MARCH

25 CENTS
IN CANADA 30 CENTS

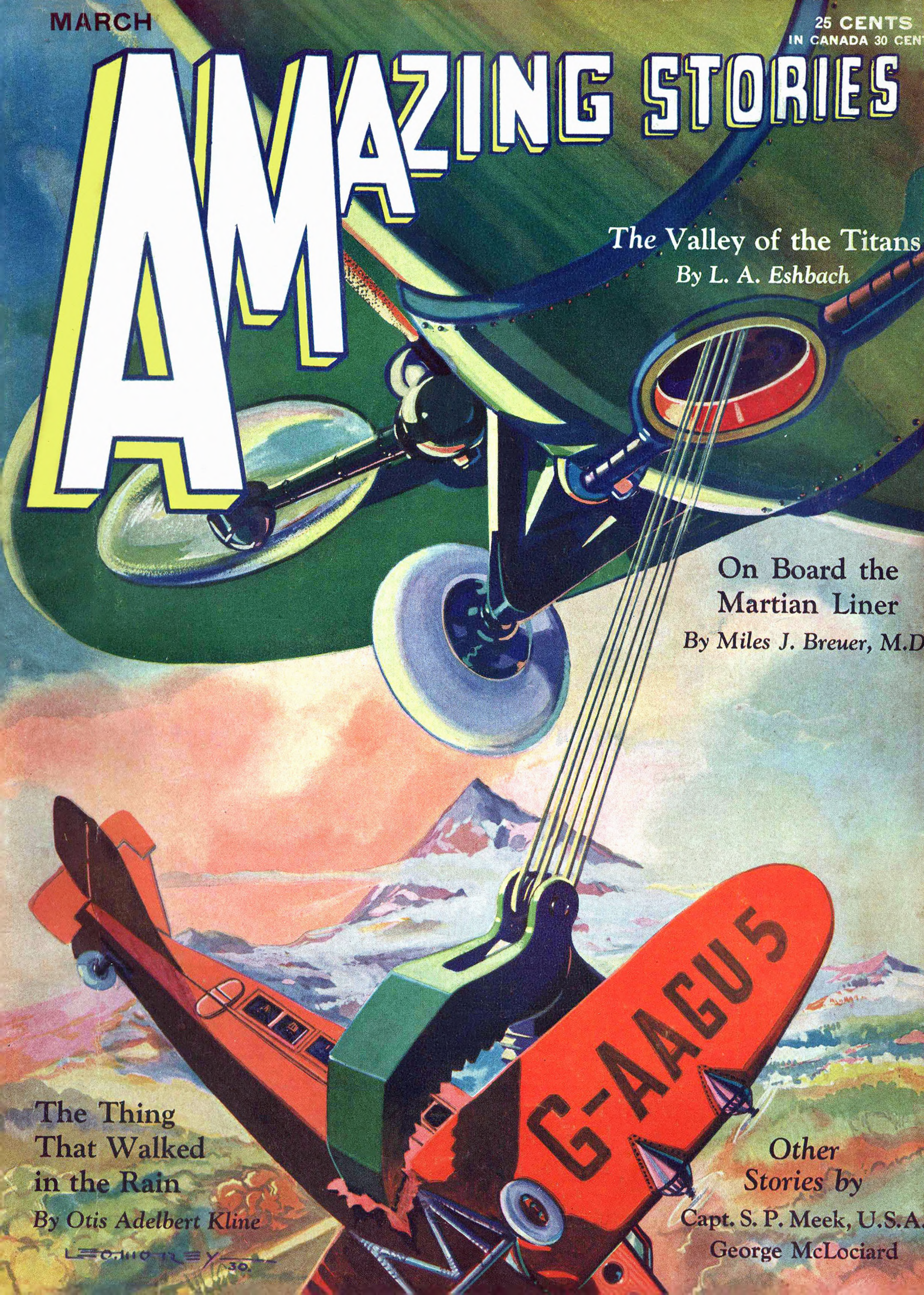
AMAZING STORIES

The Valley of the Titans
By L. A. Eshbach

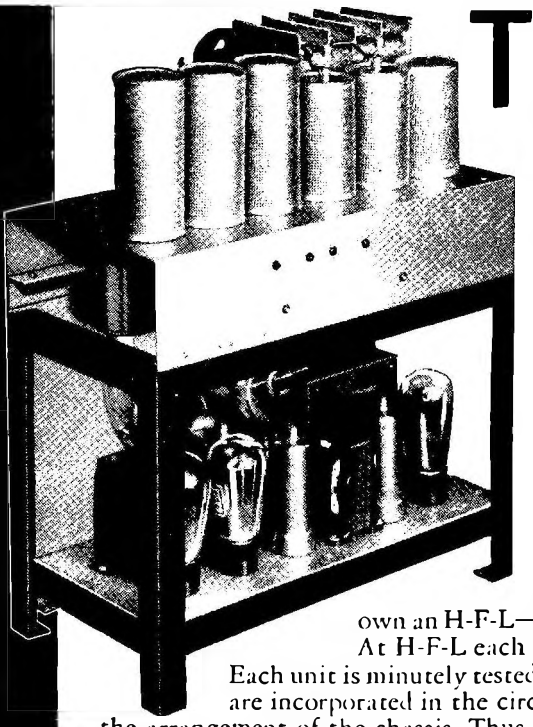
On Board the Martian Liner
By Miles J. Breuer, M.D.

The Thing That Walked in the Rain
By Otis Adelbert Kline

Other Stories by
Capt. S. P. Meek, U.S.A.
George McLociard



NEW IN EVERY WAY



The Difference is in the Making!

The Advantage is Yours the H-F-L Way

The fine things are always hand made. This is especially true in radio. The art advances so fast, that huge factory-set-ups for mass manufacture cannot keep pace. Only a few may ever own an H-F-L—such quality receivers cannot be built in quantity. At H-F-L each receiver is hand made to the precision of a watch. Each unit is minutely tested before inclusion in the set. The latest discoveries are incorporated in the circuits. The most advanced designs are followed in the arrangement of the chassis. Thus, your H-F-L receiver gives you all that radio has to offer. Buy H-F-L in these great expectations—you will not be disappointed!

THE LITTLE GIANT MASTERTONE

MAKES ITS FIRST BOW TO FAME IN THE FIELD OF FINE RADIO

HOPKINS BAND REJECTOR SYSTEM

Entirely new! New in circuit arrangement—new in chassis design. America's outstanding builders of fine radio now produce a supremely fine low-priced superheterodyne receiver for everybody.

A real sensation is this set. It challenges all comparison. Quick as a flash, it falls into tune with the station selected. With microscopic fineness, it accepts that signal to the exclusion of everything else in the air. Even background noises cannot creep in. With bounding power, it reaches to the outposts of the world in its reception range. With enrapturing tone, it transports you to new heights of musical enjoyment. New miracles of this wizard-like art are brought to produce an entirely new superlative performance. Yet, all this you get at surprisingly low cost. No more to spend than for ordinary radio!

Sensational New Circuit!

To combine 10-kilocycle selectivity with beautiful tone quality has been the dream of every radio engineer. But, not until the perfection of the Hopkins Band Rejection System was this possible. Now in the Mastertone this is accomplished. Far away stations, on bands adjacent to powerful locals, are brought in with clarity, volume and full strength. No compromising of tonal reproduction by side band clipping. Tune to the station desired and *all* the energy in that channel is accepted and reproduced. All adjacent stations are entirely avoided. Reception is *precise*, *definite*, unhampered! The Hopkins Band Rejector System is exclusive with H-F-L and is found in no other receivers.

WORLD WIDE RECEPTION POWER

Extreme Selectivity

The full value of screen grid tubes brought to perfection. Reach out to the far corners of the earth for unforced, clear-as-a-bell reception. The sensitivity is greater than 1 micro-volt per meter—*all over the dial*. This sensational circuit arrangement always provides the reliable 10-kilocycle separation at all volumes—high or low, at all wave lengths, on local or far distant stations.

Single-Unit Chassis

A cascaded, one-unit chassis of great ruggedness. Built like a skyscraper of steel and aluminum. The dynamic speaker is integral with the chassis. All delicate parts enclosed and protected from accidental injury. All units securely anchored so that after years of use it still functions perfectly. Very compact, measuring only 21 inches high, 16 inches wide and 8 inches deep. Ideal for use in consolette or for inbuilding in the wall.

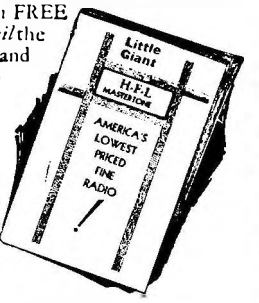
Beautiful Console Model

This wonder receiver is now available in a modern, walnut console in striking design. Neat, compact, but a fitting companion to the finest furnishings the home might have. And, best of all, it comes at a price lower than the market has ever offered. Here we have a complete, ultra powerful, beautiful tone superheterodyne receiver at a cost even less than must be paid for an ordinary trf set when secured through the usual channels.

SINGLE UNIT CHASSIS

Write for Whole Story

Learn how you can test this record-breaking, sensational new receiver and see and hear for yourself. Know the amazing price. Find out about the great new circuit embodied in it. Hear the enthusiastic praise of those who have already tuned it! All this will be brought to you in a little Brochure which will be be sent to you FREE on request. *Mail* the Coupon now and soon begin to enjoy radio in all its possibilities.



DEALERS: Write for Special H-F-L Franchise.

10 KC STATION SEPARATION

HIGH FREQUENCY LABORATORIES
Dept. A-231, 3900 No. Claremont Ave.
CHICAGO

AMERICA'S LOWEST PRICED FINE RADIO

H « F « L

LITTLE GIANT
« MASTERTONE »
A Super-Heterodyne
WITH THE HOPKINS BAND REJECTOR SYSTEM

High Frequency Laboratories, Dept. A-231,
3900 No. Claremont Ave., Chicago, Ill.

Without cost or obligation to me, please send me a copy of your new Brochure describing the New Little Giant Mastertone and your liberal selling policy.

Name .....

Address .....

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

MEN!

Get Your Copy of My *New* Book

It shows You

How to get a good job in the Radio Industry

Hundreds of Jobs paying $50, $60, $75, $100 a week are opening in Radio every year.

I showed these men how to get *Big Pay* jobs like *these*

If you are earning a penny less than $50 a week, send for my book of information on opportunities in Radio. It is free. Radio's amazing growth is making hundreds of fine jobs every year. My book shows you where these jobs are, what they pay, how I can train you at home in your spare time to be a Radio Expert.

Seldom Under $100 a Week

"My earnings in Radio are many times bigger than I ever expected they would be when I enrolled. In November I made $577, December $645, January $465. My earnings seldom fall under $100 a week. I merely mention this to give you some idea of what a Radio man can do who has the training."

E. E. WINBORNE,
1614 W. 48th St., Norfolk, Va.

$3000 a Year in Own Business

"I cannot give N. R. I. too much credit for what I have been able to do in Radio. I can safely say that I averaged $3000 a year for the past three years. I am in the Radio business here. Any man who really wants to advance cannot go wrong in Radio. There is certainly a lack of trained men."

FRED A. NICHOLS,
P. O. Box 207, Eaton, Colo.

You have many Jobs to choose from

Broadcasting stations use engineers, operators, station managers and pay $1,800 to $5,000 a year. Manufacturers continually need testers, inspectors, foremen, engineers, service men, buyers for jobs paying up to $15,000 a year. Shipping companies use hundreds of operators, give them world-wide travel with practically no expense and $85 to $200 a month besides. Dealers and jobbers (there are over 35,000) are always on the lookout for good service men, salesmen, buyers, managers and pay $30 to $100 a week for good men. Talking Movies pay as much as $75 to $200 a week to men with Radio training. There are openings almost everywhere to have a spare time or full time Radio business of your own—to be your own boss. Radio offers many other opportunities. My book tells you about them. Be sure to get it at once.

My New 8 Outfits of Parts give you extensive Practical Radio Experience

With me you not only get the theory of Radio—you also get practical Radio experience while learning. You can build over 100 circuits—build and experiment with the circuits used in Atwater-Kent, Majestic, Crosley, Eveready, Stewart-Warner, Philco, and many other sets. These experiments include A. C. and screen grid sets, push pull amplification and other late features. When you finish my course you won't need to take "any old job" just to get experience—you will be trained and experienced ready to take your place alongside men who have been in the field for years.

Back view of 5-tube A. C. screen grid tuned Radio frequency set—only one of many circuits you can build with the parts I give without extra charge.

I Will Train You at Home in Your Spare Time

Hold your job until you are ready for another. No need to leave home. All I ask is part of your spare time. I have doubled and tripled the salaries of hundreds through my practical home-study training. You don't have to be a high school or college graduate. My course is written in easy, simple terms that most anyone can understand.

My course includes Talking Movies, Wired Radio, Television

My course is up-to-date with Radio's latest uses and improvements. It includes Radio's application to Talking Movies, Television and home Television experiments, Wired Radio, Radio's use in Aviation, in addition to fitting you for many other lines. When you finish you won't be a "one job" man. You will be trained for many jobs.

Money Back If Not Satisfied

I will agree in writing to refund every penny of your tuition if you are not satisfied with my Lesson Texts and Instruction Service when you have finished my course. This agreement is backed by the Pioneer and World's Largest organization devoted entirely to training men and young men for good jobs in the Radio industry, by correspondence.

Find out what Radio offers you Get My Book

This book gives you the facts on Radio's opportunities and the many features and services of N.R.I. training. It gives you 100 letters from actual students who have proved that my methods are successful. Get your copy today. There is no obligation.

J. E. SMITH, President,
National Radio Institute, Dept. ICS.
Washington, D. C.

THIS COUPON IS GOOD FOR ONE *FREE* COPY OF MY NEW BOOK — mail it NOW

J. E. SMITH, *President*
National Radio Institute, Dept. ICS.
Washington, D. C.

DEAR MR. SMITH:—Send me your book. I want to see what Radio offers and what you offer in Radio training. This request does not obligate me in any way.

Name.....

Address.....

City.....*State*.....

Lifetime Employment Service to all Graduates

General view of one section of our Service Department, showing students doing actual work on various Radio Receivers

LEARN RADIO-TELEVISION

NOT By BOOKS Or CORRESPONDENCE-By

Don't spend your life slaving away in some dull, hopeless job! Don't be satisfied to work for a mere $20 or $30 a week. Let me show you how to make **real money in Radio**—the fastest-growing, biggest **Money-Making Game on earth!**

Thousands of Jobs Open
Paying $60, $70 to $200 a Week

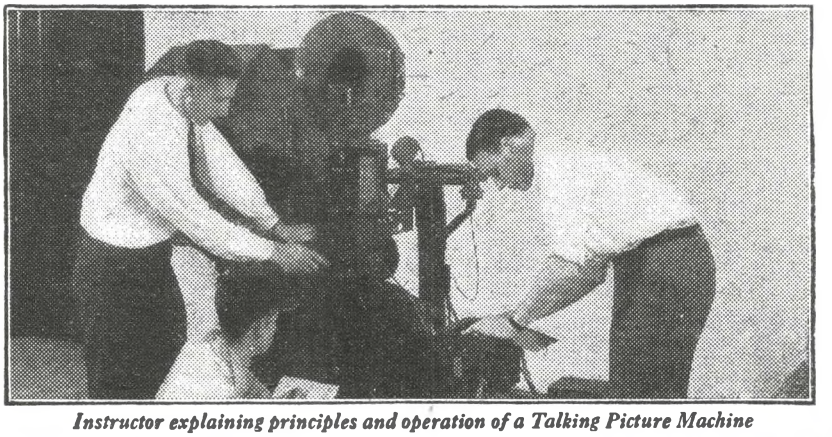
Jobs as Designer, Inspector and Tester paying $3,000 to $10,000 a year—as Radio Salesman and in Service and Installation Work, at $45 to $100 a week—as Operator or Manager of a Broadcasting Station at $1,800 to $5,000 a year—as Wireless Operator on a Ship or Airplane, as a Talking Picture or Sound Expert—THOUSANDS of JOBS PAYING $60, $70 and on up to $200 A WEEK!

