her "Women with Wings."

"The Emperor of the Stars" by Schachner and Zagat. (Comment unnecessary!) "An Adventure in Futurity" is par excellence. Same applies to the "Sargasso Monster" and "Great Green Things." And now about "The Man who Evolved" and "The Return from Jupiter." Mr. Edward's sequel deserves far more praise than I can give it. Let some learned grammarian "pat on the back" Mr. Edwards. "The Man who Evolved" is engrossing, thrilling, starkly convincing! Another masterpiece to your credit, Mr. Hamilton!

The next issue is an all-star one from all appearances. Mr. Starzl, Repp and von Hanstein are sure to present us with new and astounding stories.

A great war over whether time-traveling could be or could not now seems to be raging. No one knows, that's certain. I believe it is possible but nevertheless would like to present an entirely different, I believe, paradox. This is quite different from "Killing Grandma" and the rest. Here it is: Prof. Bryl travels into the year 2000. He walks the streets of New York, in this distant age, and purchases the Sol, 2000 issue of WONDER STORIES.

"Ah!" he probably exclaims to himself, "Look at this marvelous cover by Paul!" Our Prof. Bryl returns to the year 1931 with his "all-star" issue of WONDER STORIES. He copies down on the typewriter one of the stories contained in this magazine. He calls it his own. It is not plagiarism for the story will not be published for 69 years! He sends the story to Hugo Gernsback. Mr. Gernsback accepts

## THE READER SPEAKS

and prints it. It is acknowledged as the work of Prof. Bryl. When it is published in the future if it was supposed to be written by anyone else than Prof. Bryl it would be called plagiarism. Yet if it is reprinted and admitted to be by the said Prof., when he went into the future he would have found a story by him, in a magazine, that he had never written. And so on *ad infinitum*.

Am pleased to hear that the movie "The Girl in the Moon" is to be shown throughout the country. I would be very pleased to hear from some one in New York who was allowed the pleasure of viewing the picture.

Forrest J. Ackerman  
530 Staples Avenue,  
San Francisco, Calif.

(Mr. Ackerman has thrown into the editorial sanctum a veritable bomb. Perhaps, now it is possible that some of the stories we use are reprints of volume 71, of the year 2,000! What are we to do? If we refuse to publish them now, on the grounds of stealing the fruits of the future, we will deprive our present readers of the stories, and by doing that we may so restrict our present stories that those who look upon us now as inspiration for future generations will not receive it. Science fiction may be so blocked, therefore, that no stories will be published at all in the year 2,000. We call upon our readers. What shall we do!—Editor)

### The Penalty of Superiority

Editor, WONDER STORIES:

I have just finished the April number of your magazine. I certainly enjoyed it. Since you changed the size you have been steadily improving. Keep up the good work. As the pioneer of science fiction you must always remain the leader.

Three of the stories in this number are as fine as anything I have read. "The Emperor of the Stars" is an adventure in scientific fantasy that ranks in the forefront of imaginative romance. The basic conception is daring, the existence of another cosmos besides our own, where altogether different physical laws prevail. And the adventures of the heroes is good action stuff. The authors of this little epic have been setting new marks for fiction of this type. I hope that they will give us more of their works.

"An Adventure in Futurity" is another splendid narrative. The author succeeds in erecting an entirely credible civilization of the future. I like particularly his novel device of having a man of the future come back to the present with a time traveling machine. This obviated, beautifully, the threadbare and rather incredible method of having a man of our time so great a genius as to invent a time machine without a background of long experiment, of many failures, such as all modern inventions have required before their completion.

But I do think the author might have been ingenious enough to figure out some way in which man of the future could succeed in saving Earth for our race.

"The Man who Evolved" is not really a story, but a scientific treatise. However, the thing is very well done. One follows with bated breath the various stages in man's evolution, wondering what is to come next. And the final episode! Wow!

Leslie Stone's story might have been splendid. The ideas are all there. But somehow it is unsatisfying. Perhaps I find it so because it violates two fundamental emotions in me, pride of race and pride of sex. We humans may be just crawling bugs on an infinitesimal rock in an immensity of space. But we like to think of ourselves as the noblest works of Nature. We resent any aspersions on this conception of our own worth.

The other two short stories are a couple more of those things. Hundreds of yarns just like them have appeared in the science fiction magazines, and, I suppose will continue to appear. But why should you inflict them on us? Please, Mr. Editor, if you must resort to space fillers, choose at least novel themes.

I had almost forgotten the last installment of "The Return from Jupiter." Just fair, I expect much better from Gawain Edwards. Had the serial been written by somebody else I might have been better pleased. But Mr. Edwards has set so high a stand-

(Continued on Page 139)

Get your

# RADIO TRAINING

From America's  
finest Radio School

**T**HE man who really wants to become an expert in radio... who knows that the better his foundation, the better his chances... and who is willing to spend a year preparing himself... such a man will make no decision until he has read the complete story of RCA Institutes, Inc.

### A Good Foundation Vital

Like other professions, radio rewards only those who excel. The poorly trained will never rise higher than the place in which they started. Others will climb step by step to positions of power in radio telephony... broadcasting... sound pictures... aviation radio... radio merchandising. And among these will be those who planned years in advance... studied, worked, stuck to it.

You are making your decision right now, how well you will fit yourself. So decide wisely. To be a graduate of RCA Institutes stamps you as a man who knows the real worth of a good foundation. As one who knows that a year of training now, under America's finest radio instructors, is the surest way to acquire the knowledge and skill you must have.

### You Can Study At Home

You do not have to give up your present position to enjoy the benefits of RCA Institutes training. You may study at home in your spare time... or at any of our resident schools throughout the country. The Home Laboratory Training Course includes a complete set of radio equipment of the most modern design.

### Send For Our Free Book

If you have read this far... you have already indicated that you are the type of man who should study radio. This may be the big turning point of your life. You will not rest until you have sent for our free book that tells you the complete story of what RCA Institutes offers you. Fill in and mail the coupon below right now. There is plenty of time for investigation... but no time for delay in getting all the vital facts.



## RCA INSTITUTES, Inc.

RCA INSTITUTES, Inc.