NO BOOKS .. NO LESSONS
All Practical Work

Coyne is NOT a Correspondence School. We don't attempt to teach you from books or lessons. We train you on the finest outlay of Radio, Television and Sound equipment in any school—on scores of modern Radio Receivers, huge Broadcasting equipment, the very latest Television apparatus, Talking Picture and Sound Reproduction equipment, Code Practice equipment, etc. You don't need advanced education or previous experience. We give you—**right here in the Coyne shops**—all the actual practice and experience you'll need. And because we cut out all useless theory, you graduate as a Practical Radio Expert **in 8 weeks' time.**

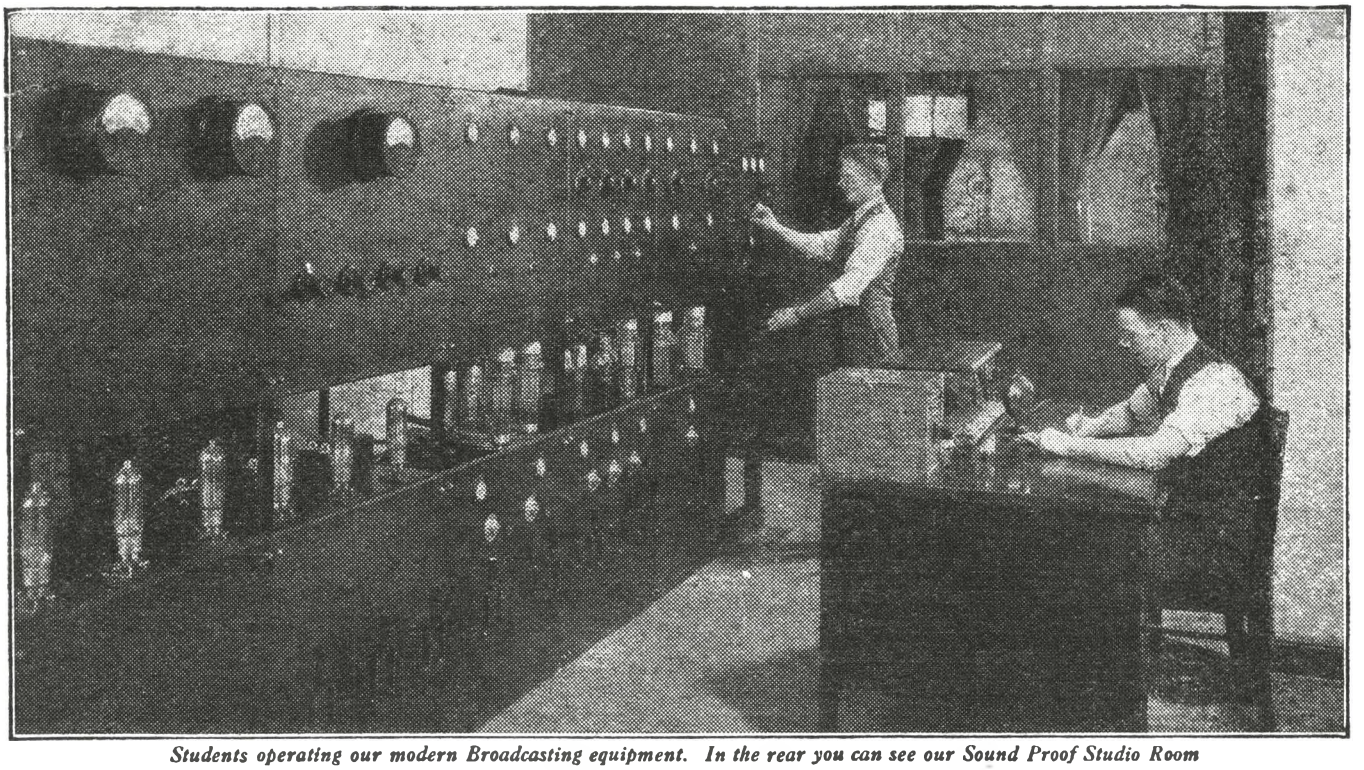
TELEVISION
IS ON THE WAY!

And now Television is on the way! Soon there'll be a demand for **Thousands of Television Experts!** The man who learns Television now



Instructor explaining principles and operation of a Talking Picture Machine

MAIL COUPON ON OPPOSITE PAGE



Students operating our modern Broadcasting equipment. In the rear you can see our Sound Proof Studio Room

TALKING PICTURES in 8 WEEKS

Actual Work-In the Great Shops of Coyne

can make a FORTUNE in this great new field. Get in on the ground floor in this amazing new Radio development! Come to COYNE and learn Television on the very latest Television equipment.

Talking Pictures -- A Great Field

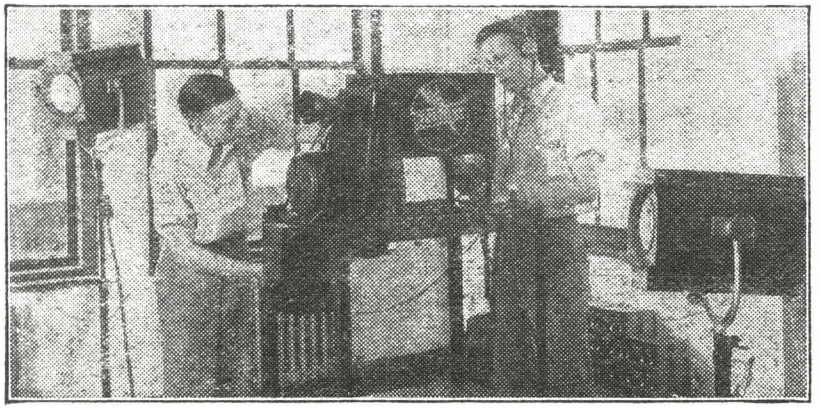
Talking Pictures and Public Address Systems offer thousands of golden opportunities to the Trained Radio Man. Here is a great new field of Radio work that has just started to grow! Prepare **now** for these marvelous opportunities! Learn Radio Sound work at Coyne on actual Talking Picture and Sound Reproduction equipment.

EARN AS YOU LEARN

Don't worry about a job! **Coyne Training settles the job question for life.** We often have more calls for Coyne Graduates than we can supply. **You Get Free Employment Service For Life.** And don't let lack of money stop you. If you need part-time work while at school to help pay living expenses, we will gladly help you get it. Many of our students pay nearly all of their expenses that way.

COYNE IS 32 YEARS OLD

Coyne Training is tested, **proven beyond all doubt.** You can find out everything **absolutely free.** How you can get a good Radio job or how you can go into business for yourself and earn from $3,000 to $15,000 a year. It costs **nothing** to investigate! Just **mail** the coupon for your copy of my big Free book!



Students operating and adjusting our modern Television Transmitting equipment

FOR BIG FREE BOOK

H. C. Lewis, Pres. **RADIO DIVISION** Founded 1899

COYNE ELECTRICAL SCHOOL

500 S. Paulina St., Dept. 31-8C, Chicago, Illinois

H. C. LEWIS, President
Radio Div. Coyne Electrical School
500 S. Paulina St., Dept. 31-8C, 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* .....

JULES VERNE'S TOMBSTONE AT AMIENS PORTRAYING HIS IMMORTALITY

AMAZING STORIES

Scientific Fiction

Vol. 5 **March, 1931** **No. 12**

In Our Next Issue

ACROSS THE VOID, by Leslie F. Stone. Once more this author comes forward with a tale of rare value in the field of scientific fiction. Many months ago, in her story, "Out of the Void," we got startling news from a distant planet, of which we of the earth had known nothing. Now, in this new, novel-length serial, we get the thrilling sequel, telling of the extraordinary adventures of the earth people, who had gone with the strange visitor from Abrui, to his planet. Better written and more thrilling than anything she had done thus far, is "Across the Void." Do not miss the first instalment which appears in the next issue.

THE AMBIDEXTER, by David H. Keller, M.D. Obviously, even eminent surgeons of international fame are not immune to the tendency toward revenge. How another famous surgeon, in his supreme hour of need, trusts himself implicitly to this world-known colleague, and with what subtly drastic results, is exquisitely told by Dr. Keller in this extraordinary short story, in which, incidentally, the famous Detective Taine is once more introduced.

THE LAUGHING DEATH, by Stephen G. Hale. If an atom contains an almost limitless amount of energy, which, under the proper control, would yield enormous constructive power, what devastating destruction could such atomic energy, uncontrolled, exercise! Mr. Hale shows definite individuality of style in his writing, and he is, in our humble opinion, a real find for AMAZING STORIES. He not only knows his science, but he has the ability, also, of weaving an absorbing tale around his scientific subject.

COSMIC POWER, by J. C. Dare. In the struggle for supremacy between money and science, to whom would go the spoils? This short story by our new author contains plenty of science, and is exceedingly entertaining besides. It was crowded out of a previous issue.

Other unusual scientific fiction.

In Our March Issue

Our Cover

this month depicts a scene from the story entitled, "The Valley of Titans," by L. A. Eshbach, in which the hero's plane is suddenly caught in the iron clutch of the mysterious helicopter, which incident later explains the many mysterious disappearances of other planes carrying detectives.

Cover Illustration by MOREY

Published monthly by Radio-Science Publications, Inc., at 184-10 Jamaica Avenue, Jamaica, N. Y.
W. Z. Shafer, Pres. Byrd D. Wise, Sec'y Laurence A. Smith, Treas.
Guy L. Harrington, Vice-Pres.

Price 25c a copy; subscription $2.50 a year in U. S. A., $3.00 a year in Canada, $3.50 in all foreign countries.
Entered as second-class matter at Jamaica, N. Y., under act of March 3, 1879.
We cannot be responsible for lost manuscripts, although every care is taken for their safety.
Editorial and Executive Offices, 381 Fourth Avenue, New York City.

VOLUME 5

AMAZING STORIES

THE MAGAZINE OF SCIENTIFICTION

MARCH, 1931 No. 12

T. O'CONOR SLOANE, Ph.D., *Editor*
MIRIAM BOURNE, *Managing Editor*
WILBUR C. WHITEHEAD, *Literary Editor* C. A. BRANDT, *Literary Editor*
Editorial and General Offices: 381 Fourth Avenue, New York, N. Y.

Extravagant Fiction Today - - - - - - - - - - Cold Fact Tomorrow

Weight in Chemistry

By T. O'Conor Sloane, Ph.D.

CHEMISTRY as a science came into being when Lavoisier found that it was subject to additive laws, just as truly as are ordinary substances. It was based upon relative weights as given by the beam balance. On a spring balance a pound at the equator acted on by centrifugal force due to the earth's rotation and at the greatest distance from the center of the earth weighs less than it would at the poles where there is no centrifugal force and where it is several miles nearer the earth's center. Weight on which so much depends is a variable quantity. A ton of coal would weigh less in Florida than in Canada. It is a curiosity of science that so much of it depends upon a varying unit, the factor of weight.

We know that this uncertain unit has proved a satisfactory basis for the most fundamental conceptions of science. The reason that it has provided this basis is hinted at above. The spring balance was not accepted as a scientific weighing apparatus. It would vary in its readings nearly one-half of one percent between pole and equator. It would give one reading on the top of a mountain and another at the sea level.

The beam balance comprising a beam free to oscillate on a "knife edge" as it is called, with one pan for the weights and the other for the substance to be weighed completely eliminates the inaccuracy due to varying gravity and centrifugal force. The weights on one pan of the balance and the substance on the other, are equally affected by gravity variations, so that when the weights are determined they give the relative masses or quantities.

One great thing required in natural science is the relative mass of things—the relation of a quantity to the standard or basis of weights.

If one turns to an unabridged dictionary or to an encyclopaedia, he will find an astonishingly long list of standard weights, those of the different countries of the world. But the standard weight, as accepted by the great nations of Europe and as accepted with reservations on this continent also, is the gram, which is the weight or is supposed to be the weight of a cube of water of definite size. It is one centimeter in length on each edge.

Some years after the French Revolution, the powers that be undertook to reform the basis of measurement and in order to get the basic measure of length they selected one ten millionth of the length of the meridian quadrant of the earth reaching from the pole to the equator. The scientists set to work and measured an arc of the surface of the earth on the meridian. But the measurement turned out not to be exactly right, so we have to consider the meter as an arbitrary length based on standard meters in various places, Paris, London and others. One hundredth of the length of the meter was taken to represent the length of the edge of a cube and a cube with this length of edge was the ten thousandth part of a cubic meter, and the weight of this volume of water was taken as the gram.

In everyday chemical analysis the work is done upon a gram of substance or thereabouts. For more complicated and more accurate determinations, five, or even ten times this weight may be taken for the analysis. The weighing is carried down in ordinary work to a tenth of the milligram. Thus the chemist weighs down to one ten-thousandth part of his sample of analysis.

If we once had a natural unit instead of the erroneous meter, then accuracy in all directions would follow, but we are now so tightly bound to an inaccurate unit standard, namely the meter, with all the units derived from it, that we can do nothing to change things.

The length of light waves can be determined with great accuracy and in determining the number of light waves for any line of the spectrum, such as the sodium line, we at once have a natural check upon the whole system of weights and measures. Thus while we have to say that the meter is the distance between two lines upon bars of metal preserved by the Bureaus of Standards of different countries, we have the wave length of sodium light as the original standard with which to fix the length of the true meter. We appear therefore to be not so badly off as might at first sight appear because by appealing to the spectrum we can get a unit of length based on a true factor of nature.

This factor of nature is the wave length of light lying in a definite part of the spectrum.

This little cube of water, smaller than an ordinary backgammon die, seems a very small quantity, but as we have seen the chemist weighs down to the ten thousandth of this weight in everyday analytical work, and in very accurate work the weight is frequently carried down to the one hundred thousandth of the same gram. The clue to the universal use of weight units in chemistry which as we have seen properly speaking are not units at all, because they vary with the latitude, is found in the fact that they give directly the relative quantities of substances, and it is on such quantities that so much in science is based.

If we go from chemistry into the astronomical field we again are told of weights. The fact that astronomers use the term weight and units of weight in presenting to us the mass of celestial bodies, emphasizes the fact that the term weight is used to express the relations of bodies to each other. For if we take the definition of weight as mass acted on by the gravity of the earth we will see how absurd it is, on the face of it, to say that a celestial body has weight. But as a matter of convenience weight units are employed and give us the relative masses of bodies.

All that has been said here is of course in the domain of what are sometimes called classic physics and chemistry, and is entirely removed from relativity and its doctrines. Perhaps it is a blessing that in ordinary investigations we can use the familiar bases and factors of "classic" science.

The Valley of Titans

By L. A. Eshbach

Author of "A Voice from the Ether"

MANY phases of abnormal development of mankind are due to the ductless glands, and it is more or less well known that we have in our power the possibility of creating giants or dwarfs. It could hardly be said that the possibilities stop there. It might be equally likely that some time some means could be found, through the glands, to create sages, or the reverse. For ordinarily what can be accomplished in one direction might just as easily, and with just as great success, be done directly in the opposite. And what might actually be done, following up this line of action, is beyond the reasonableness of any stated fact. We simply cannot tell. In this beautifully written story, that is so reminiscent of "The Moon Pool" and "The Metal Emperor," our author gives us much food for thought and a deal of entertainment.

CHAPTER I

Into the Hidden Valley

IN clearing up the mystery that had almost demoralized England's aviation forces in India I owe my success to a thunderstorm. If Nature had delayed the unleashing of the tempest for five minutes, or if my plane had moved a few hundred feet farther, the affair might still be shrouded in mystery, aviators might still be disappearing, and the story of the hidden valley might never have been made known. But, regardless of what might have been, the fact remains that my plane was caught by a demon gale, and was hurled over miles of towering mountains, and was placed in—but that is the story.

The storm had come upon me unheralded, or rather I had suddenly entered the storm in my flight. There was a curious fading of the sunlight, a falling of a gloom like that of dusk, and a sudden cooling of the air. Then I saw a gigantic cumulus cloud speeding toward me from the north—and the tempest broke in all its fury.