Dept. NP-6

75 Varick St., New York, N. Y.

Gentlemen: Please send me your FREE book which tells about your laboratory method of radio instruction at home.

Name \_\_\_\_\_

Address \_\_\_\_\_

Occupation \_\_\_\_\_

The first exploration of Pluto, mystery planet of the solar system is offered to you in  
Stanton H. Coblenz'  
powerful novel

**"INTO PLUTONIAN DEPTHS"**

The adventure of two men on that lonely world, outpost of the solar system, will grip you not only with the terrific drama, the magnificent scenes of that underworld life, but with that biting satire that is the weapon of our author.

**"THE AVENGING RAY"**

is the new offering of our popular "newcomer"  
A. Rowley Hilliard

An intensely realistic story of an experiment that got out of hand, and nearly upset a continent.

**"WHEN PLANETS CLASHED"**

By Manley Wade Wellman

is a fair, unbiased but exciting version of an interplanetary war.

**"THE EMPIRE OF GLASS"**

By Frank Miloche,

is a time travelling story of a new and original type, picturing the death gasps of a civilization that is beaten.

Read also of the exciting

**"INTERPLANETARY PLOT CONTEST"**

These stories and more in the  
SPRING 1931 WONDER STORIES QUARTERLY  
NOW ON SALE ALL NEWSSTANDS



**ATLANTIC CITY'S**  
NEWEST CENTRALLY LOCATED  
FIREPROOF HOTEL

**HOTEL LUDY**

SOUTH CAROLINA AVE.  
AT THE BOARDWALK

\$2.50, EUROPEAN PLAN  
\$5.00, AMERICAN PLAN  
GARAGE ATTACHED

WIRE · PHONE · WRITE R. B. LUDY, M. D.

*Around the corner from the  
Little Church around the Corner*

# HOTEL SEVILLE

**MADISON AVENUE  
& 29th Street.**

**New York City**

A hotel of distinction and comfort within walking distance of shopping and amusement centers. Five minutes from Times Square, Pennsylvania Station and Grand Central Terminal.

**Room \$3.00 Per  
and Bath Day Up**

Convenient to all  
points of interest

**THE READER SPEAKS**

(Continued from Page 137)

ard in most of his work that we expect superlative work from him. And when he falls back to the common level of the ordinary writer we are disappointed. That's the penalty of superiority.

Which goes for all of **WONDER STORIES**. You have been setting a high standard for yourself, if you fall below it there will be a howl from your readers, even though you will still be as good as the other publications in your field.

Maxwell Patterson,

(The penalty of superiority is indeed difficult to pay. As Mr. Patterson indicates it means straining always to go one better. But we have no intentions of letting down at all. If we can't do better, we will not do worse.—Editor)

**Dr. Breuer Explains**

Editor, **WONDER STORIES**:

In regard to Mr. Miller's question in the May issue of **WONDER STORIES**, I shall do my best to state an opinion, but am afraid it will not be very satisfactory.

In physics, mathematical equations have no *a priori* meaning. They are merely abbreviated, approximate statements of fact. They are not always even exact statements of fact. Facts are stated in mathematical equations because it can be done more briefly and more accurately.

But not every mathematical equation states a fact. It is possible to string up all sorts of equations that have a very close resemblance to such equations as do express physical facts, but which mean nothing, or about whose meaning we know nothing.

Therefore, in reply to Mr. Miller's inquiry as to what is my opinion, I must say that I have none. There are no data on which to base one. His opinion is as good as mine, and probably better. I do not keep thoroughly posted on the latest developments in astronomical observations or in experimental physics; but as far as I know, there is no data of an objective character to throw any light whatever on the

(Continued on Page 140)

**FOR THE JULY ISSUE**

we offer

a really new story, of a world-shaking series of events that sprang suddenly upon an unsuspecting world. In

**"The Time Projector"**

by David Lasser and David H. Keller, M.D. you find, told in grim realism, what would happen, if the truth about existence were made known to us. In order not to give away the secret we ask you to start this novel length story, and be thrown with its characters into the tumult of world-shaking events . . . .

Clark Ashton Smith

repeats his triumph of "An Adventure into Futurity" in his new story

**"The City of Singing Flame"**

Mr. Smith's words burn and grip you. He carries you along to his strange world, where you feel as he did the overpowering lure of the flame . . . .

**"The Planet of Despair"**

is

R. F. Starzl's

latest contribution. You learn of the enslavement of one world to another and how the yoke of despair was broken when a man pitted his wits against that of an overpowering race.

**In "Rebellion—5000 A.D."**

by Garth Bentley

we get an intensely dramatic picture of future worlds, of their strangeness, their problems, their loves, and hates and wars; their conquests and greeds. Mr. Bentley has drawn a masterly picture of what our civilization may have to contend with 3000 odd years hence.

These and other stories in the **JULY 1931 WONDER STORIES** ON ALL NEWSSTANDS JUNE 1

**EARN \$5000!**

*a Year and More.*  
**Learn the New and Better system of DRUGLESS HEALING**



A New profession which offers most unusual opportunities for men and women everywhere—This complete system of non-medical and non-surgical treatment of bodily disorders meets a popular and rapidly spreading demand.

**New Unusual Way to Learn at Home**  
Moving Picture Instruction  
Projector and Films Furnished Free

Our amazing new method combines motion picture instruction with our time tried and proven plan of correspondence instruction. We supply everything. You can quickly become a competent and successful practitioner. Not only is it possible for you to soon earn \$100 a week but you can be a great benefactor to the many who need you.

**SEND FOR OUR FREE TRIAL COURSE**

Send 4 cents postage for Free introductory course of instruction. Learn how you can quickly achieve your highest ambitions. **WRITE TODAY.** Be the first in your community.

**AMERICAN UNIVERSITY**

Chartered 1913 by the State of Illinois  
Dept. M-6, 510 N. Dearborn St. Chicago, Ill.

**NEW LOW PRICES**

**GOODRICH-GOOD YEAR**

**Firestone - U.S.**  
AND OTHER TIRES



**Lowest Prices on Earth!**

Thousands of satisfied tire users all over the U.S.A. Our 16 years of business speaks for itself. This big responsible company will supply you with reconstructed standard make tires at lowest prices in history—**Guaranteed to give 12 months' service**

**Don't Delay—Order Today**

CORD TIRES		BALLOON TIRES	
Size	Tires/Tubes	Size	Tires/Tubes
80x3	\$2.20 \$1.00	28x4.40	\$2.30 \$1.10
80x3 1/2	2.25 1.00	28x4.50	2.40 1.15
81x4	2.95 1.15	80x4.50	2.45 1.20
82x4	2.95 1.15	80x4.75	2.90 1.35
83x4	2.95 1.15	28x5.25	2.95 1.35
84x4	3.50 1.15	80x5.25	2.95 1.35
82x4 1/2	3.20 1.45	81x5.25	3.10 1.35
83x4 1/2	3.20 1.45	80x5.75	3.20 1.40
84x4 1/2	3.45 1.45	82x6.00	3.20 1.40
80x5	3.60 1.75	83x6.00	3.20 1.45
82x5	3.60 1.75	82x6.25	3.50 1.65
83x5	4.45 1.75		



**DEALERS WANTED**

Send only \$1.00 deposit with each tire ordered. We ship balance C. O. D. Deduct 5 percent if cash in full accompanies order. Tires failing to give 12 months service will be replaced at half price.  
**YORK TIRE & RUBBER COMPANY, Dept. 107-A**  
3855 Cottage Grove Ave. Chicago, Ill.

A SPECIAL ANNOUNCEMENT TO NEW AND OLD READERS will be found on Page 136. A few minutes spent in reading it NOW will prove that it is of great interest.

**PATENTS—TRADE MARKS**

All cases submitted given personal attention by members of the firm.

Information and booklet free.

Patent Office & Federal Court Practice  
**LANCASTER, ALLWINE & ROMMEL**  
PATENT LAW OFFICES  
475 Ouray Bldg., Washington, D. C.

No Wind Can Blow It Out



**MYSTERY CIGAR LIGHTER**  
Something Different

**MAKE BIG MONEY**

Showing this Scientific Marvel to Men. New Principle of Ignition. What Makes It Light? No Flint or Friction. All Guaranteed. Sample with Sales Plan, 25c. Sample Gold, Silver or Chromium Plated, \$1.00. Agents, Write for Proposition.  
**NEW METHOD MFG. CO.**  
Desk SF-6 New Method Bldg. Bradford, Pa.



The Greatest Sin of all is total IGNORANCE of the most important subject in the life of every man and woman—SEX.

### AWAY WITH FALSE MODESTY

Let us face the facts of sex fearlessly and frankly, sincerely and scientifically. Let us tear the veil of shame and mystery from sex and build the future of the race on a new knowledge of all the facts of sex as they are laid bare in plain, daring but wholesome words, and frank pictures in the huge new library of Sex Knowledge.

### "MODERN EUGENICS"

**544** Pages of **SECRETS**

#### Everything a Married Woman Should Know—

How to hold a husband  
How to have perfect children  
How to preserve youth  
Warding off other women  
Keeping yourself attractive  
Why husbands tire of wives  
Dreadful diseases due to ignorance  
Diseases of women  
Babies and birth control  
Twilight sleep—easy childbirth  
How babies are conceived  
Diseases of children  
Family health guide  
Change of life—hygiene  
Why children die young  
Inherited traits and diseases  
What will you tell your growing girl?  
The mystery of twins  
Hundreds of valuable remedies

#### Secrets for Men—

Mistakes of early marriages  
Secret of fascination  
Joys of perfect mating  
How to make women love you  
Bringing up healthy children  
Fever and contagious diseases

Accidents and emergencies  
Hygiene in the home  
Limitation of offspring  
The sexual embrace  
Warning to young men  
Secrets of greater delight  
Dangerous diseases  
Secrets of sex attraction  
Hygienic precautions  
Anatomy and physiology  
The reproductive organs  
What every woman wants  
Education of the family  
Sex health and prevention

#### Girls— Don't Marry before you know all this—

The dangers of Petting  
How to be a vamp  
How to manage the honey-moon  
What liberties to allow a lover  
Secrets of the wedding night  
Beauty diets and baths  
Do you know that—  
How to attract desirable men  
How to manage men  
How to know if he loves you  
How to acquire bodily grace and beauty  
How to beautify face, hands, hair, teeth and feet  
How to acquire charm  
How to dress attractively  
Intimate personal hygiene  
How to pick a husband

#### IMPORTANT!

[This work will not be sold to minors.  
When ordering your book, state your age!]



Grenpark Company  
245 Greenwich St.  
Dept. WS-631  
New York, N. Y.

Please send me "Modern Eugenics" SEALED in plain wrapper. I am sending you \$2.98 in accordance with your special half price offer.

My age is .....  
Name .....  
Address .....  
City and State.....

## THE READER SPEAKS

(Continued from Page 139)

point of whether infinite mass is possible, or even possible as a theoretical concept similar to the Fitzgerald Contraction.

I wish to close with the reminder that mathematical equations are not sorcery; they have no intrinsic meaning of their own. Unless they are a statement of some experimental or observational fact, they tell us nothing. We can write any kind of a story we please upon their basis; and if we avoid upsetting what is known, it will make good literature.

Miles J. Breuer, M.D.  
907 Federal Trust Bldg.,  
Lincoln, Nebraska.

(We are glad to get from Dr. Breuer this illuminating point of view on the relationship between mathematical equations and actual fact. As he states so clearly it is not always possible to make a visual picture of what a mathematical formula means.)