A bolt of lightning cut the clouds like a knife, accompanied by a sullen roar of thunder that drowned the drone of the plane's motor. Torrents of chilling rain fell in swirling walls of water that beat a deafening tattoo upon the wings.

So merciless was the storm, that in a very few moments I sat in the plane in a daze. Incessantly I was being cuffed this way, whirled that, as though tossed by the hand of an invisible giant. Amid eddies and vortexes I pitched and spun, in the grip of a cyclone that seemed to be a living thing, possessed of a diabolic cunning.

Suddenly the plane took a terrifying dip, turning end over end. Then it whirled upward, spinning like a top. "This is the end of Jimmie Newton," I thought. I dared not try to control the machine with either rudder or joystick, lest I snap one or both controls, thus disabling the phone entirely. I was utterly helpless.

Flash after flash of lightning played about the plane; momentarily I expected one of the bolts to strike the machine, and fill the cockpit with a mass of charred flesh. I was blinded by the glare around me; was deaf-

The beings that bore Claire and me were side by side. And, wrapped about by the purple mists, we were racing, hurling, down a seemingly endless shaft. Where were they being taken?

ened by the ceaseless roar of the thunder; and my mind was in a state of chaotic disorder. Thoughts, whose frenzy equalled that of the storm began to whirl through my brain.

And then there was a lull in the storm. The prolonged reverberations of the thunder and the gleeful shrieking and howling of the wind abated. With hope gradually returning, I reached for the joystick.

A moment later, a mighty, twisting whirlpool of air, the rear guard of the storm, caught the plane in its grip, and tossed it high above the clouds, a toy in the hands of a Titan. Tossed it, and caught it—and placed it gently upon the earth! And during that terrible dipping and whirling, I sat in the cockpit, overcome by an awful nausea. I had succumbed at last to the pitching and twisting of the monster wind that bore the plane.

And the storm passed on——

How long I sat there, I cannot say, but finally the sickness and dizziness left me, and I threw off my belts and leaped from the plane. For a moment I tottered unsteadily, for I felt rather light-headed; then as my mind cleared, I stared around.

I seemed to be in the heart of the Himalayas. On every hand arose lofty mountain peaks, enormous, snow-capped monuments of Nature. Towering spires of gray rock, their peaks covered by huge, silver crowns, gem-encrusted, glittering; gigantic turrets and steeples of ochre, pale sapphires for their diadems; giant pinnacles lifting their heads among the clouds, beautiful yet oppressive—these were the mountains with their covering of eternal ice and snow.

I looked down—and caught my breath in surprise. Below me lay a scene unlike anything I had expected to see in the Himalayas. I was standing at the top of a rather steep, rocky slope that descended into a vast, tree-lined valley. It was a wide, green bowl, held in the hands of the clustered hills, with the peaks crowding around it, craning their lofty heads to peer within. A great hollow, it was, covered with tropical verdure, that seemed somehow to be filled with a spirit of unbelievable antiquity.

I CIRCLED the valley with my eyes. There seemed to be nothing other than an endless stretch of mist-obscured jungle, broken at frequent intervals by a splash of color, or the flash of a stream or lake. Nothing, that is, except for a towering, conical mount that rose from the floor of the valley, five or six miles away. Its sides sloped rather gently, ascending gradually to the apex of the hill that was flattened like a huge platform, as though in the distant past it had been shorn away by some gigantic, keen-edged blade. And in the very center of that flat area in rough imitation of a table, lay a great boulder. Its smooth, flat top, and fairly even sides were suggestive of the hand of man.

I turned then and examined the elevation upon which the storm had placed the plane. Apparently I had landed on the floor of a deep, wide ravine that lay between two peaks. On the both sides of me, separated by about a hundred feet of rocky earth, towered two mighty rock walls. Several hundred feet above, I saw the top of each.

As I shifted my gaze, I heard a loud, grating sound, the rasp of metal upon rocks, and heard something falling headlong down the slope. I turned in time to see my plane settle into a precarious position on the edge of the incline. In landing, it had wedged itself into a crevice in the wall of the gorge, with its front end leaning over the edge. And now, probably because of the weight of the motor, and its insecurity, it was settling toward the valley, freeing rocks which bounded down the slope.

Even as I took a step toward the plane, it moved a bit farther. I could see that it would fall in another minute. Without the plane I was lost; there was a bare chance that, once in the machine, I could fly free; I sprang into the cockpit.

My added weight was all that was needed to start the plane; and in a moment it was falling in a tail-spin toward the valley below.

I had been counting on a moment or two before the plane started, to set the motor in motion, but this had been denied me. Shortly before it reached the valley, however, I managed to straighten into a steep glide. And in that position I struck.

If the plane had landed on the open ground, there is little question but that I would have been killed; fortunately for me, however, the force of my fall was broken by the branches of a mighty monarch of the forest. Instead of being killed, I escaped injury entirely, suffering nothing worse than a bad shaking-up.

With some difficulty I freed myself from the wreckage of my plane—for wreckage it was—and holding fast to the plane's struts, balanced myself on a heavy limb. All around lay the jungle, a wilderness of gigantic tree-ferns, interspersed with tall, stately palm trees, the whole matted together by vines and creepers as thick as a man's arm. It was a tropical jungle, the wildness of which was not equalled by that of Africa.

About thirty feet below lay the earth. As I gazed around, inspecting the peculiar growths that covered the ground, my eyes came to rest upon a small stream, little more than a gutter, that flowed near by. Sight of the water made me conscious of the fact that I was thirsty.

To secure water I decided to descend from my precarious position without further delay. Besides, I was curious to see just what kind of a place I had landed in. My plane was wrecked beyond repair, so there was no question but that I was stranded in the valley. The quicker I adjusted myself to my new environment, the better it would be for me.

Finally, after inspecting my automatic and filling my belt with cartridges from the supply in the plane, I descended to the ground. The plane held a machine gun, but that was too cumbersome for use. The pistol would have to do.

A moment after reaching the ground, I knelt down beside the stream, and with cupped hands, started drinking.

Suddenly I heard a guttural exclamation behind me, and whirled. A short distance away stood three squat, shaggy creatures, human in form, but little superior to apes. Powerful, hairy arms, appended to wide, muscular shoulders, placed their hamlike hands parallel with their knees. Short, bowed legs supported their heavy bodies. Small, close-set, rat-like eyes; huge flat noses, nostrils distended; wide, thick-lipped mouths from which large, yellow teeth protruded; and heavy, bearded jaws—such were their faces. They were men of the past, creatures from some long-forgotten age.

The three stared at me with curious, surprised expressions on their faces. They were motionless for a moment; then they sprang toward me.

Quickly I drew my pistol and fired. The foremost savage grunted and pitched forward on his face. His two companions stopped short. When I fired a second shot over their heads, they turned and fled in mad haste.

Although I was the victor, I regretted the incident exceedingly, for it could only serve to make my way more difficult. But the thing had been thrust upon me; and nothing could be gained by vain regrets. With all possible speed I returned to the tree that bore the wreck of the plane.

I HAD just reached the comparative safety of the limb, when I heard a great commotion, and loud throaty voices a short distance to my right. Several minutes later I saw fully twenty beastmen creeping stealthily through the underbrush in my general direction. After circling warily for a few minutes, they gathered by common consent in the open space directly beneath my tree!

Suddenly one of the last ones to arrive pointed up at me, gesticulating wildly, while a jumbled stream of jargon flowed from his lips. In exasperation I fired at the brute, but I must have missed, for he dashed off through the jungle as though pursued by devils. The shot had one result, however; instantly the beastmen disappeared, hiding behind every tree and shrub that offered concealment.

I was in a worse position now than I had been before. There was no place for me to hide; I had to remain there in plain sight, a perfect target. With every sense alert, and my nerves on edge, I stood on the limb, waiting with my automatic held in readiness. Minute after minute, each seemingly endless, dragged by, and nothing happened. The silence was unbroken save for the natural noises of the jungle.

My nerves had almost reached the limit of their endurance, when things began to happen. On all sides arose a loud crashing. The tree-tops shook violently as though a great wind was passing through them. Then, thrusting aside mighty tree-ferns as though they were blades of grass, five nightmare monsters came into the clearing. On the back of each was a beastman.

I had no time for more than cursory glance at the creatures, but they were so amazing that that glance served to impress their appearance indelibly upon my mind.

The monsters which traveled on all fours, looked exceedingly awkward; their short, stumplike forelegs were only one third as long as their hind limbs. Indeed, the difference in the length of their limbs seemed to throw them off balance; apparently they were in danger of falling end over end. When I first saw the creatures, I was impressed by their great size, but later I learned that they were diminutive when compared with the other monsters of the valley. Their armor-plated backs at their highest points were fully ten feet above the ground, and they must have measured all of twenty-five feet from the tips of their tiny, pointed, triangular heads to the ends of their blunt, spiked tails. The monsters' backs were covered with a protective armor of huge, overlapping plates of horn, dark green in color. Their under sides seemed unprotected; in all probability they defended that vulnerable point with their massive tails. From the base of the creatures' heads to the ends of their powerful, tapering tails, following the backbone, were double columns of upright, triangular plates, ranging from three to fifteen inches in height. The edges of those plates appeared to be as sharp as a knife blade. Where the plates ended, the tail was studded with eight, pointed spikes, a foot or more in length. I could well imagine those spiked tails lashing out like whips, to tear and cut the flesh of an adversary.

I have written that I had no time for more than a cursory glance; this was so, because immediately after the five monsters entered the clearing, and before I could recover from my surprise, one of the beastmen stood upright on the back of his strange steed and hurled a heavy, ten-foot club at me. It struck me a glancing blow on the side of my head; I swayed drunkenly for a moment, a cloud of blackness before my eyes; then I toppled from the limb.

I suppose one of the brutes caught me as I fell for when I awoke some time later I was uninjured.

I came to my senses in a gloomy, filthy, foul-smelling cave, lying on the damp, stone floor, bound hand and foot. How long I had been unconscious I had no way of determining, but it must have been hours, for night was falling, rendering my view of my surroundings anything but clear.

That night seemed to be an endless eternity. Fear kept me awake; I dared not close my eyes. I am not an imaginative individual, but I could not help peopling the blackness around me with frightful phantoms, weird shapes, and hordes of indescribable monsters. And even if I had felt safe enough to sleep, the frightful noises of the jungle would have made it impossible. There were shrill, high-pitched screams, low, ominous roars, cries of pain, and howls of triumph, all intermingled in a chaotic, terrifying bedlam of sound.

Toward morning the terror of my surroundings had worn off to some extent, and I occupied my thoughts with a review of events leading to my falling into the valley.

Twenty-four hours before I had been at the English aviation base in Calcutta, India, speaking with Captain Freeman. He, it was, who assigned me to the task of scouting through the air in the locality in which I had been when the storm had hit me.

For an entire year aviators had been disappearing, planes and pilots vanishing without trace. At first it had been thought that they had crashed to earth through some fault of the men, or of the motors, but when machine after machine had disappeared, the vanishings had been credited to some powerful, human agency.

Then, about two weeks before, one of the pilots had returned to the airport with the story of a huge helicopter, far larger than any known plane, that had swooped down upon his machine in an effort to capture it. So rapid had been the motion of the strange craft, that the smaller plane had almost been captured by great grappling hooks that hung from beneath the cloud-hawk. He had escaped by dropping almost perpendicularly toward the earth.

And finally, just five days ago, the world was shocked by the disappearance of its greatest trans-oceanic passenger plane, the Teutonia. It had left its hangar with its cargo of passengers, had started across the Atlantic, and had vanished, as it were, into thin air.

It was then that all the planes were equipped with machine guns, for a decisive effort was to be made to wipe the sky-menace from the face of the earth.

Immediately after my plane had been thus equipped, and I had gone to the territory which I was to patrol, I was caught by the storm.

And now I was held prisoner by a tribe of men as low on the scale of evolution as creatures could be and still be called men.

As the first gray streaks of dawn began to dissipate the darkness, my eyelids closed, and I slept.

I was awakened a short time later by the excited voices of a number of beastmen outside the cave. Then I heard a hard, stern voice, different from the rest, growl a guttural exclamation, followed by:

"You fools have been up to something again! I'll tear the hide from the one who is guilty, if it's something I disapprove of. Brainless brutes!"

A voice speaking in English!

A moment later, a tall, broad-shouldered man clad in khaki, strode in to the cave.

CHAPTER II

The Evolution Master

AN exclamation of surprise burst from the tall man's lips as he paused inside the cave, and peered around. "And how did you get here?" he queried in a harsh, unpleasant voice. I could not see his face—he was a dark silhouette looming large against the mouth of the cave—but I felt a distinctly menacing quality in his voice and attitude.

Hastily I told him of my experience in the storm, my landing in the gorge, the crash, and my subsequent capture—hastily, because I wanted to dispel any doubt or suspicion of me that he might have had, for in a man of my own race lay my only hope of escape from the beastmen, or from the valley. But my inability to see his face placed me at a definite disadvantage; I could not determine his reaction to my story.

For a few moments after I concluded my brief account, the tall man remained standing in motionless silence; then in a voice that was vaguely suggestive of hesitation and doubt, a voice that somehow didn't seem to ring true, he spoke.

"That—that was an unfortunate accident for you on the face of it, but it may prove to be of equally good fortune to both you and me. I'm a scientist engaged in research work in this hidden valley; and I happen to be in need of an assistant. If you will fill the bill, it will be to our mutual advantage. I—but you can't be comfortable lying there on that hard floor! I'm an inconsiderate brute!" He chided himself in a way that seemed forced and unnatural. "I'll have you free in a jiffy; and we can continue our talk down in my shack."

In a moment he had cut the cords that held me prisoner, and I tottered to my feet. My legs and arms were cramped from their hours of inaction, but a few minutes of chafing restored them to normalcy. And then I followed him out of the cave.

At our appearance, the hairy men and women who had been loitering in the vicinity, fled in every direction, vanishing in the black interiors of their cave homes.

We stood on a narrow, sloping, rather sharply curving ledge, that descended in a gradual spiral to the base of what seemed to be a great, perfectly circular pit. The ledge started high above us on the opposite side of the shaft, and completely circled the walls again and again, like the threads of a wide-set screw. And all along the ledge, at fairly regular intervals, were the mouths of many caves, the homes of the beastmen.

At the bottom of the pit, in the very center, stood the queerest structure I have ever seen. A great sphere, it was seemingly composed of highly polished, faint lavender glass. Like a huge, glass bubble, it lay on the floor of the pit. It was evidently the "shack" my host, captor or rescuer, whichever he was, had referred to when he talked to me.

My inspection of the shaft had taken but a moment; even while I was looking around, I followed my guide along the ledge.

"By the way," he broke the silence, "we may as well get acquainted. My name is Carcante, Verne Carcante. Born in England of French father and English mother; educated in England and Germany. I'm a biologist, engaged in research work along the lines of evolution."

"My name is James Newton," I rejoined. "I'm an American, at present in the air forces of His Majesty, King of England. Had two years at Harvard; education cut short by financial difficulties. Since I left school, I've been footloose and fancy-free—an aviator because of the adventure it offers."

Finally our downward progress brought us to the bottom of the shaft. Quickly we crossed to the great sphere and entered the peculiar structure.

It was the strangest building I have ever seen. Constructed of an unbroken sheet of translucent, or semi-translucent glass, seemingly blown into its globular shape, it was all of fifty feet high. Carcante informed me that its length and width were of the same dimensions as the height; the building was a perfect sphere. And not a solitary window, and only one low, round door broke the smoothness of the walls!

The interior of this floor of Carcante's home was flooded with light, the source of which was a large, queerly shaped bulb that hung from the middle of the wooden ceiling. By that light I saw that the room we had entered was very simply furnished, having a table, a bed, and a few chairs. In addition to this, a large, square cupboard stood close to one wall. No rug covered the rough boards of the floor; nor did anything adorn the walls of what was evidently Carcante's living quarters. In the center of the room, coming up through the floor and reaching through the ceiling, was a wide, glass shaft with a jagged opening leading into it—evidently the means of reaching upper and lower floors.