With regard to one of the postulates of the Fitzgerald Contraction equation that the mass of a body increases with its velocity, experimental evidence was really adduced in the Kaufmann-Bucherer experiment. Cathode rays were shot into a magnetic field and the deviation from their path caused by the field was studied at various velocities of the rays. Now it was assumed that at higher velocities the particles would naturally deviate less than at lower velocities, but it was actually found that the lessened deviation was more marked than could be accounted for merely by a greater velocity. The only answer could be that as the velocity increased, the inertial mass increased also, as postulated by Einstein, and therefore the rays were less affected by the field. The assumption would be that if the speed of the rays were that of light they would be unaffected by the field at all.—*Editor*)

## BOOK REVIEW

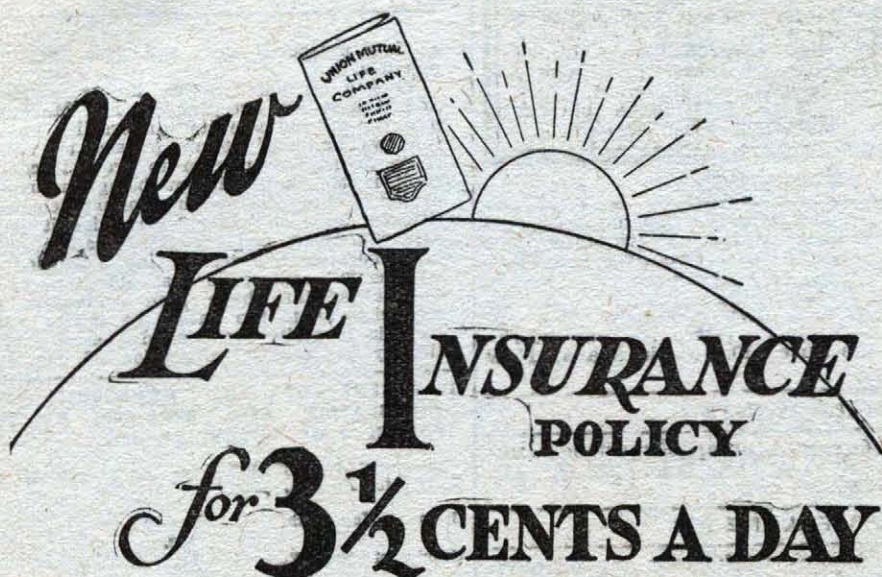
**THE DYNAMIC UNIVERSE** by James Mac-  
kaye. 300 pages, stiff cloth covers. Size  
6 x 8. Published by Charles Scribner's  
Sons, New York. Price \$3.50.

One of the many unexplainable mysteries of our physical universe is undoubtedly the nature of gravitation. No satisfactory explanation has yet been offered why two material uncharged bodies attract across the vastness of interplanetary and perhaps interstellar space.

Isaac Newton appeared to have accepted that "action at a distance" was quite within reason, but modern physicists are inclined to doubt that material bodies could affect each other over a gulf of nothingness. To explain gravitation, and also the transference of radiation through space, the ether was invented; and for a full generation its existence has been a source of violent debate among scientists. Although Michelson and Morley, in their classical experiments on the velocity of light, seem to have effectively destroyed its possible existence, it has lived on, now in the author of the present volume to receive another champion.

Mr. Mackaye postulates three things: 1. That the Einstein relativity theory is only a "dimensional disguise" for Doppler effects. 2. All matter is only forms of radiation. 3. Gravitation is but a radiation effect.

The third principle which perhaps is characteristic of the other two is based on the belief that all space is pervaded with pressure-producing radiations. This is our so-called ether. The radiations are possibly shorter than anything we know and therefore pass through all matter as well as all space. But when they pass through matter their nature is changed somewhat—some of them losing part of their pressure-producing power when they are re-radiated. Now if there were only one material body in the universe, it would not be affected since radiations enter and leave it equally from all sides. But given two bodies, such as the earth and moon, between them will be formed



*New*  
**LIFE INSURANCE**  
**POLICY**  
*for 3½ CENTS A DAY*

A new life insurance policy that sells for less than 3½c a day up, depending on your age, is being featured by the Union Mutual Life Company, Des Moines, Iowa, that covers death from any cause and pays full benefits of

**\$1000.00 on Life!**

**\$5000.00 for Accidental Death**

**Full Coverage—Legal Reserve—Old Line Insurance**

With special Travel Accident features, loan values, disability benefits and paid-up cash insurance. A regular full coverage policy figured on net cost basis to policyholders eliminating agents' commissions and medical examinations.

**How We Do It!**

**Uncle Sam Is Your Agent**

This direct method eliminates about 60% of the ordinary selling expense on life insurance, which totalled the stupendous sum of \$603,538,769.87 last year. Think of this tremendous amount you help to pay agents, special license fees, etc., that is added to your life insurance premiums annually.

**Many Thousands of Policyholders . . . Millions of Insurance in Force**

Do not confuse this with cheap, small coverage policies. This is a regular old line full life policy backed by one of the strongest mutual life insurance companies in America under State and Federal Supervision. Thousands of people already have this protection totaling millions of insurance in force.

**No Medical Examination** whatever is required. You do not even have to pay a cent until you have thoroughly examined the policy. Simply send name, address, age on coupon below, and we will send complete information and sample policy. No agent will call—no red tape.

If you are not entirely satisfied after a thorough examination that it is the best and cheapest insurance you can buy, just return the policy and you owe nothing. Write today, using the coupon below.

**TEN DAYS' FREE INSPECTION—Mail This Coupon**

UNION MUTUAL LIFE COMPANY OF IOWA,  
Teachout Building, Des Moines, Iowa.

Box 218

Send me your new life insurance policy on 10 Days' Free Inspection. There is no obligation.

Name \_\_\_\_\_

Address \_\_\_\_\_

Age \_\_\_\_\_ Occupation \_\_\_\_\_

**CLASSIFIED ADVERTISEMENTS**

Advertisements in this section are inserted at the cost of ten cents per word for each insertion—name, initial and address each count as one word. Cash should accompany all classified advertisements unless placed by a recognized advertising agency. No less than ten words are accepted. Advertising for the July 1931 issue should be received not later than May 7th.

**DETECTIVES**

**DETECTIVES Earn Big Money.** Excellent opportunity. Experience unnecessary. Particulars Free. Write, George Wagner, 2190-B Broadway, N. Y.

**FORMULAS**

**MAKE AND SELL your own products.** We will furnish you any formulas. Write for our literature. Chemical Institute, 19S Park Place, New York, N. Y.

**HELP WANTED**

**POSITIONS on Ocean Liners;** Experience unnecessary. List of positions free. 292-G, Mt. Vernon, N. Y.

**MISCELLANEOUS**

**AGENCY desired for any works touching on obvious infinities of the universe.** F. L. Jones, G. P. O. Box 543, New York.

**PERSONAL**

**LONESOME FOLKS!** Dandy little ladies, desirable gentlemen, everywhere, will marry. Confidential, reliable. Particulars FREE. Mrs. Budd, Box 753-S, San Francisco, Calif.

**ESCAPE from your lonely existence.** Valuable information free. Write today. Box 128-M, Tiffin, Ohio.

**SWEETHEARTS—do you want one? Are you lonely?** Thousands everywhere awaiting your acquaintance. Sealed information FREE. Write today. Box 4707-S, San Francisco, Calif.

**PHOTOGRAPHY**

**PHOTO-ENLARGEMENTS AT HALF-PRICE —** 5 x 7—25c; 8 x 10—40c; 16 x 20—\$1.50 Glossy or dull finish. Other sizes proportionate prices. Send negative. Stamps accepted. Send for circular. Charles, 210 Chestnut St., Camden, N. J.

**SONG POEM WRITERS**

**SONG poem or melody writers—offer bonafide proposition.** Hibbeler, D153X, 2104 Keystone, Chicago.

**LADIES!** I positively guarantee my great Successful "Relief" Compound. Safely relieves some of the longest, most obstinate, abnormal cases in 3 to 5 days. No harm, pain or interference with work. Mail \$2.00; Double Strength, \$3.00. Booklet Free. Write today.

**DR. B. X. SOUTHLINGTON REMEDY CO.**  
Kansas City, Mo.

**LADIES!** When delayed use FAVORITE REGULATORS, get quick relief; regular \$2 double strength, with valuable directions, only \$1 for a limited time. Trial size 25c. MYCO, Dept. 103, 3235 South Benton, Kansas City, Mo.

**MARRY!** BIG illustrated Book with descriptions sent in plain wrapper for ten cents.

**BONAFIDE CO.,**  
Dept. 58, Kansas City, Mo.

**BOOK REVIEWS**

(Continued from Page 140)

a "low pressure" area and thus they will be forced together.

Looked at hastily, this theory is simplicity itself, and it begs for acceptance. Mr. Mackay determined however to indicate its universality by examining all that we know of atomic physics as well as the relativity principles in order to prove it conclusively. His book is technical without being mathematical and is evidently designed for the non-mathematical but scientifically trained reader. In brief it is a theoretical rather than a mathematical treatise. The principles he elaborates in order to find a unified conception of all energy manifestations should serve vitally to clarify the battles that have been raging in the world of physicists as to the nature of things. Meanwhile the book is cordially recommended as a somewhat revolutionary yet tenable conception of our universe.

**STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912.**

Of WONDER STORIES published monthly at New York, N. Y., for April 1, 1931.

State of New York

County of New York

Before me, a Notary Public, in and for the State and County aforesaid, personally appeared Irving Manheimer, who, having been duly sworn according to law, deposes and says that he is the Business Manager of WONDER STORIES, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher: Stellar Publishing Corporation, 98 Park Place, New York.

Editor: Hugo Gernsback, 98 Park Place, New York.  
Managing Editor: David Lasser, 98 Park Place, New York.  
Business Manager: Irving S. Manheimer, 98 Park Place, New York.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

Stellar Publishing Corporation, 98 Park Place, New York.  
Hugo Gernsback, 98 Park Place, New York.  
Sidney Gernsback, 98 Park Place, New York.  
D. Manheimer, 98 Park Place, New York.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.)  
None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is (This information is required from daily publications only.)

IRVING S. MANHEIMER.

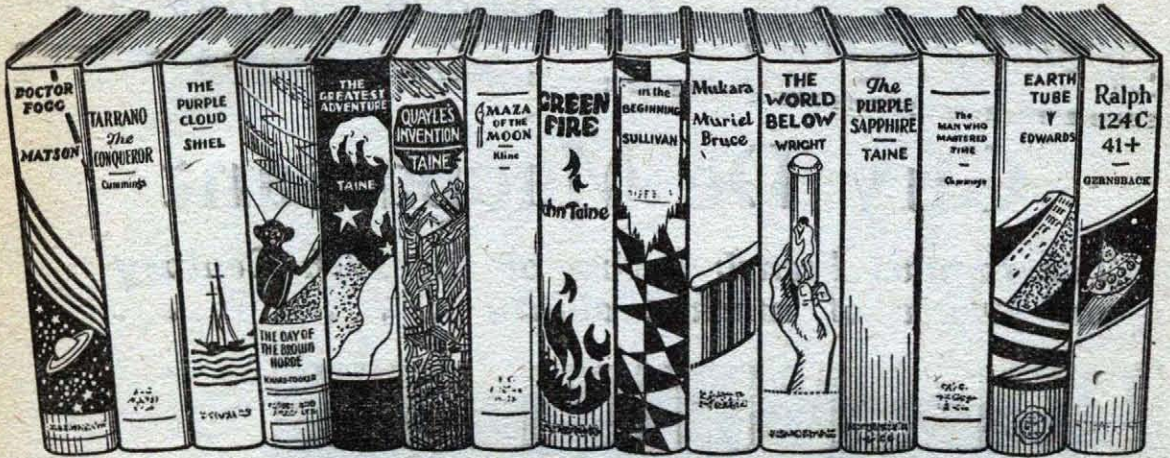
Sworn to and subscribed before me this 31st day of March, 1931.

MAURICE COYNE,  
Notary Public.

(My commission expires March 31, 1932.)



# NEW SCIENCE FICTION



WE present to the readers of WONDER STORIES the most complete selection of recent important science fiction. We have selected these books because they are the foremost of their kind today. There is such a great variety that it will satisfy any taste that any student of science fiction might have. We have no catalog and ask you to be kind enough to order direct from this page. Prompt shipments will be made. Remit by money order or certified check. If you send cash, be sure to register it. No C.O.D.'s. Books sent prepaid in U. S. A. Add postage for foreign countries.

**MUKARA**  
by Muriel Bruce, 275 pages, stiff cloth covers. Size 5 1/4 x 8. **\$2.50**  
Explorations into the unknown parts of our globe are revealing the most astonishing remains of ancient Civilization. On the basis of the notes of the Fawcett expedition, Bruce has constructed a most thrilling story of the meeting of our civilization with one whose strangeness, mystery and power over nature will astound you.