Motioning me to a seat, the scientist began to talk in a business-like manner, clearly and concisely, and in short-clipped sentences. While he talked, I gave him a careful inspection.

Carcante was tall, well over six feet, and proportionately broad. But one lost interest in his body immediately, eyes drawn in fascination to his face. Iron gray hair rose in a tumbled mass above a very high forehead. A large, hawklike nose overshadowed his small, thin-lipped mouth. A square, outjutting chin, high, clearly defined cheek bones—these completed his face, except for his eyes. And those eyes were the strangest part of this strange man's countenance. Sunken deep in his head, they seemed to be tiny pinpoints of light, glowing like fiery embers in the depths of twin caverns. Somehow they gave the impression of vast distances, yet withal, of disconcerting nearness. Carcante's face was one that attracted attention—and held it.

I gained the impression that he was built of the stuff that makes world-conquerors—but there was something about him that inspired a vague distrust.

CARCANTE was speaking. "I suppose you've been wondering about this peculiar pit and building. There is little I can tell you about them; they're almost as much of a mystery to me as they are to you. For the shaft as you saw it, and this sphere, were here when I came, different only in two respects. In the first place, everything was overgrown with the vines and creepers of this tropical valley; and the caves were not in the wall along the ledge. They were hollowed out later by the beastmen. In addition, this sphere was not partitioned off into floors; I had that done myself. When I found it, it was a huge, empty sphere with a shaft running through it from bottom to top.

"My idea concerning the origin of the shaft and house," Carcante continued, "is this: ages ago I believe that a race of intelligent creatures inhabited this valley; they built these, to us, strange things. What the form of these beings was, I cannot say, but I don't think they were human. Human beings would have constructed steps; in all the time I've been in this valley I haven't seen a single flight of them. Nor would humans have built a sphere like this. However, that is unimportant and doesn't concern us. Suffice it to say that a race such as I've mentioned must have existed at some time, for the valley is full of shafts similar to this one.

"Probably there are a number of questions you would like to have me answer before I get to the point of this conversation?" Carcante paused.

I hesitated for a second. "There are so many things that I'd like to ask, that I don't know where to begin. For example: where did the beastmen come from—how did the prehistoric monsters survive through all these ages—oh, I believe you had better explain things in your own way, telling me whatever comes to your mind."

Carcante maintained a thoughtful silence for several moments then exclaimed:

"I have a far better way of letting you know than telling you. This building has three floors, one below this, and one above. The cellar is my laboratory; the upper floor I use as a photograph studio. There I develop the films of the moving pictures that I take; and there I have a screen for projection. With the aid of those films I can give a much clearer explanation than I could verbally."

He arose then and guided me through the low, jagged opening that led into the shaft, the interior of which was encircled by a spiral ledge that led to the floor above. Rapidly we moved around and around until we reached the studio. Here, as in the room below, glowed one of those queerly shaped bulbs. My curiosity was piqued by them and I asked Carcante where he secured the power that gave them life.

"I make use of atomic energy," he said. "You may remember the furor created some years ago by the disappearance of Otto Meinig, a German scientist, immediately after he had announced his discovery of a way to release atomic energy. I persuaded Meinig to give me his secret!"

I remember the incident Carcante referred to; and I could well imagine how he had persuaded the German to give up his secret. My dislike for my strange host increased.

For a few minutes after we entered the studio Carcante busied himself with the projector; then, pointing out a seat for me, he seated himself behind the apparatus, clicked off the lights, and turned on the current that started the machine.

"You asked about the monsters that the beastmen ride; we'll begin with some pictures of them."

As Carcante spoke there flashed on the screen before us an image of huge monsters similar to those that had carried the beastmen at the time of my capture. There were several hundred of the creatures, milling and jostling about in a great enclosure.

"That is the place where we keep our beasts of burden," Carcante explained, "a corral which the men built, a short distance from the top of the shaft. Stegosaurs, the monsters are herbivorous saurians, whose forbears came into being back in the Jurassic period of the Mesozoic era."

The scene changed, showing the beastmen on the backs of the stegosaurs. We watched their activities in silence for a moment then Carcante spoke again.

"You may wonder at the fact that these mighty beasts let the comparatively diminutive men control them; yet there is really nothing remarkable about it. The stegosaurs are naturally docile creatures, easily controlled by the superior intelligence of the men. And since we see that they always have an abundance of food they are very tractable.

"We have tried to subjugate the other monsters of the valley, but we've met with little success. There is one brute, though, the triceratops, that we can control to some extent, but they are too treacherous and warlike for safe use. They are controlled by means of sharp blows being delivered on the central one of the three horns on their heads.

"And now," Carcante concluded, "I'll show you some of the other monsters of the valley."

THE scene changed to a wide, marshy lake surrounded by a "canebrake" of huge, horsetail reeds. the stems of which were four and five inches in diameter. Far out on the bosom of the lake we saw a mighty upheaval, a tumultuous swirling and boiling of the water, suggesting some vast volcanic eruption on the lake bottom. The disturbance drew closer as we watched, finally revealing its cause.

Six prehistoric reptiles, like dragons from a book of fairy tales, rose above the water. At first glance there seemed to be no reason for so great an upheaval, for all that I saw was heads. Six, huge, snakelike heads moving along the surface—wide, grinning jaws lined with fearful teeth—great, faceted, compound eyes, lidless and staring—each head covered with tight-stretched, glittering skin—that was my first impression of the monsters. As they entered the more shallow water, their bodies began to rise above the surface. One, in the lead, emerged first. A massive, black neck, like the trunk of a giant tree, arose twenty-five feet into the air. An amazingly large body followed, a body that was more than twenty feet thick, and about thirty feet long, a gigantic barrel of living flesh, covered with smooth, black skin that glistened in the sunlight. A twenty foot, tapering tail stretched out behind the creature, an apparently useless mass of cumbersome flesh.

Then another and another of the creatures emerged from the water and wallowed contentedly in the mud beyond the reeds.

"These are specimens of the saurian known as gigantosaurus africanus," Carcante explained. "Fossilized remains of similar monsters were found in Africa by a German expedition. These, like the stegosaurs, belong to the Jurassic period of the Mesozoic era."

Nothing worthy of note was occurring on the screen, the monsters moving about aimlessly, so the scientist continued talking.

"For a long time," he said, "I could not explain the presence of these creatures to my own satisfaction. They simply didn't belong. But at last I've hit upon what I believe is the solution. This valley is surrounded on all sides by lofty mountains, forming an insurmountable barrier. One can enter or leave only through the air. It is my belief that these monsters, since they lived in an unchanged environment, did not develop as did the others of their species. Briefly stated, I believe that a static environment produces a condition of static evolution.

"But—watch the screen!"

The water in the vicinity of the drowsy monsters began to churn and swirl violently. The cloak of lethargy dropped from the huge saurians, and they leaped into frenzied action. Their mighty tails, that I had thought were useless appendages, delivered terrible blows to right and left. The monsters inflicted awful punishment upon each other ere they learned what had attacked them.

A school of great, fishlike creatures had come upon them undetected, and had begun tearing them to shreds. They were well equipped to do this, with their mighty, pointed snouts, five feet long, and their wide jaws, lined with large, pyramidal, needle-sharp teeth. Ichtyosaurs, Carcante called these brutes.

The fight was unequal; from the beginning its result was inevitable. The great gigantosaurs, outnumbered at least three to one, were drawn beneath the surface of a lake that, in the immediate vicinity, was blood red. They had taken toll of their assailants, however; nine of the creatures floated on the water for a moment, their bodies beaten to a pulp. Then they, too, sank out of sight.

Carcante cut off the current, and began changing the film.

"I could continue showing you pictures of the activities of different monsters for hours and hours—but nothing would be gained by that.

"You asked me about the beings you call beastmen. I'm going to tell you about them—but not merely to satisfy your curiosity. I'll tell you because, in them lies my reason for telling you what I have already told you, and for my needing an assistant. Prepare yourself for the unexpected, for you'll be surprised and shocked.

"But before I show you these pictures, I'd better tell you of certain things I've learned about evolution, things that will make it easier for you to understand. There are numerous explanations of the cause of evolution—segregation, adaptation, and a dozen others—but all are wrong. To the world, the cause of evolution is an unsolved mystery. But I've discovered what's behind it all—and I can prove my claim!

"Evolution, that infinitely slow climb up from the unicellular, protoplasmic mass, the amoeba—that gradual advance from sea-slime to jelly-fish, to invertebrates—reptiles—mammals—man—evolution, the great riddle of biology, is caused by something within the body! The excretions of one of the ductless glands brings it about!

"Years ago I learned that this was so; and immediately I set about attempting to discover a means of accelerating the painfully slow process. Ability to do this presented possibilities so vast, that I believed and still believe, that such a discovery would change the entire course of human existence. Think of it—the countless ages required for the upward climb, covered in one gigantic leap! A short cut to a seat with the gods!

"Keep what I've said in mind as you watch these pictures." And Carcante, after switching off the light, started the motion picture projector again.

For some moments I saw nothing that appeared on the screen before me; my mind was completely occupied by the statements the scientist had made. I had studied some of the facts of evolution, and had read about certain fantastic theories that had been advanced by way of explanation; but never anything so revolutionary as this statement of Carcante. But finally something pierced my mental fog, and I turned my attention to the screen.

A great helicopter, a large quadriplane of most peculiar design, had appeared on the white surface. Carcante explained it before I had time for more than a fleeting thought, beginning then to intersperse explanatory remarks between items of interest.

"This is my plane, the machine I use in entering and leaving the valley. Like all my mechanisms it derives its power from atomic energy. It played a mighty important part in my experiments on evolution."

The plane was gone then; but it left a horrible suspicion in my mind. A machine answering to the description of this one had caused the disappearances of the aviators and their machines. This plane—Carcante—the unknown, hidden valley—they dovetailed into each other perfectly. Yet not in my wildest flight of fancy did I suspect the complete truth. But I hadn't long to wait ere I knew all the fiendish facts, in their hideous, heartless brutality.

THE screen was now occupied by a picture of what was evidently the lower floor of the sphere. In the center of the chamber, before a strange mechanism of wires and cones, discs and tubes, stood Carcante.

The latter's voice came to me faintly out of the semi-darkness. "These pictures were taken automatically to serve as a permanent record of my experiments. The room is my laboratory."

Carcante's image walked out of the camera range; but returned in a moment, bearing in his arms a curious burden. Long and narrow, it was, wrapped completely in white cloth. As the scientist removed this covering, I gasped in horror. His burden was a human being, a man I recognized as the first aviator who had disappeared. There was no time for the full significance of this to penetrate my consciousness, for Carcante's image was in motion.

Carrying the man across the room to what appeared to be a large, wooden cross, he tied him fast to the cruciform object, arms widespread, head fastened back, and body sagging. Then returning to the machine, he manipulated the apparatus for a moment, and stepped back.

A stream of light leaped from the heart of the device and bathed the aviator with an alien glow. Abruptly he stiffened while an expression of unutterable pain and torment overspread his face. In a moment this was gone, replaced by a look of mingled horror and dazed wonder. Then suddenly there was a strange blurring of his features—his body grew squat, broadening perceptibly—hair sprang from his flesh with a speed that could be seen—he turned to a beast before my eyes!

The awfulness of what I had beheld numbed my faculties, yet I heard all that Carcante said with complete clarity.

"That was my first attempt to accelerate evolution. As you saw, it was unsuccessful. Indeed, instead of speeding up the process, it cast the subject back along the path of evolution. The speed of the subject's retrogression, by the way, was far less rapid than the film indicated. The camera is responsible for the greater speed.

"The result of this, my first attempt, was duplicated in every way in each case, even though each subject was treated in a slightly different manner.

"The ray that you saw is composed of the collected and magnified emanations of a certain radioactive element that I've discovered. These emanations act on the glands of the body, breaking down the mineral matter in them, and forming other elements. The structure of the tissues undergoes a metamorphosis, and the cells are reorganized and changed. The excretions of the glands are replaced by entirely different compounds. So potent is the action of the ray that the entire body is transformed—but the change is directly opposite to that which I desire! Of all the subjects on which I've experimented, a total of nintey-one men and women, not one advanced; all degenerated.

"But I think I've discovered a method of reversing the action of the ray. I intend starting a new series of experiments very shortly—and that's where I need you. If you will do so, you may aid me in this attempt to lift humanity high above its low plane, to a position of undreamed of culture and knowledge. There is a remote possibility that my new process will fail, and that the subjects will be cast further back, but we needn't feel any greater concern about that.

"What do you say?"

What would I say? For a moment I could say nothing; the chill hand of horror had made me speechless. This man must be insane! But finally, when I regained control of my tongue, all the horror, revulsion and disgust within me sought outlet.

"What do I say? Just this: you're mad! But sane or insane, you're a foul, inhuman brute! Help you? The only way I'll help you is to see that you get the punishment you deserve. You——"

Carcante snapped on the light—and fell back, aghast. Never had I seen a face given over so completely to evil. His deep-set eyes were narrowed to slits from which flashs of anger seemed to dart, and his thin lips were drawn back in a hideous snarl. And then the madman leaped upon me!

I am not very tall, but since boyhood I've been noted for my abnormal strength. I needed all of it to withstand Carcante—all of it and more! His was the strength of two men. In a moment his hands fastened themselves about my neck in a viselike grip and cut off my breath. I felt my struggles growing weaker—a flare of multicolored, bright lights—a wave of blackness—and my senses left me.

With returning consciousness I became aware of a sharp, cutting pain at each of my wrists. For a moment I could not comprehend where I was, then abruptly I realized. I was bound to the arms of the wooden cross in Carcante's laboratory!

The mad scientist was busily working with his dials and controls. Finally he seemed to have them arranged to his complete satisfaction; then he turned toward me with a cruel, gloating expression in his pin-point eyes. He opened his lips to speak—but closed them without uttering a sound.

A confused bedlam of guttural voices had broken the comparative silence; a revolver shot rang out on the air! The sound seemed to come from a point a short distance away from the sphere.

Carcante gazed at me for a moment, then turned, dashed across the room, and disappeared up the shaft.

I was left alone, bound to a cross, awaiting the application of a ray that would transform me to a creature little better than a beast.

CHAPTER III

The Subterranean Tubes

IMMEDIATELY after Carcante left the room I began to struggle with the bonds that held my wrists. The cords were thick and strong, and I felt before I tried that they were beyond my power to break; but I could not remain there motionless, docilely awaiting my captor's return. As I had thought, my efforts were in vain; the cords held.

From without came the babble of gutteral voices, mounting higher and higher, and growing stronger and stronger with the passing moments. Then gradually they faded, as though their owners were moving slowly from the vicinity. A heavy silence that was somehow disquieting fell upon the room.

Minutes passed by—and I became aware of a vague suggestion of sound close at hand. It seemed to be a faint grating rasp of one hard surface upon another, heard for a moment, then gone, only to be repeated a few seconds later. Sharply I stared around, searching.

In a few moments my quest was rewarded. A short distance away, a few feet from the shaft that led to the upper floor, a circular section of the curving floor, about twelve feet wide, began to move. As I watched, it slid aside into some hidden compartment, revealing the dark mouth of a shaft.

Impatiently I watched the opening while my heart beat more rapidly. What new menace was this, come to threaten me? Not for long was I left in doubt.

The figure of a woman arose above the surface. Anxiously she peered around, then climbed quickly into the room. Stepping lightly, she crossed to my side.

So rapid were her movements, and so unexpected her presence, that I gained only an indistinct impression of her appearance. A lovely, oval face; deep, starry brown eyes; beautiful red lips, now tense with excitement; a mass of tumbled chestnut hair brushing red cheeks; and a lithe form clad in a dress that was soiled and torn—that was what my swift glance revealed.

I cleared my throat to speak; she laid a silencing finger across her lips, and doubled her efforts to release my fettered wrists. Finally she succeeded, and I staggered away from the wooden cross, and the diabolic machine that made men into beasts.

Quickly we moved over to the opening in the floor—and there the girl hesitated.