**TARRANO THE CONQUEROR**  
by Ray Cummings, 350 pages, stiff cloth covers. Size 5 x 7 1/2. **\$2.00**  
Mr. Cummings is a master of science fiction, and in this story he achieves the summit of his power. Interplanetary warfare rages through his dynamic pages, over continents and planets stalks the terrifying figure of Tarrano—the merciless. A story of the year 2400 A. D. but so realistic that you will live each page.

**THE WORLD BELOW**  
by S. Fowler Wright, 350 pages, stiff cloth covers. Size 5 x 7 1/2. **\$2.00**  
What could the man of today really do and accomplish if he were thrown into the world of 5,000,000 A. D.? What would he do when confronted with his own race incredibly aged? A richly imaginative novel, that will shake you from your seat and leave you breathless with wonder.

**GREEN FIRE**  
by John Taine, 300 pages, stiff cloth covers. Size 5 1/4 x 7 1/2. **\$2.00**  
Someone has been tampering with the universe. This is a powerful novel—intensely realistic, yet weird and fantastic—of two rival scientists who struggle to gain control of the terrible energy within the atom—one for good and one for evil.

**THE MAN WHO MASTERED TIME**  
by Ray Cummings, 350 pages, stiff cloth covers. Size 5 x 7 1/2. **\$2.00**  
20,000 years into the future sped the young adventurer, a thrill with the possibilities for glory and romance! But a world filled with turmoil, war, upheaval and strange hates and lusts met him. He went into an age of the unbelievable, almost the impossible.

**THE EARTH TUBE**  
by Gawain Edwards, 300 pages, stiff cloth covers. Size 5 1/4 x 7 1/2. **\$2.00**  
The popular author of "The Rescue" and "The Return from Jupiter" achieves another success in this powerful novel. A tube through the earth . . . an invincible army possessed of strange scientific weapons capturing South America. Mr. Edwards is a rising star on the horizon of science fiction, and in this volume he exceeds himself.

**THE DAY OF THE BROWN HORDE**  
by Richard Tooker, 300 pages, stiff cloth covers. Size 5 x 7 1/2. **\$2.50**  
The author, with an original conception goes back into the dim past of our earth to re-create what is unknown to us! With consummate skill he builds up the life of our primordial ancestor, prehistoric man. Mr. Tooker has achieved a triumph of the human imagination.

**THE PURPLE CLOUD**  
by M. P. Shiel, 300 pages, stiff cloth covers. Size 5 1/4 x 7 1/2. **\$2.50**  
The thrill and the danger of a trip to unknown portions of the globe for an enormous reward . . . madness creeping on desolate men . . . the return of one man to civilization to find he is the only living being on earth. A most astounding portrayal of a world catastrophe.

**DOCTOR FOGG**  
by Norman Matson, 165 pages, stiff cloth covers. Size 5 1/4 x 7 1/2. **\$2.00**  
Doctor Fogg has created a most astonishing invention, his sway extends to the furthest stars . . . he has created life . . . But a world filled with greed . . . envy . . . deadly curiosity burst down upon this harmless man to invade his life and fill his days with madness . . .

**MAZA OF THE MOON**  
by Otis Adelbert Kline, 340 pages, stiff cloth covers. Size 5 1/4 x 7 1/2. **\$2.00**  
The desire of all of us to find some living beings on the moon is answered in this story filled with thrills and startling adventures. Across the interplanetary spaces go our heroes to unknown, breathless experiences . . . to take part in interplanetary warfare . . .

**QUAYLE'S INVENTION**  
by John Taine, 450 pages, stiff cloth covers. Size 5 1/4 x 7 1/2. **\$2.00**  
"You are a menace to civilization," said the banker to young Quayle, and left the inventor to die upon the sun-scorched island. But with superhuman courage Quayle struggles against pitiless nature to return to civilization. There is also the secret of his invention, that can make the young man master of the planet. Science fiction of the most extraordinary nature.

**THE PURPLE SAPPHIRE**  
by John Taine, 325 pages, stiff cloth covers. Size 5 1/4 x 7 1/2. **\$2.00**  
From the depths of Thibet came the strange purple sapphires, jewels of startling value and great beauty. Into the heart of this unknown land in search of fabulous wealth went two men and a girl to the most unusual adventures that befel human beings.

**IN THE BEGINNING**  
by Alan Sullivan, 305 pages, stiff cloth covers. Size 5 1/4 x 7 1/2. **\$2.00**  
Adventures that outdo the famous "Mysterious Island" of Jules Verne. A million years have vanished over the heads of strange, bizarre creatures that our explorers find. A conflict between men of the 20th century and the Pleistocene men and women who speak in clucks and do not even know fire . . .

**THE GREATEST ADVENTURE**  
by John Taine, 250 pages, stiff cloth covers. Size 5 1/4 x 7 1/2. **\$2.50**  
A body of scientists are plunged into the most terrifying of adventures, into conflict with pitiless nature when she deems it time for a gigantic display of her power . . . truly a great adventure story.

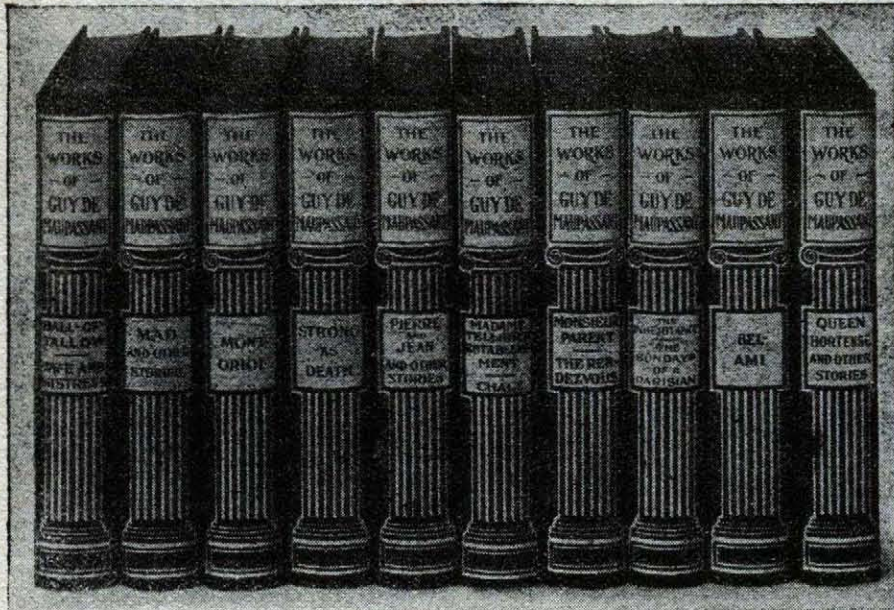
**RALPH 124C 41-**  
A Romance of the Year 2660 by Hugo Gernsback, 300 pages, illustrated, stiff cloth covers. Size 5 1/4 x 7 1/2. **\$2.00**

Not since the publication of the stories of Jules Verne has there appeared such a book. Mr. Gernsback, Editor of WONDER STORIES, with a keen insight into the progress of the world, has constructed a brilliant setting in the year 2660 for his romance. Ralph's tremendous battle through interplanetary space, with its tragedy and terror, and the use of the most incredible weapons, that will some day come true, make a classic of science fiction.

*Spend a Leisure Evening at Home with*

## Guy De Maupassant

*The famous French author of the 19th Century  
and writer of marked ability . . . . .*



TEN  
VOLUMES

### COMMENTARY

"By common consent De Maupassant has become first rank among the naturalistic school . . . . . The literary perfection of his work is undeniable . . . . . His tales . . . . . are so starkly true to life and the actors in them so accurately — and unblushingly — described that more once indignant protests assailed him. He remains and will remain a master of style, a man of the art of tale writing . . . . . The value of his work lies in his astonishing faith in reproduction of reality."

Professor F. O. deSumichrast,  
Harvard University

### MAIL COUPON TODAY!

Gernsback Publications, Inc. WS-631  
96-98 Park Place, New York, N. Y.

I enclose herewith remittance of \$5.95 (check or money order preferred) for which you are to send me immediately, postage prepaid, the Works of Guy De Maupassant in 10 Volumes.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

THE name of Guy De Maupassant carries great admiration for the famous writer of the 19th Century, and so much so that his works have grown more popular year after year. Today even the great public libraries cannot satisfy readers in demand for his great works. And among the personal libraries of many hundreds we find volumes of De Maupassant that are quite costly, in fact volumes that are cherished by proud owners.

As a courtesy to readers of WONDER STORIES, we offer a fine 10-Volume Set of the Works of Guy De Maupassant, sturdily bound in French blue holliston cloth. This new edition is printed in large readable type, illustrated and of standard book size. The front covers are embossed and the backbone of each volume in the set is stamped in silver; each book is guaranteed to be perfect and carefully covered with a dust wrapper in attractive design.

As the supply of these books does not exceed but a few hundred sets or so, we suggest that our readers take advantage of the extremely low price of \$5.95, and promptly purchase the 10-Volume Set of the works of Guy De Maupassant. These books are now ready for shipment; orders are filled immediately so the books will reach you in a few days. Use the Coupon at the left for convenience in sending your order—*mail it today.*

# The Gambler

He gambles that a "lucky break" will come to him in the course of time

**M**OST men live in the HOPE that their "lucky break" will come TOMORROW or NEXT WEEK or NEXT YEAR. They gamble that FATE, some day, some way, will make them rich! They risk their whole lives on what may COME to them in the course of TIME.

This is a WORSE form of GAMBLING than gambling for MONEY with a card sharp or a "three shell game" expert.

Gambling on what TIME and FATE have in store for you is more costly than any other form of gambling known.

You lose MORE than money. You lose your SELF-RESPECT. You lose the self-respect of those about you.

And as each year passes your CHANCE to amount to anything becomes slimmer and slimmer.

You get discouraged. You begin to feel that fate is AGAINST you. You complain secretly about your ill luck. Perhaps you hide your shortcomings behind a whole flock of easy EXCUSES.

But the hard, cold world doesn't care about you.

You've got to look out for YOURSELF.

Time alone cannot help you. If it could, EVERY man over 70 would be rich.

You cannot COUNT on luck or fate or circumstances. If you could, EVERYBODY would get rich at some time or other.

Your life is too precious to waste away WAITING for "something to turn up."

There's ONE SURE WAY—yes, ONLY one sure way—to get what you want out of life.

Nothing can help you but your own BRAIN. Make your brain just a little bit more effective and you will MULTIPLY your earning power.

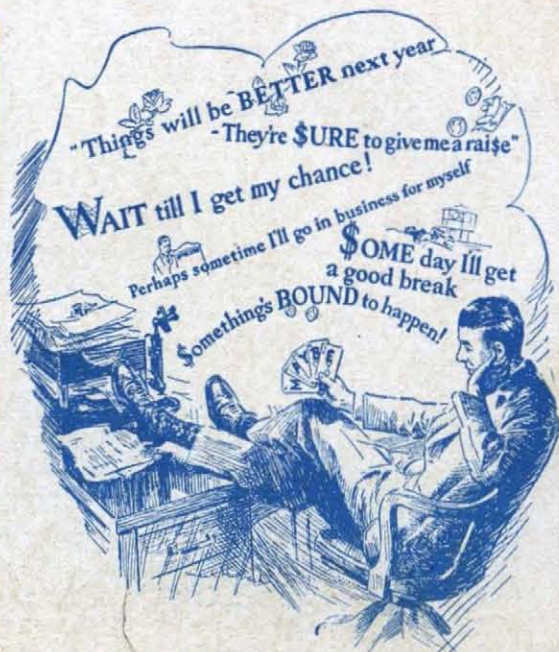
There is NO LIMIT to what the human brain can accomplish. Scientists and psychologists tell us we use only about TEN PER CENT of our brain power. Ninety per cent is unused. It lies dormant. The longer it is unused, the harder it becomes for us to use it. For the mind is like a muscle. It grows in power through exercise and use. It weakens and deteriorates with idleness.

What can you DO about it? That is the question you are asking yourself. Here is a suggestion.

Spend 2c for a postage stamp. Send in the coupon below for a copy of "Scientific Mind Training." There is no further obligation whatever. You need not spend another penny.