"I'll return in a moment," she whispered. "Wait!" And in a trice she had crossed the room and had vanished in the circular shaft.

Impatiently I waited, my mind filled with conjectures—and with anxiety for the stranger. In a moment she returned with a canteen of water, and a knapsack filled with food.

"They belong to the mad scientist," she smiled, "but we need them more than he."

A moment later, with the girl in the lead, we entered

the mouth of the shaft and started down another, now familiar spiral ledge. The door slid automatically back into place when the girl applied pressure in a round indentation in the wall. We were completely surrounded by abysmal darkness, in some subterranean passageway beneath Carcante's home.

Around and around we went, down, down, until we paused on a level surface at the base of the shaft. And there we stood for a moment, the silence broken only by our breathing.

"The bottom of the pit," the girl explained through the darkness. "So far as I know, we can go no farther. I've never been able to learn whether or not there's a way out; but I've never had a light."

Her mention of light reminded me of the cigarette lighter that I habitually carried. Fortunately, the beastmen had not taken this; although this was the only thing they had missed while searching me. Drawing the lighter from my pocket, I pressed the button that simultaneously released the lid and ignited the wick. A faint flickering glow replaced the absolute darkness.

Searching the walls with the aid of the pygmy flame, the girl suddenly exclaimed, "Here it is—the mechanism that controls the opening and closing of the bottom of this shaft!" And she pointed to a depression in the wall similar to the one above.

It was the work of a moment to step back on the ledge and press on the control. Slowly, ponderously, creaking in protest, the base of the shaft slid back into the wall.

We peered down. About twelve feet below us lay a smooth, level floor; it was vague, indistinct, and barely discernible in the rays of the lighter. Only for a moment did we gaze down; then there was a sharp report, a sudden lurch of the ledge on which we stood; and we were dropping through the air.

In the shock of my landing the lighter was extinguished; but miraculously I retained my hold upon it. In a second the flickering flame again illuminated our surroundings.

Hastily I glanced around. High above us was the shaft, a jagged edge showing where a portion of the ledge had broken away. It was so high above that it was completely beyond our reach.

To right and left stretched a long tunnel, about twelve feet high. That is, it gave the impression of great length in spite of the fact that our meagre light penetrated only a short distance into the gloom. It seemed to be a great pipe with smooth, shining sides.

A sound behind me recalled my companion to my mind. Turning, I saw her struggling to her feet. "Are you hurt?" I exclaimed.

"I seem to have wrenched my ankle," she replied. "But I don't think it's anything serious."

At my suggestion that we bathe her ankle with water from the canteen, she laughed. "It's nothing," she said.

"And what will we do now?" she asked, changing the subject.

I hesitated. "That's hard to say. I believe I could lift you up so that you could grasp the ledge and draw yourself up; but I don't think we want to do that. What we want to do is to find some way out of this tunnel, other than through Carcante's laboratory. And I don't believe that will be difficult as it seems at first thought." I recounted Carcante's statement concerning the countless pits, similar to the one in which he lived, that covered the entire valley; told, too, of my belief that the tunnel into which we had fallen acted as a connecting link between the pits.

"If we can find a place where one of these shafts leads into the tunnel," I concluded, "we'll manage to open the door, and get you on the ledge. With that accomplished, I feel certain that some way will present itself to enable me to join you.

"At any rate, it seems to be the only feasible plan."

After a moment's discussion, we started through the great tube, slowly, carefully, eyes watching for the unexpected. The girl's arm rested upon my shoulder; her injured ankle handicapped her walking considerably.

Somehow the pressure of her arm had a queer effect upon me. It was strangely pleasant. I had never had any great interest in the female of the species; but there was something so very appealing about this woman that I was involuntarily drawn to her.

AS we made our way along the great tube, I became aware of things that I hadn't noticed before. The walls seemed to be formed of the same, glass-like substance that made up the floor of the ledge in Carcante's pit, and the sphere. More highly polished, though, this seemed to be, casting back the rays of the feeble light I was carrying. I noticed, too, that the floor of the tube was thickly coated with dust. Powder-fine, inches thick, it lay, the dust of ages, a sign of immemorial antiquity. Not on the floor, alone, was dust; the walls, when I touched them inquisitively, I found were covered with the same age-old film. Where my fingers removed the dust, the interior of the tube shone more brightly than ever; it was far more highly polished than I had imagined. Strange, this tube was, and ancient as the Himalayan hills.

The voice of the girl broke in upon my musings. "We've been thrown together under peculiar circumstances," she said, "and the fate of each of us seems closely linked with that of the other. I think our association will be less strained if we become acquainted. I know that I'm curious about how you came into the mad scientist's grip, who you are, and all the rest; and I suppose you're wondering the same thing about me."

Now that she mentioned it, I was curious; our being together had seemed so natural that it hadn't occurred to me before.

"Of course!" I exclaimed. "I've been wondering who you are, and how you come to be here." As we moved through the tube, then, I identified myself, and related briefly the events leading up to my meeting with the girl.

She in turn told her story, a narrative not very surprising in the light of what I already knew, but that was nevertheless far from commonplace.

Claire Maynard was her name; she, too, was an American. A week before she had been on board the transoceanic passenger plane, Teutonia, en route from New York to Liverpool. Midway between the continents, a panic had seized the passengers at the strange behavior of the plane. The pilots seemed to have lost control of the craft. Then the truth became known. A mighty monster of a machine, strangely wrought, had seized the Teutonia with great hooks that dangled from the former's under side, and had borne her from her course. It was Carcante, in his plane, seeking new subjects for his experiments.

The Teutonia had been carried south, landing finally in the hidden valley. There, the mad scientist, aided

by about a dozen beastmen, had herded the terrified passengers and crew into his laboratory. A number of the men—there were more women than men—had offered resistance, but their efforts were in vain They had been shot down in cold blood. Then, while the beastmen stood guard, Carcante had begun his experiments

Claire, by some chance, had been farther back than the rest. While watching the horrible spectacle before her, one of her heels had sunk into a depression in the floor. To her amazement, a great door drew aside in the floor behind her. With the sounds of her movements concealed by the cruel voice of Carcante speaking to his captives, she had retreated into the shaft, and had pressed on the indentation in the wall similar to the one above. Darkness had closed about her.

There followed five seemingly endless days of waiting in the darkness, five nights of nerve-wracking foraging through the sphere for much-needed food and water. Twice she had been close to detection, but both times had escaped.

And then on the sixth day I had come. Through the door she had heard the wild mutterings of Carcante as he prepared his apparatus; had heard the sounds of violence among the beastmen, and Carcante's departure from the room; and had decided to take a chance and rescue me, with the hope that, together, we might escape.

With her narrative concluded, Claire became silent. And I too was silent, busy with my thoughts. A remarkable woman was this who had rescued me from Carcante—how remarkable, I had not realized. The weaker sex! Not much weakness could be found in this girl! More than ever I felt myself drawn toward her, felt the full force of her attractive personality.

During the recital of each of us, we had continued on through the great tube; but not a sign of a shaft leading to the world above had come to our eyes. I began to feel disheartened. Perhaps my theory was wrong, and there were no other shafts; or, which was more probable, perhaps we had been passing doorways so cleverly concealed that they had escaped our notice.

After I told Claire my thought, we kept our eyes trained upon the top of the tube with far greater care than we had exercised before.

And then we came to a point where the tube divided—or rather where a number of tunnels met. After some debate we decided upon one of these, and continued on our way.

We had gone some distance, when, without a warning sputter, the flame of the lighter died! With a dread suspicion in my mind, I tried to ignite it again—but to no avail. It was empty! We were lost in a maze of subterranean tunnels—lost in darkness, without means of making light!

"Miss Maynard," I said to the girl, striving to keep my voice steady, "I'm afraid the lighter is useless. It was the height of folly for me not to realize that the fuel could not last forever. We've been wandering farther and farther from the shaft that led us into this tunnel; and I—I don't believe we could possibly find it again. I frankly admit that things look mighty hopeless; but anything is better than the fate Carcante had in store for us."

I had tried to keep any suggestion of dread from my voice; but a sickening fear had begun to surge up within me—fear for myself, but a greater fear for the girl at my side. I dared not think of the future, when our water and food would be exhausted——

Then Claire spoke, her voice weary and hopeless. "I—I don't care what happens! I'm so very tired—" Suddenly her voice broke; I felt her tremble. Long-repressed emotions sought release—sobbing low she clung to me, her face buried in the hollow of my shoulder. And there in the utter blackness of the tunnel, filled with strange, until then unknown emotions, I comforted her as best I could.

Suddenly a great, all-engulfing resolve swept over me. I'd escape from this prison with Claire, and overcome Carcante—and all his beastmen, if need be! I loved this girl! The thought came unbidden, as had the love. I loved her, and for her sake, I'd win!

Presently Claire's sobbing ceased, and she grew calmer. Hastily she drew back then, realizing for the first time her position. But she still held fast to my arm.

"Come, come," I said reassuringly. "We're going to get out of this—we have to!" And linking her arm in mine, I started forward along the tube. Our only hope of escape lay in finding an exit; and our only chance of finding an exit lay in search.

WE had taken only a few steps through the darkness, when my feet sank through the floor. Then with a sharp, rending crash, the base of the tunnel gave way beneath me. For a moment I struggled to regain my footing; then I felt myself spinning down and down, finally landing with a jarring impact on a hard, smooth surface. I attempted to rise; a heavy weight falling from above struck my back and head—and I knew no more.

Consciousness returned slowly. Faintly, barely loud enough to be heard, it seemed to me, someone was calling my name, "Jimmie! Jimmie." Gradually my senses returned; then I recognized the voice. It was Claire's. I was lying flat on a hard floor, my head cradled in her arms. My face was wet—she had evidently bathed it with water from the canteen that was slung over my shoulder.

"I—I'm all right," I said weakly, struggling to a sitting posture.

"Are you sure?" she asked in an anxious voice.

Upon my replying in the affirmative, she helped me to my feet. My back pained me considerably, but I ignored this. For a moment I swayed dizzily; my head was spinning. Claire grasped my arm anxiously, supporting me. "That was an awful fall you had," she said.

A sudden thought arrested the wild gyrations of my mind. "How did you escape injury—or didn't you fall?"

"Yes, I dropped, too, but I landed on you. I suppose that broke the force of my fall, and saved me." She smiled.

For a moment my mind dwelt upon that smile—then abruptly the significance of it broke upon me. I could see her! There must be light!

I stared quickly around, my dizziness and the pain in my back forgotten. We were in another great tube, similar to the first, except for the fact that a strange, violet luminosity emanated from the walls of this one. Nor was there dust in this tunnel; its sides were clean and smooth. Nothing ancient about this tube.

Directly above I could see a circular, jagged hole, the place through which we had fallen. It was all of fifteen feet above us; this tunnel was wider than the

other. The tube above evidently ran parallel with, or crossed the nether tube at that point, and there was little of the substance of the tunnels between the two. Our double weight had broken through.

"Strange light, isn't it, Mr. Newton?" Claire asked, somehow divining what had occupied my thoughts.

"It certainly is," I replied. "And where light is, there's usually life of some sort. There must be some reason for these tubes, anyway!

"But don't call me Mr. Newton, Claire. I was Jimmie a minute ago."

She looked at me steadily for a moment, studying me in the unearthly, violet light, then she replied, "Very well—Jimmie!"

For a moment we gazed into each other's eyes, intently, searchingly; then Claire exclaimed in some confusion, "Well, let's hunt for the life you mentioned."

A second later, the arm of each encircling the waists of the other, we moved along this second tunnel.

We had walked for about five minutes, my thoughts busy with the strangeness of what had happened, and the wonder of this sudden love that had come to me, when suddenly Claire stopped short.

"Look, Jimmie! There ahead!"

I followed her pointing finger with my eyes. Far down the tunnel was a pinpoint of brilliant, purple light! As I watched, it grew larger, drew closer. Then I saw another, some distance behind the first.

"Quick!" I exclaimed, "Crouch down against the base of the tube!" In a moment we had made ourselves as inconspicuous as possible.

The first light had drawn close, very close, while our eyes had been turned away. Suddenly it whirled past us, a twelve-foot disc of misty, purple fire, deeper in the center, forming there a thick, swirling nucleus. The brilliance was intense. As it passed by us, almost touching us, I felt a strangely exhilarating buoyancy. Then it was gone, vanishing down the tube, apparently unaware of our existence.

Scarcely had the first one gone when the second passed. Moving at the same rate of speed, it seemed to be an exact duplicate of the first.

No sooner had this passed, than the third arrived. There was something utterly astounding about this silent procession; if it had not been so tremendous, it would have been uncanny. As it was, it gave me an impression of strange unearthliness, of a gigantic, alien, living power. One disc following another at most precise intervals and at exactly similar speed! A parade of living light.

In all, ten of the unnatural beings flashed past while we crouched there. Not one so much as hesitated upon reaching us; they seemed to be entirely oblivious of our presence.

With the passing of the last purple disc, Claire and I rose to our feet. After I had gathered my scattered wits, and had recovered to some extent from the spell the strange sight had cast over me, I said slowly:

"We've obviously seen the life of this place—the things that made the tunnels. Strange though those discs of purple flame appeared, there was something intelligent, something controlled about them that dispels any thought of their being a mere phenomenon of nature.

"There's only one possible question: Are those moving masses of light the form the life has taken, or does the thicker, deeper nucleus of each hold the intelligent creature that guides the misty disc-machines?

"There's only one way to find out, and that is, investigate."

For a moment more we discussed the strange spectacle we had seen; then arm in arm we started through the great tube—two puny human beings in a tunnel of fantastic strangeness.

How long we traveled, I could not tell; but it seemed to me that more than an hour passed while we followed the gently curving, downward sloping tube, searching for the place from whence the purple lights had come.

Finally we came to a point where the tube curved sharply, abruptly. As we rounded this bend, we came face to face with a sight so awe-inspired, so colossal, that it beggared description.

THE tunnel tilted at a sharp angle for several hundred feet, leading into a vast, light-filled chamber. In the center of the base of that great, vaulted room, of such dazzling brilliance that human eye could scarce rest upon it, was a lofty amethystine dome of flaming splendor. Beneath its convex surface swirled clouds of shimmering violet that were opalescent—yet crystalline. Flames leaped up from the dome dancing high into the top of the chamber; flames that were tipped with flickering points of vermilion, that darted out, withdrew, then flared into greater brilliance.

Flames, fire in the chamber—yet there was no heat!

Long we gazed at the phantasm, hesitant; then slowly, timidly, we advanced. One step, another, on the smoothly polished surface of the slanting tunnel—and suddenly our feet slid from beneath us, and we flashed down the incline into the chamber.

Ten, twenty feet we slid toward the center ere we could regain control of our footing. But all of four hundred feet lay between us and the amethystine enigma when our forward motion ceased. For a moment we stared at the amazing thing before us; then we turned and gazed around the chamber.

We stood on the floor of the interior of a vast sphere, the walls of which were glass-smooth, and were composed of a substance that had a vaporous, violet iridescence. All around us stretched the curving surface, broken only by the dome, the mouth of the tube behind us, and the three other tubes that led into the chamber. One lay in the wall directly opposite us; the other two were equidistant from the first two, one in each side of the sphere. Eight hundred feet and more above us was the roof, a continuation of the curving surface that was the inside of this great ball. And in the very center of the base of the sphere was the flaming, purple dome.

With the inspection of the chamber completed, I turned my attention a second time to the even more wonderful dome. As I watched the darting streams of purple radiance, I became aware of a strange effect of the light. Out from the dome drifted a queer intoxication, pleasantly exhilarating. It seemed to grip my mind, banishing all but itself from my thoughts. And with the passing moments it was increasing in intensity.

Such mad joy I had never experienced before. My spirit seemed buoyed up, seemed inspired by the living purple light. Claire, at my side, I saw was similarly affected. What there was about the purple dome that caused this unnatural phenomenon,, I cannot say; but that its effect was as I have described, I know.

So soothing was this intoxication, that in a few moments all our cares and fears had vanished. Then my mind, queerly, returned to the commonplace. For the first time in many hours I became aware that I was hungry and thirsty. Calling this to Claire's attention, I opened the canteen and knapsack. In a moment both of us were busily engaged in satisfying the wants of our stomachs. Eating—beside that incredible, purple dome! But the incongruity of it did not occur to us then; nothing that we did seemed unnatural while we were in that intoxicating chamber.

We had just finished our simple repast when I sensed something moving in the mouth of the shaft behind us. I turned curiously. One of the discs of living flame that had passed us in the tube was now framed in the tunnel's mouth. For a moment it hovered there; then it floated into the room. The other nine followed in rapid succession.

They paused in the air above our heads, completely covering us with a gigantic circle. High-pitched bell notes came from the flame-discs, an elfin chiming, crystal clear, soothing, sweet—their voices! Then two of them floated down toward us, slowly but surely settling upon us.

Claire drew back, a soft cry upon her lips. I caught her with one arm and drew her close, holding the other free to protect.

Closer the violet figures drew, closer till they were almost upon us. Some vague impulse prompted me, I drew back my fist and struck blindly at the misty discs. Futile gesture! With a sudden jar, my blow was arrested before it reached its goal. My hand fell to my side, paralyzed.

Something drew Claire from my arm, something that I could not resist. Then the misty beings settled upon us; the thicker, swirling nucleus encircled us. Engulfed by a cloud of alien radiance, we were powerless.

Completely surrounded by the mist, we were, yet I experienced no difficulty in breathing. Amazing and unnatural—but true!

From the substance of the creatures came a vast, inconceivable calm, a drowsy tranquillity that was all-consuming, that gave Claire and me a peace past understanding. Lassitude ineffable filled us, a lassitude that was, paradoxically, the essence of well-being.

What followed immediately after seemed like a dream. Indeed, I cannot say that it actually happened. The beings that had taken us within themselves, rose slowly into the air, and completely surrounded by the eight others, floated toward the thing of purple flame in the chamber's center. In a moment they reached it, and hovered above it. Slowly they descended—and passed down through it!

As we descended, I gained the impression of a substance that was nebulous, yet solid; wraithlike, yet compact—energy in the form of matter! Force titanic—yet somehow benevolent!

But it may have been a waking dream. I cannot say.

CHAPTER IV

The World of Violet Light

FOR a moment we had hovered above the huge dome; then we were through, were falling as into an abyss. A great gulf opened, striking down depth upon depth, immeasurably vast.

Four of the purple discs had gathered before us, four behind. The beings that bore Claire and me were side by side. And wrapped about by the purple mists, we were racing, hurling, down a seemingly endless shaft. Whither?

I caught a glimpse of the girl through the misty substance of the creatures' bodies. On her face was naught of fear; only a great wonder rested there. It was the strange peace that the beings had given us that kept fear from us. At the time, no thought of apprehension or dread came to me—only a great, uncomprehending wonder. It was not until the adventure was a thing of the past that my mind grasped fully all that had occurred.

As we flashed down and down, I watched the wall of the shaft through which we fell. Stone, it seemed to be, but stone that was planed and glazed, and from the heart of which emanated a nebulous, violet radiance. Circular, the pit was, and wide as the hundred-foot dome in the chamber above.

I became aware then of the whistling shriek of the wind. Shrilling like the high-pitched wail of souls in Hades, it swept past, as the misty creatures cleft it.

Wind, tempestuous—yet I felt it not!

Nebulous, the purple beings were, little more tangible than the air they split; or was it that they, like the substance of the dome, were force, energy, given solidity? Nebulous or solid, they cut the air, and it whirled past, unfelt.

Suddenly the shaft ended, and we were hurtling through the vast reaches of a space of unguessable immensity. Darkness thick and tangible filled the place, a darkness that suggested monstrous things within itself. Shapes unnameable, awesome.

Abruptly the darkness gave way to an ocean of billowing light. Mile upon mile, on every side, it stretched, its waves leaping a thousand feet in the air, reaching toward us. Waves of turquoise, ruby, emerald; vivid pillars of vari-colored light; clouds of swirling radiance—into the heart of this we flashed. Unswerving, and with undiminished speed, we darted into this sea, passed through it—and it was gone!

A continuation of the great shaft lay before us. In a moment the palely glowing walls were flowing past.

Down, down we fell, toward the heart of earth—then I became aware of a gradual lessening of our headlong speed. The shriek of the wind slowly lost its volume, falling to a barely audible whisper.

Far below I saw a point of light; it grew larger; we were within it; darted through it—and softly the beings that bore us came to rest.

A moment, and the discs of mist released us. Claire was beside me; my arm crept around her; and together we looked about.

At first all I could see was space, vast reaches of space filled with the now-familiar, pale-lavender light. Flickering, gleaming diamond dust seemed to fill the air, like midges in sunbeams; tiny atoms of light, they were, that seemed to be alive. And the sparkling nebulosity rose into infinite distances, vanishing in a dim, violet haze.

I drew my eyes from their contemplation of the light; and they came to rest upon a forest of slender trees, whose trunks, boughs and twigs were glowing—cold, white flame! They were swaying, moved by a gentle breeze that threaded its way among them. And

as twig brushed twig, and bough touched bough, soft, crystalline chimings and alien sighings drifted through the air from the forest. The trees were bare, devoid of leaves. I could see that no foliage belonged on them; they were complete as they stood.

With my eyes I followed the high-reaching trunks to the earth—and gasped. There was no soil—only hard, smoothly polished stone! Crystal trees springing from adamantine rock! Perhaps the forest was petrified, its cells replaced by crystalline elements—but it seemed to be alive.

We stood higher than the forest; far beyond lay masses of gigantic spheres. But they were too far away to be seen with any degree of clarity.

The high, chiming voices of the purple beings recalled me to my closer surroundings. Directly below stretched a sharp incline, smooth and glassy, and gently curving. Urged on by the discs, we stepped out upon this and slid to the bottom.

As rapidly as possible we started across the glazed rock that formed the floor of this subterranean world. But our footing was too insecure; try as we might, our pace was painfully slow.

Suddenly two of our captors—or rescuers—settled upon us. For a moment we were enveloped; then the mists cleared as the beings sank to our feet, gripping us tightly. Thus supported, we were borne high into the air.

Rapidly we sped toward the mass of spheres that I had seen in the distance. Swiftly that undulating, glowing forest of fantastic trees swept past. And then the city of spheres—if city it was—lay beneath us.

IMAGINE, if you can, a vast stretch of faintly glowing bubbles of translucent, violet glass, piled high in great, conical masses, rising a thousand feet into the light-flecked air. Of uniform size were the spheres, each about fifty feet in diameter. And nowhere in the sides of them could I see doorway or window, save in those that rested upon the earth. In them were doorways similar to the one in Carcante's globular home. The conical heaps, by the way, were arranged in orderly manner, with definite, regular thoroughfares running between them.

Beyond the spheres, miles away, gigantic, luminous cliffs towered mountain high, stretching to right and left as far as eye could reach. It was from this that the diamond-flecked light seemed to stream. But what lay between the city and cliffs, and what lay beyond the great barrier, I had no way of determining.

My inspection of the City of Spheres was all too short; but the beings moved over it so rapidly that I had no time for more than a fleeting glance. Then too, in a few moments things came to my notice that banished all thoughts of the city from my mind.

I had turned to Claire to comment on the complete absence of life in this strange world, when her arm stretched out, pointing, and a single word left her lips.

"Look!"

Some distance ahead I saw myriads of purple spheres, counterparts of those that bore us, emerging in great clouds from a circular orifice in the base of a mountainous sphere that dwarfed those of the city into insignificance. Saw, too, countless other creatures, like three foot discs of pale amethyst, with eight opalescent tentacles, four on each side, like fantastic hubs of wheels seen in dreams. On their narrow edges these rolled, propelled along the smooth rock surface by their tentacles. And they, with the beings of mist, were moving toward us!

Then there came to my ears a mighty chorus of chimings, a jubilant, musical throbbing. Vibrant, harmonious, weirdly disquieting, it floated through the violet air.

And then we were among the floating beings, drifting through a sea of purple mist and deeper nuclei. There was a moment of great commotion; and the voices of them were stilled. Then from the eight that had formed a guard around us since we had left the Chamber of the Dome, came a chiming communication. When the bell-voices ceased, the beings moved aside, and a pathway opened to the portal of the gigantic sphere.

Along this pathway we moved, past the populace of this fantastic world, all of which seemed to be studying us curiously—and passed through the portal.

Within the silence of the chamber beyond the doorway brooded a spirit, gigantic, unearthly. A temple, this was, a temple of a vast solemnity, that seemed to hold something more ancient than earth itself. Here the violet radiance was dimmed, replaced by a soft glow, like a faint, lavender moonlight.

And here dwelt a Presence, mysterious, alive, a Presence that suggested a Deity within its shrine!

The beings that bore us swept up and out—and paused in midair. Then, as my eyes became accustomed to the fainter light, I saw the Being whose spirit filled this temple. Like a phantasm seen in a dream. Its reality was the reality of a nightmare.

A Creature of Light, it was, light in every hue of the spectrum. Smoldering ochres, flashing opalescences, warm glowing rubies, flares of emerald and sapphire—the intermingled light of gem-fires, pulsing with life that flecked the lights with flashing yellows, like the radiance of frozen suns. Such was the God, the Ruler of the Purple People. And this Being was vast; all of five hundred feet above us it reached, occupying fully a third of the space of the great, globular temple.

A moment I stared at this Thing of light in awe from my position in midair; then I was lowered to the floor. A great slab of crimson stone lay before the Being; very gently I was placed upon this, Claire beside me.

A wave of power gigantic that emanated from the Being caused me to draw the girl to me in a protecting gesture. And even in the presence of that majestic Ruler, she looked up at me with trust in her eyes! Crushing her close, I turned again to the enigmatical Deity.

The mists of gem fire were twisting and swirling in a somehow purposeful manner. And I saw a shape taking form on the surface of the Being. It was a face! A face, godlike, yet strangely human. Benevolent, kindly and benign, was the face, dispelling all doubt, filling me with awe and reverence.

And then the lips of the face moved, and the Deity spoke!

Never had I heard a voice like the voice of the Being; never, language like its language—for It spoke not in the tongues of earth, but rather with the words of thought itself made articulate, thought itself given form!

And I understood!

"Man and woman, you call yourselves, beings from the world above," the indescribable voice began. "You come to me in a time of tribulation and distress of mind.

In your world you were in great danger; in fleeing from that danger, you entered our land.

"You desire help in returning to your own world; and help will I give you. Still is there danger there, but danger it is that you are willing to face. Help would I give in overcoming that danger, were it not that I do not wish ever to return to the upper world. But even that will I do if there is need."

A vision of the evil face of Carcante passed before my eyes, and a question entered my mind. Could I overcome him? Or had he been destroyed in the beast-man uprising?

Divining my thought, the Being continued, "I see there is a doubt within you; it shall be dispelled."

AS though at a given command, one of the purple discs that had accompanied us into the temple, suddenly rose into the air and flashed down through the portal. The thought came to me that it had been sent by the Deity to investigate conditions in the valley.

"And now," said the Being, "I see that there is wonder in your minds about this, to you, strange world. While we wait, I will show you the history of the world of Novad Thasor, the God of Light."

An arm of radiance leaped from the substance of the God of Light and enveloped us, revealing new wonders to our eyes. In a great panorama, with stereoscopic clearness, the history of the Purple Race passed before us.

First we saw the Creature of Light, the entity I have called the Being, hovering over a globe of dully smoldering fire—the earth. The thought came that the Being had wandered from Its birthplace on some far-flung star, and had come to the terrestrial sphere, countless eons before the advent of life.

Then we saw a picture of the time when, in the childhood of earth, her surface was covered with waters in which dwelt only tiny, living things that knew naught but hunger and its satisfaction. Then step by step, as the waters receded, we saw the evolution of earth; saw great levels of steaming ooze, peopled with crawling things; saw the waters withdraw still farther, and green life clothe the world; saw mountains rise.

And then, when earth's surface was solid, Novad Thasor, the deathless Being, who had been there throughout the ages, bestirred himself, and decided that this green globe should be peopled with intelligent life. With the essence of life itself he labored, fashioning the beings of misty purple, and the discs of lavender stone. And these grew, and created in turn; and the earth was covered by them.

But always, new forms of life appeared to disturb them. Many they destroyed; but they were not of combative natures, disliking strife. It was easier to flee than fight. The Purple People let themselves be crowded back, giving up their great cities to brainless brutes.

And then, as consciousness grew within the Being's creations, they knew they could live in the heart of earth. So when their fleeing caused congested conditions, some made their way beneath the surface of the earth. And there, using the crafts that Novad Thasor had taught them, they followed out their separate worlds.

Monsters grew through the ages, monsters that caused great discomfort among the remaining Purple People, destroying their cities and their peace. Finally all had vanished beneath the surface save a small remnant who sought refuge in the heart of a vast range of towering mountains. There they hollowed out a great valley for their dwelling place. And there they thought to live in comfort while the ages rolled by. It was with these that the Being took abode.

But peace was not for them. The mountains that barred the monsters from the valley, sank into the earth, opening anew the pathway. In that time of Nature's unrest, it was not long ere they arose from the earth again, to close the entrance; but the damage had been done.

Into earth's heart went the last of the Purple People, into the realm of darkness where they had to make the light, but where they could dwell undisturbed. And in that nether world, the temple was built by the beings of light to house the Greater Being.

The arm of light withdrew then, and the vision ended. Novad Thasor concluded his revelation orally.

"The ruins still remaining in the valley above that I see in your minds, are the remnants of the homes we built ages ago. The way into our world we thought was closed—and it is closed! That you fell into the tube connecting our different lands was an accident. After you are gone, we will seal the way forever."

The Being grew silent, pensive, thoughtful. Then he spoke again, in that voice that was thought made articulate.

"And now I am minded to give you something that, unknown to you both, you desire. Something of peace and understanding that will make your lives happier."

With the last word that arm of radiance flashed out from the Being again, and surrounded Claire and me with an indescribable aura. For a moment our hearts seemed to pause in their beating; then there welled up within us a vast serenity, a joyful understanding. In a great flood of light the shields were torn from the eyes of our minds, and there was revealed to us our great need for each other, and the fact that we were intended for each other, that we were—twin souls!

I had known before that I loved this glorious woman; but that knowledge was nothing, compared to this overwhelming revelation.

A moment each looked deep into the eyes of the other; then my arms drew her close. Claire clung to me with her slender hands, looking up at me. My face sank to meet hers, and my mouth found her lips. Our spirits seemed to unite, to coalesce, joined by the knowledge of our mutual, our perfect love.

The arm of light withdrew from us then; and we separated. As we stood arm in arm, the Being gave utterance to Its final message.

"The Misty One I sent away went into the upper world to learn of conditions there. When he returns we will know what to do. If the danger is such as you may be able to meet, we shall take you up and leave you. If too great; we will aid you.

"Until then you will be placed in the keeping of those who brought you here. And so that your way may be made easier, knowledge of their language will I give you."

For the third time the arm of light engulfed us; a knowledge of the meaning of the bell notes of the beings came to us; and the arm withdrew.

Then, as we watched, the face of the Being dimmed—and vanished! A thing of rainbow hues it was again, enigmatical, cloaked in mystery, the god of an alien world. And again I felt that spirit of vast, inhuman

brooding, that incalculable power for good — that holiness!

I was still lost in wonder when the Purple Beings raised us and carried us from the temple. But as we passed through the city, and I heard the chiming of the bell-voices and understood their meaning, the Supreme Being took second place in my thoughts.

HERE was a civilization that was happy, serene, peaceful! Yet a civilization so strange as to be almost beyond belief. Here was a people with thoughts and emotions incomprehensible to human mind—yet a people farther advanced than man!

Through the throngs of Purple People we were borne, along a pathway that opened up before us as the great discs moved aside, their bell-notes chiming in wonder and question. Finally we paused at the base of one of the huge conical piles of spheres. Into one of the globes at the base of the heap we went, through the open, circular doorway. And there, with a chiming command for us to wait, the Misty Ones left us.