Read this little book. It has opened the eyes of hundreds of thousands of other individuals who had the same problems you have. Over 700,000 people, in all parts of the world, and in all walks of life have followed the advice given in this booklet. Lords and servants, princes and laborers, captains of industry and clerks, bookkeepers and bankers, men AND WOMEN of all types and of all ages have read this book and have changed their whole scheme of existence as a result.

This little book will tell you the secret of self-confidence, of a strong will, of a powerful memory, of unflagging concentration. It tells you how to acquire directive powers, how to train your imagination (the greatest force in the world), how to make quick, accurate decisions, how to reason logically—in short, how to make your brain an instrument of all-around POWER. It tells you how to banish the negative qualities like forgetfulness, brain fog,



inertia, indecision, self-consciousness, lack of ideas, mind wandering, lack of system, procrastination, timidity.

Men like Judge Ben B. Lindsey, Sir Harry Lauder, Prince Charles of Sweden, Jerome K. Jerome, the famous novelist; Frank P. Walsh, Chairman of the National War Labor Board, and hundreds of others equally famous, praise the simple method of increasing brain power and thought power described in this free book. OVER 700,000 OTHERS PRAISE IT.

You have only TWO CENTS to lose by writing for your copy. You may GAIN thousands of dollars, peace of mind, happiness, independence!

Thousands who read this announcement will DO NOTHING about it. The effort and the will needed to send for this book—which is FREE—may be lacking. How can these people EVER gain what they hope for, crave for? They are the skeptics, the doubters, the "show me" wisecracks.

Other thousands will say, "I can lose only TWO CENTS. I may GAIN a great deal by reading 'Scientific Mind Training.' I will send for it NOW. It promises too much for me to RISK MISSING."

The thousands who are open minded—who are willing to learn something to their advantage—will ACT on their impulse to send the coupon. They will be better, stronger minded for having TAKEN SOME ACTION about their lives, even if they do nothing more than to READ a booklet about the inner workings of the mind. For your own sake—and for the sake of your loved ones, don't continue to GAMBLE that your future will be bright whether or not you DO anything about it! Mail the coupon today—NOW.

## THE PELMAN INSTITUTE OF AMERICA

Suite 2256, 71 West 45th Street, New York City  
Offices in London, Paris, Stockholm,  
Delhi, Durban and Melbourne

The Pelman Institute of America  
Suite 2256, 71 West 45th Street,  
New York City

Please send me without obligation your free booklet, "Scientific Mind Training." This does not place me under any obligation and no salesman is to call on me.

Name .....

Address .....

City .....

State .....

# TWICE AS EASY

to become a popular musician this simple home-study way

**D**OES the very thought of harsh-sounding scales—compulsory practice and impatient teachers put a damper on your ambition to become a popular musician?

With such excuses as—"It takes too long"—"It costs too much"—"I don't know the first thing about music"—are you alibiing yourself right out of good times and a highly enjoyable attainment?

## You're the Boss

You'd take up music in a minute, wouldn't you—if you thought there was a way of learning that made every lesson easy—that allowed you to study when, where and as much or as little as you please—that encouraged rapid progress—that did not cost too much?

All right. Such a method is far from being imaginary. It is so real that inside of a few short months you can learn to play your favorite instrument. Without taking lessons from a teacher! Without paying expensive fees! Without any tiresome technique to struggle through!

Thank the U. S. School of Music for the utter simplicity of this remarkable system. It removed completely the difficulty, boredom and extravagance from music lessons. Now to begin your musical career you don't even have to know "do" from "re" or a sharp from a flat.

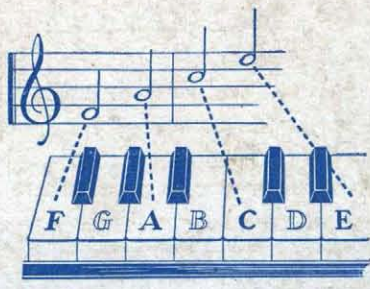
Your own home is your studio. The lessons come to you by mail. They consist of complete printed instructions, diagrams . . . and all the music you need without extra charge.

A sheet of music is not a riddle to you. You never have to guess what's right or wrong—you know! First you are told how a thing is done. Then a picture shows you how, then you do it yourself and hear it. Small wonder it's twice as easy as old-fashioned private teacher method.

## Play Your Favorites

Instead of just scales you are playing real

tunes from actual notes — right from the very first lesson on. Sooner than you realize you will be bringing cheer to the folks at home with your playing. Gradually you gain confidence and professional expression. Then parties, popularity, orchestra work follow in short order. You'll know how good it feels to



be out of the wallflower class and into the whirl of things.

Don't be afraid to begin your lessons at once. Over 600,000 people learned to play this modern way—and found it easy as A-B-C. Forget that old-fashioned idea that you need special "talent." Just read the list of instruments in the panel, decide which one you want to play, and the U. S. School will do the rest. And bear in mind no matter which instrument you choose, the cost in each case will average the same—just a few cents a day.

## Free Book and Demonstration Lesson

Our wonderful illustrated Free Book and Free Demonstration Lesson explain all about this remarkable method. They prove just how anyone can learn to play his favorite instrument in half the time and for just a fraction of what old slow methods cost.

If you really want to learn to play—if social popularity, and increased income appeal to you—take this opportunity to make your dreams come true. Now! Sign the coupon and send it in before it's too late. Instruments supplied when needed, cash or credit. U. S. School of Music, 506 Brunswick Bldg., New York City.

**U. S. SCHOOL OF MUSIC,**  
506 Brunswick Building, New York City

Please send me your free book, "Music Lessons in Your Own Home," with introduction by Dr. Frank Crane, Free Demonstration Lesson, and particulars of your easy payment plan. I am interested in the following courses—

Have you instrument?

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

### What Instrument for you?

Piano	Piccolo
Organ	Hawaiian
Violin	Steel
Clarinet	Guitar
Flute	Drums and
Harp	Traps
Cornet	Mandolin
Cello	Sight Singing
Guitar	Trombone
Ukulele	Piano
Saxophone	Accordion
Banjo (Plectrum, 5-String or Tenor)	
Voice and Speech Culture	
Automatic Finger Control	
Italian and German	
Harmony and Composition	
Juniors' Piano Course	