For a moment we were alone; then down a spiral shaft in the center of the sphere came one of the small, lavender discs. With opalescent tentacles pointing toward us, it remained motionless, seeming to inspect us. Then, from the roots of the tentacles came a chiming that was a replica of the voices of the Misty Ones.

"Welcome to the house of Arrasua. I have been commanded to shelter you here until such time as Novad Thasor sees fit to summon you. And now—follow."

Turning about, the narrow-edged disc rolled to the base of the shaft, and propelled by his tentacles, began to ascend. Claire and I followed. In the globe at the top of the shaft our guide halted and spoke again.

"These are your quarters," the bell tones chimed, "and here will you remain until you are called. This command has been given for your own good, inasmuch as you would become lost in a few moments, and perhaps be injured by the things of our world.

"You will be here only a very short time; soon Novad Thasor will call." And with that the disc rolled down the twining ledge. Claire and I were left to ourselves.

For a long moment our eyes met, silence between us—then I drew her to me and kissed her, glorying in our newly revealed love.

"Claire, sweetheart," I whispered then, "if we get out of this with our lives, I'll bless Carcante to the end of my days. For it was through him that I found you."

"It's more like a dream than a reality, isn't it, Jimmie?" Claire commented softly.

Long we talked of our adventures, this world, the future, and as we talked, our eyelids grew heavy. Eventually, each clasped in the arms of the other, we lay on the hard, curving floor and slept.

How long we lay in slumber, I have no way of determining; but at last we were awakened by the crystal chiming of the Misty Ones. They were calling; the messenger had returned, and they were to bear us into the world above.

Quickly Claire and I arose, and hurried down the spiral shaft so like the one in Carcante's globular home.

Two of the misty purple discs awaited us in the sphere below. When we appeared, the elfin, bell-toned voices gave us a message that made our hearts leap with relief and joy. Carcante was dead, killed by the men he had wronged. The way was clear for our return.

In a trice the beings of light had grasped us, bore us from the chamber. High above the city we were carried; rapidly we sped toward the crystal forest beyond. We were above it—past it—and the mouth of the great shaft lay before us.

One last look we cast back at the world of wonders, the world of violet lights with its never-to-be-solved mysteries, its glories—and the wondrous Novad Thasor; then we entered the shaft and sped up and up, back toward the world of man.

The speed of our return was as great as our entrance into the subterranean world. Again the winds shrieked past; again we flashed through the sea of light, the stretch of phantom peopled blackness, and the upper half of the tube. Again we passed through the great dome of leaping, purple flame—and entered the Chamber of the Dome.

Unerringly, the great discs bore us along the tunnel to the place where we had fallen from upper to nether tube. But now, where a jagged hole had been in the roof of the tunnel, was a great, perfectly circular opening, evidently made by the messenger who had gone up into the valley.

Through this we were carried, and along the tube that was lined with the dust of ages. Along this, past the point where the tunnels converged, on, on, to the opening that led to the globe in the pit that had housed the mad scientist. They bore us up the shaft into the sphere —and there they left us.

We were back in the upper world, united by our mutual love, prepared to fight our way, if need be, to freedom and happiness—together.

CHAPTER V

The End of the Titans

THE room we had entered—Carcante's laboratory —was flooded with light that fell from the atobulb hanging from the ceiling. Quickly we glanced around, quickly and somewhat apprehensively, for with the departure of the Purple People, we had lost that feeling of dreamy peace that had been ours in the under-world. And with that loss had come a momentary dread; for so much depended upon ourselves now.

The room appeared to be as we had last seen it, except for one important change. Carcante's devilish evolution apparatus was a tangled mass of ruins, its intricate parts smashed and twisted beyond use. Aside from this, nothing seemed to have been disturbed.

Satisfied that there was no immediate danger, Claire and I moved rapidly toward the shaft that led to the upper floors. We were actuated by one impulse—a desire to escape from the room that held such unpleasant memories for us both.

In a few moments we reached the floor above. As we moved stealthily through the gloom—there was no glowing bulb here—toward the exit, I wished fervently that we had appealed to Novad Thasor for help in leaving the valley. But vain regrets were valueless.

In a moment we reached our destination. The room we passed through was empty. Outside was the gray of dawn, rapidly growing lighter. We were motionless and silent for a moment, then I whispered:

"I've been thinking, Claire, that the first thing we should do is to search this globe for any lurking danger

and for weapons. All that we need fear are the beastmen, and perhaps the monsters; for Carcante is out of the way. And if we're armed, I don't think we'll have much difficulty with the former two. We're almost certain to find firearms of some kind; and it's essential that we get them as quickly as possible."

The girl acquiesced, so we started through the sphere together. In the studio on the floor above, I found a metal container that held Carcante's films; after a second's thought, I took these with me. The upper floor, like the other two, was empty. No one except ourselves was in the sphere.

In the laboratory, in a small chest, we found the weapons we sought. Two automatics, there were, and two cartridge belts, each filled with ammunition. Besides these, there was a high-powered rifle; but we left the latter. I could find no ammunition for it. With the pistols in our possession we were possessed of renewed security.

Soon we were back on the main floor of the sphere.

"Before we venture out, Claire," I said, "I think we had better eat a bite—we don't know how long it'll be before we have another opportunity—and map out a plan of action. We'll have to gamble, of course, but the less we leave to chance, the better."

As we began this, our last meal in the valley, we realized that we were very hungry. It was a long time since we had last eaten, and we attacked the fare with great gusto. In a short time it was gone, and the knapsack was empty. I was about to cast it aside, when a sudden thought came to me. Picking up the film container, I transferred the reels to the knapsack.

"In these films," I remarked to Claire, "lies proof of our experience, and a fortune. Any 'movie' corporation will pay a fabulous sum for them; and we may need money later on."

We discussed plans for the immediate future then, finally deciding on the following course of action: First we'd return to the wreck of my plane; I had a pair of binoculars there that I wanted to secure; they'd be of help in escaping from the valley. Then we'd try to find the place where Carcante's monster helicopter was stored, for with this we would try to return to civilization. If we were successful in our quest, the future would take care of itself. If not—we'd have to adjust ourselves to changing conditions as best we could.

Our planning finished, I took Claire in my arms in a final embrace. What fate lay before us, we could not ascertain; perhaps we would be parted by death ere five minutes went by.

"Whatever happens, beloved," I admonished softly just before we left the sphere, "remember to save the last cartridge; and at the worst, use it on yourself. Better real death than a living death at the hands of the beastmen."

Stealthily, though rapidly, we started across the floor of the pit toward the spiral ledge. There was no sign of life; but the mouths of the caves that lined the ledge seemed to yawn menacingly. Around and around we went, ever upward, our automatics held in readiness, and our every sense alert for any manifestation of danger.

We had almost reached the safety of the top of the pit, and I had begun breathing easier, when something moved in one of the caves and suddenly the comparative silence was rent by a shrill, brutish scream. I fired a shot into the darkness, and the scream ended abruptly.

But the damage had been done. In a second every cave emitted a horde of hairy men and women. The ledge became aswarm with them.

"Run, Claire!" I cried, firing at those nearest to us. "It's our only chance!" Claire's automatic spat a stream of fire as she leaped ahead. There was a gap before us: the beastmen seemed to hesitate in indecision; in that moment we got through.

I turned and emptied my pistol into the faces of our pursuers in a sweeping flood of death. Claire did likewise. The beastmen halted under the scathing fire, then turned and dashed madly down the ledge. And we, in turn, fled into the jungle, reloading our automatics as we ran.

With all possible speed we crashed through the underbrush. I had no idea where my plane was; and because of that, we had about one chance in a thousand of finding it; but we kept a sharp lookout for the clearing in spite of that.

And then I saw it! It was some distance away, but I could see the open space through a rift in the tree ferns. We changed our course, heading in that direction.

In a few minutes we stood beneath the mighty tree that held my plane. For a second we eyed the machine that, had it been intact, would have given us an immediate means of escape; then I exclaimed hurriedly:

"The beastmen may attack any time, Claire, and if they do, I'm afraid our pistols won't be a very great protection, for they can overpower us by sheer force of numbers. If we can get the machine gun down from the plane, we can defend ourselves against a regiment."

I was about to start climbing to the plane, when a violent motion in the jungle appraised me of impending danger. Intently we peered through the trees, waiting with ready automatics.

Suddenly the underbrush was thrust aside at a dozen places and as many beastmen leaped toward us. Our pistols hurled twin streams of death at our attackers, halting them before they reached us.

But simultaneous with the roar of our automatics, we heard a chorus of guttural shouts directly behind us. I whirled—and a well-directed blow tore the automatic from my hand!

I have a vague recollection of a whirling melée of hairy arms and legs; a picture of Claire battling bravely; then a clap of thunder about my ears—and utter blackness.

A DULL, gnawing ache in every muscle of my body, a thundering throbbing in my head—these, together with a singular lassitude, were my sensations when conscious life returned to me. Weak, sick, and dazed, I lay there, barely aware that I was alive.

For the moment, my mind, groping blindly through a nightmare maze, was occupied solely by thoughts of the torturing pain that gripped me; then suddenly to my brain flashed the thought of Claire! An intense, yearning wonder for her welfare, and a sickening fear lest she be dead, flooded my mind, banishing every thought of myself.

With a tremendous effort, gasping and shaken, weak and unnerved, I managed to raise myself upon one elbow, and to peer about me. I was alone. All about lay the steaming, prehistoric jungle that surrounded the clearing; but nowhere was there human life. Here and there, a sign of the struggle; here and there a little pool of blood—but I was alone!

And then the thought flashed upon me with increased force, "Claire was gone!" Full realization of this forced itself upon my dazed perception and acted as a goad to my rebellious muscles.

"Claire! Claire!" I gasped, and struggled to my feet. For a moment I stood there swaying, my mind striving to grasp the magnitude of what had occurred.

Slowly my mind cleared—and with returning clarity of thought there came to me an overwhelming realization of my incalculable loss; and the wreckage of all our hopes and plans for the future. The weight of my grief and self-condemnation for the loss of the girl I loved, coupled with the weakness of my body, almost deprived me of my senses for a second time; then a fleeting thought went straight coursing through my body again.

Perhaps there was still time to save her! The sun was well past its zenith, so I must have been unconscious for a number of hours, but there was a bare chance that she was still alive and unharmed!

Hurriedly I circled the natural clearing with my eyes, searching for my automatic. A moment sufficed to convince me that it was gone; evidently the brutes had taken it with them even as they had taken their dead fellows. Why I had been left behind, I could not say, unless it was to furnish a meal for some carnivorous reptile.

With the pistol gone, but one thing remained—the machine gun in the plane.

My weakness and pain forgotten, I began climbing the giant tree. My progress seemed painfully slow; but finally I reached the limbs that supported the wreck of my machine. And there I stopped short, my eyes caught by a queer phenomenon.

By chance I had glanced through the branches at the tall, cone-shaped mountain I had seen in my first inspection of the valley. From my vantage point high above the ground, I could see it clearly, rising into the air no more than a half mile away. But it was not the peak itself that had caught my attention; rather was it the amazing parade that was ascending one of the gradually sloping sides.

In single file, one behind another, stegosaur after stegosaur was ascending the mount, forming a great, reptilian parade, astounding and unnatural. And on the back of each was a beastman!

What could it mean? Beastman and stegosaur climbing to the flat, tablelike top of the mount! For what purpose?

To answer these questions I secured the binoculars from the cockpit of the plane, and trained them upon the parade. Suddenly the glasses fell from my nerveless fingers; and I caught a branch to prevent myself from falling. Their purpose I could not tell, but that it had to do with Claire, I was sure, for there, on the back of the foremost stegosaur, bound hand and foot, and held in the arms of an abnormally large beastman, was the girl!

For a moment my mind was blank—but only for a moment. Then a frenzy seized me, and my mind whirled madly. What could I do? Something had to be done immediately—but what? I had to reach the peak, but how?

And then a sudden thought arrested the wild gyrations of my mind. Frantically I grasped it like the drowning man grasping the proverbial straw. The stegosaurs! Perhaps there was one remaining in the corral that I had seen on Carcante's screen!

With a machine gun for a weapon, and a stegosaur for a steed, I might still be able to rescue her!

With mad haste and with fumbling fingers that almost refused to do my bidding, I freed the machine gun from its fastenings. After a second's hesitation, I dropped it to the soft loam that made up the floor of the clearing. Then, seizing a box of ammunition, I flung myself from branch to branch until I reached the ground. And there the box slipped from my hands—and I stopped short, frozen in consternation.

Not more than ten feet away, contemplating me sullenly, stood a titanic, red-eyed monster. In horrified fascination I stared at it, my eyes taking in with painful detail, every contour of its thirty-foot length.

It looked more like a gigantic, long-tailed rhinoceros than a reptile, with its heavy, gray knob-encrusted hide covering its body with great folds of overlapping armor. It possessed three great horns—one, fully a yard long, above each eye, and the other, smaller on the tip of the nose. A large, bony, parrot-like beak, and a mighty, tapering tail completed the list of its offensive weapons. Its defensive armament included its armor-plate hide, and a great, collarlike shield that extended back from its head. Fully fifteen feet high, it was far larger than the stegosaurs.

In a flash I had seen all this; a second later my eyes were casting about for some means of defense. All that rewarded my search was a heavy, ten-foot club, like those that the beastmen habitually used when riding their stegosaurs. This lay an arm's length away from me.

At times of great nervous strain the mind does peculiar things. Mine did at that moment. In a flash I remembered the scene back in Carcante's studio when he had shown me the picture of the beastmen on the backs of the stegosaurs; had told me that they had had little success in riding any of the other reptiles, except the one called triceratops, a monster that was controlled by blows delivered on the middle one of its three horns. This was a triceratops!

A second this thought had taken—in another second I had stooped and seized the club. A bellowing roar from the triceratops as it lumbered toward me—a sudden side snap at me with its great beak—and I raised my staff and struck it a vicious blow upon its median horn.

I ADMIT that I felt anything but optimistic about the results of that blow; but they were all that could have been desired. The triceratops stopped short, looking at me in stupefied surprise, while a low rumble came from the depths of its barrel-like chest. A second time it snapped at me; and again I struck its middle horn, a far heavier blow than before. The monster rumbled faintly in protest; then turned away.

My first thought had been one of self-preservation, a necessity to subjugate the titan to save my life. But as it turned away, I realized that here was a way for me to reach the peak. There was no need of my depending upon the chance of a stegosaur having been left behind—here was a steed far more rapid!

Raising the machine gun from the place where it had buried itself in the soft earth, I walked around to the triceratops' rear, staggering under the weight of the weapon. Working my way up the broad tail, I placed the gun in position on the brute's back. Returning to the ground, I secured the ammunition, and carried it up beside the weapon. Then, perching myself in

back of the great shield that protected the creature's neck, I managed with much prodding, and with occasional blows upon the median horn, to start the triceratops moving through the jungle.

The monster's pace was slow at first, but as we proceeded toward the mount, it became a headlong flight at express-train speed. Great tree ferns and cycads were thrust aside as though they were non-existent. Nothing could stop this colossus. I had all I could do to prevent myself and the machine gun from being cast to earth.

Finally our headlong flight brought us to the base of the mount. Ere this, of course, the stegosaurs had reached the top. With undiminished speed we followed. Up the long slope the mighty muscles of the triceratops bore me, until we reached the flat that was the mount's apex.

With a wide, sweeping glance I took in the scene. Claire was lying on the top of the stone table, six foot high, in the center of the flat. The huge beastman who had carried her, was circling about her in a halting, rhythmic dance, a stone dagger raised high above his head. And each circle brought him closer to Claire!

This had been a human being—the thought flashed upon me—but his return to the primitive had been complete, he was more beast than man! Back to the primitive, preparing to make a sacrifice to some god that the brute minds of the beastmen had conjured up.

The stegosaurs with their riders were ranged about the edge of the flat in a great, uniform circle.

For a moment the scene was as I have described it; then things changed with lightning rapidity. As a blighting rain of steeljackets poured from my machine gun, cutting off the life of the brute with the dagger like a snuffed-out candle flame, pandemonium broke loose. I sprayed the circle of beastmen with death; under the scathing fire they lost all semblance of order.

Only a few seconds had passed since my advent on the top of the mount, and already fully a quarter of the beastmen had been swept from the backs of their steeds. According to all indications, Claire would be rescued.

But as I turned my attention to those remaining, something occurred that I had not taken into my calculations. The triceratops, until now entirely motionless, probably paralyzed, stunned by the inexplicable roaring on its back, leaped suddenly into frenzied action. A ten-ton battering ram of infuriated flesh, it ran amuck among the stegosaurs, burying its horns in their bodies, ripping their flesh, and lashing out in insane fury with its mighty tail.

In the first moments of the triceratops' madness, the machine gun and ammunition were hurled to earth. And all that saved me from a similar fate were the great knobs and crevices of the creature's hide. Clinging with hands and feet, I managed to retain my position on the wildly swaying back.

In less time than is required for the telling, the top of the peak became a scene of wild confusion, with the squealing stegosaurs leaping about aimlessly, beyond the control of their riders, and the triceratops hurling himself again and again upon every reptile that came within reach. One after another the stegosaurs fell, life destroyed by the monster that carried me.

But the triceratops was weakening. It had not emerged from those numerous encounters unscathed; the razor-edged shields on the backs of the stegosaurs, and their lashing, spiked tails had inflicted great wounds on the larger brute. Now less and less violent became the monster's attacks. The end, I knew, could not be far away.

The end—when the great beast would fall, and I would be cast from its back to be trampled under the feet of the stegosaurs! The end—with Claire lying bound and helpless on the stone table, left there, perhaps, to die of thirst, or if taken away, to meet a fate worse than death——

Then without warning of any kind, cutting off my gloomy musings, all motion on the mount ceased! Triceratops, stegosaurs, beastmen—all were still. In stark amazement I tried to move, to determine the cause of this inexplicable cessation of all movement—but I could not! I was paralyzed!

For a moment nothing happened—then a cloud of purple mist surrounded me, and I felt myself drifting slowly through the air! And suddenly a great peace settled upon me; there was naught to fear now. The Purple People, the people of Novad Thasor, had come to the rescue!

In a sudden burst of speed I was borne high above the peak. A second purple disc was waiting there, a disc that held Claire within itself. She smiled at me reassuringly; in spite of her bonds she was uninjured!

AND then something impelled me to look down. Below us, and some distance to the left, hovered a great, purple sphere. Not a disc, this, but a great, cloud like globe, made up, I could see, of the Misty Ones. It was fully as large as the mighty temple that housed Novad Thasor.

As I watched, there was a motion in the sphere. It began to turn slowly as on an axis. Then from its base spurted streams of white flame. They fell upon the paralyzed brutemen and reptiles on the mount, and flowed and splashed over them. In the bodies was a dreadful movement, stiffening—dead nerves responding to the blasting flood of energy passing through them.

Over the entire flat the white flame flowed, touching man and monster as with a caressing hand. There was a sound like the crackling of broken glass—and both living and dead flamed up—and were consumed.

Where not more than five minutes before there had been a bedlam of struggling men and beasts, there were now only little, whirling clouds of gray dust. Slowly these settled to the top of the peak.

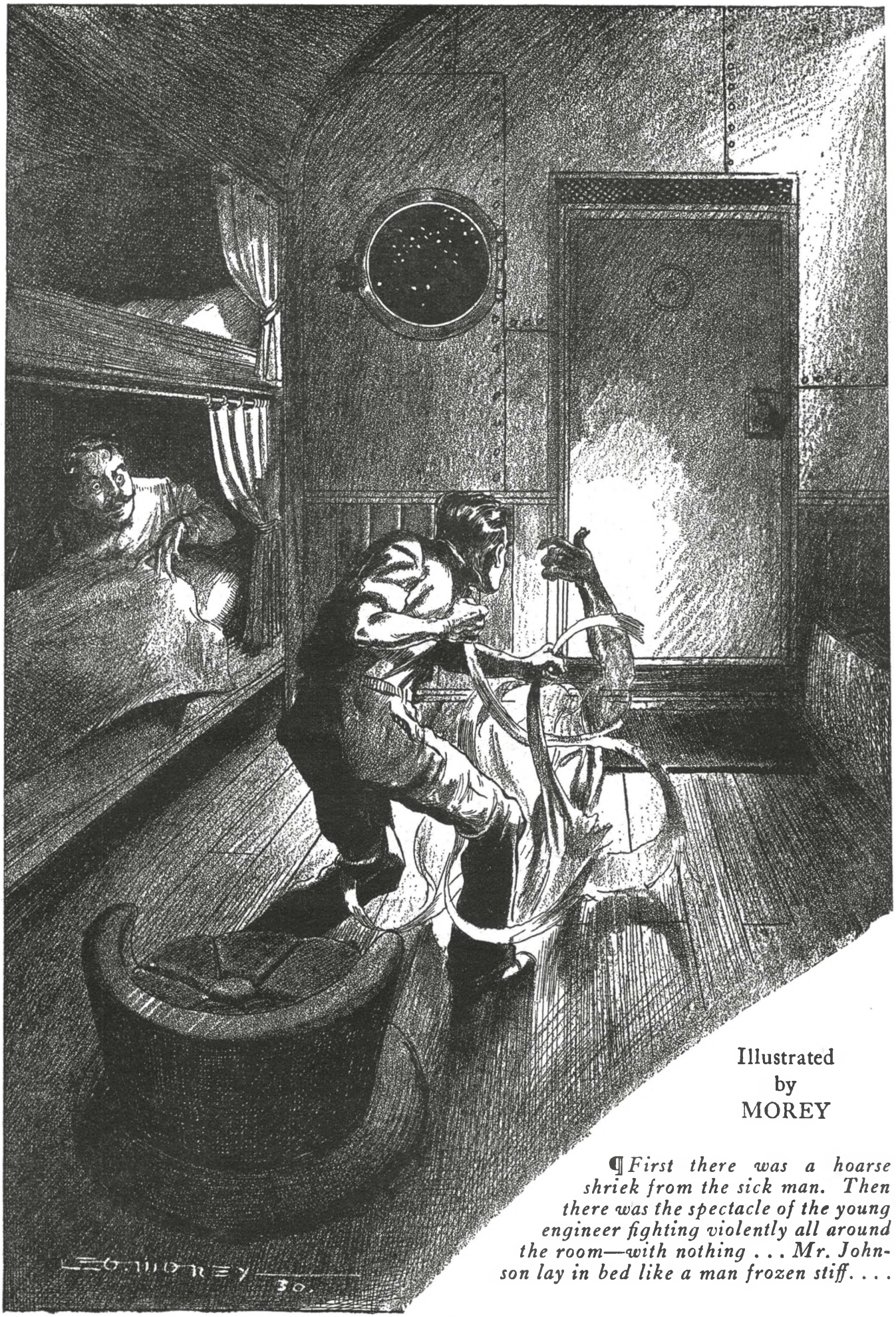
A moment more the great globe hovered there; then it flashed down into the valley. The discs that held us followed. Above the floor of the valley the sphere paused hesitantly; then it flashed off at a sharp tangent—flashed off and settled to the earth. In a moment we were beside it.

We had landed in a large, fenced enclosure, in the center of which was a low, oblong building, constructed of rough timber. The Misty Ones released Claire and me before the sliding door that led into the building. After I had removed the cords that bound the girl, a command came for me to try the door. It was unlocked; and in a moment I had thrust it aside.

Rapidly my eyes adjusted themselves to the gloom of the interior—and I saw what the building housed. This was the dead scientist's airplane hangar; here he kept the giant ato-helicopter that he had used in securing his subjects. The Purple People had saved us; and now they placed before us a means of escape from the valley!

Quickly Claire and I rolled the helicopter from the

(*Continued on page* 1115)



Illustrated
by
MOREY

¶*First there was a hoarse shriek from the sick man. Then there was the spectacle of the young engineer fighting violently all around the room—with nothing . . . Mr. Johnson lay in bed like a man frozen stiff. . . .*

On Board *the* Martian Liner

By Miles J. Breuer, M.D.
Author of "The Gostak and the Doshes," "Rays & Men," etc.

WHEN space travel is an accepted matter—who knows but that it might be soon—there must undoubtedly be much room for adventure—not only what we know would be incident to the danger of moving through space, or what would be due to the unknown factors that might be met with on landing. Because a man is going through space, it is not a foregone conclusion that he will become all that is noble. Neither will mysterious offenses be confined to the earth. But we can't send a detective on every ship. Dr. Breuer has a much better plan and amply proves the efficacy of his method in this thrilling short story. There is definite literary merit in it and scientific interest.

"YES sir!" said "Streak" Burgess, star reporter of the *Times,* into the telephone.

"And write me up a good feature-article of the trip," the editor's voice barked into his ear. "Give me vivid, human stuff. The public is sick of these dry science articles. And remember that we're trying to arouse people to space-mindedness. Here's three good planets, with no end of business opportunities, and the people are asleep. Wake 'em up!"

Burgess hung up the receiver and whirled on his heel.

"Where do you have to go this time, Mr. Burgess?" inquired a youthful voice at his side.

"Oh, hello Chick!" said Burgess.

Burgess knew Chick merely as a boy of about seventeen who ran loose about the premises of the Club on his father's membership, and who in his youthful fashion idolized the popular and successful reporter. In spite of the discrepancy in their ages, the two had become chummy, although Burgess hardly remembered Chick's real name. Johnson, or some such common, everyday name, it was.

"I've got to start for Mars in four hours," Burgess explained. "You see, to the *Times* managing-editor, a reporter is not a person; he's merely a projectile."

"Oh, Mr. Burgess, please take me with you. Please do!" implored the boy. "I'll pay all your expenses in grand style. Please let me go with you. I'd give anything to go to Mars!"

"Well, at least *you're* space-minded anyway," the reporter laughed. "I'm sorry, kid," he said gravely. "I couldn't do it. It would get me into trouble with my paper. And the laws are mighty strict about anyone under twenty-one going up in a space-liner, except under the care of a parent or guardian. But, I'll tell you all about it when I get back."

"I'm going to Mars some day!" the boy said desperately. "I'll show you!"

"I haven't the least doubt about it," Streak Burgess laughed. "I wish I could take you along. I'd do it just to get you away from that precious gang of young toughs you are running with. I've got to meet your father some day and warn him that if he don't get away from his money for a while and look after you, you'll—you'll get into bad company."

"You mean The Science Club?" Chick asked.

"Sweet name, I'd call it. Remember, Chick, I've seen a lot of the world. Your Science Club looks like a bunch of crooks to me, who are going to use you for a tool. Your ugly president with the birthmark on his cheek is all labeled for the electric chair."

"Oh, Pug? Pug isn't bad. You just ought to know him better," Chick protested with the faith of youth.

"Well, so long!" Streak Burgess went off with the speed that had earned him his nickname. Momentarily he forgot the adventure-hungry boy; and when the time came to leave the Club and betake himself to the space-port, Chick was nowhere to be found.

The departure of a space-liner is always a thrilling spectacle. To the casual onlooker, it looks like a mad, chaotic turmoil of people and vehicles about the base of the vast, silvery bulk that looms hugely into the sky. Immense trucks backing up with the last consignments of fast freight to the platform overhung by countless

cranes reaching out of the blackness of the vessel's ports; a stream of lighter trucks carrying baggage; one aero-taxi after another depositing now a man, now a woman, now a group of several on the platform; the flashing of the brilliant uniforms of the space-fleet officers, the hoarse shouts of the crew and stevedores, the dense crowd outside the railing, waiting for the moment when the bulging vessel would rise slowly and majestically upwards, and disappear as a brilliant speck in the sky. Who has not been thrilled again and again by the arrival or the departure of a space-ship?

The reporter was at the dock early, watching. His job as observer of human-nature on a Martian trip had begun. Already he was making notes in his mind: the timid-looking little lady who had just stepped out of an aero-taxi and hesitated a moment, clasping her hands and drawing a deep breath before plunging into the blackness of the ship's door, must be on her first trip. But the two swaggering men who walked nonchalantly in, puffing their cigars over some sort of an argument that was more important than the picturesqueness of the scene, must have made the trip more than once: obviously commercial traveling-men. All of a sudden he noted Pug's purple cheek on the platform. The presence of the big bully on the spot gave Burgess an odd sense of uneasiness. But, in a moment Pug was out of sight, and Burgess saw no more of him.

Burgess waited at the edge of the platform, watching the passengers go aboard, and planning to be the last one to go on himself. Just as the edge of the platform, which was really the lowered hatch of the ship's door, began to rise, he stepped up on it. As he did, a sudden commotion arose that nearly startled him into falling off. An aero-taxi dashed down dangerously near the heads of the crowd, and skimmed within a hair's breadth of the rising platform. Out of it jumped and rolled and landslid a great, round bulk of a man, showing a red face now and then as he pursued his pell-mell course down the rapidly inclining platform and into the ship's door. Three traveling bags hurtled out of the aero-taxi into the ship's corridor.

Fat man, traveling-bags, and Burgess, all landed in a heap on the floor of the bottom-corridor, as the big hatch swung to. Burgess, still on his feet, backed away. Down the corridor to the right, was more commotion: shouts and clanking and the roar of motors. Some belated piece of freight was being forced into the other door, against the protests of the ship's crew, who had already begun to close the hatch. When that was over, Burgess looked at the fat man who sat on the floor among his traveling-bags, a rueful picture of melancholy despair. He tried to rise, and his face twisted into an expression of pain because of some bruise.

"Porter!" he yelled sharply. "Porter!"

THE great, ungainly figure of the porter stalked down the corridor from the left. Gently it helped the fat man to his feet and picked up his traveling-bags; and the two of them departed into the gloom of the ship.

The porter was a size No. 3 televox-robot. He stood six and a half feet high, and moved with a curious croaking sound. There is a rather odd thing about the televox-robots that the General Electric has never been able to explain: although their manufacture is rigidly standardized nevertheless each machine turns out to have its individual peculiarities, and differs from all the others. It seems to have a personality of its own. Machines of this type have a square head with eyes and ears, an opening for oil, and a little diaphragm with which they can answer simple questions of a routine nature.

"When you're through, come back and show me my room," Burgess called after the robot.

And indeed, in a few minutes the huge figure came stalking back, its queer croak re-echoing through the metal corridor. The porter led Burgess to the elevator, which carried them off to the upper deck. In contrast to the glaring confusion outside, it was cool and quiet inside the ship. As the elevator went up, they left behind the musty odor that came from the hold, passed the smell of oil and ozone that came from the engine-room level, and stepped out into the fresh air of the passengers quarters, where the air-renovating apparatus had already been started. The mahogany enamel on the duralumin walls, the upholstered velvet furniture, the soft green- and brown carpets all looked quite pleasant and comfortable, and Burgess felt a little glow of anticipation of a few comfortable days ahead. Most people considered the trip a hardship and a nuisance, but his life was a lively one, and for him the trip would mean a rest.

The passengers' quarters occupied the topmost level of the after portion of the ship. Ahead of them were the officers' quarters, and forward of these, the quarters of the crew, or the forecastle. Below was the vast hold for freight, except in the center of the ship, where the machinery was located.

Burgess took a look about his stateroom and then hurried to the after-gallery. Always the passengers congregate in the above place when the ship takes off; for it is entirely walled in with glass, and from it the Earth can be seen sinking downwards. Even the two traveling-men who had already made a dozen trips, were looking eagerly down out of the window, for no one can ever become quite accustomed to that amazing spectacle. The Earth at first seems like a huge *concave* bowl, with a high rim all around, and a deep cavity below. The rim sinks lower and lower, and all of a sudden by some queer magic, it has become small and *convex*. Even after one has seen that change a dozen times, one never gets over the wonder of it.

There were twelve people gathered in the after-gallery; twelve people who were daring to venture across sixty million miles of space; who were to live together for six days almost as closely as a family. Five of them were women. The only one absent was the poor old fat man who had boarded so precipitately. The sounds of the sealing of the ports had ceased, the hammering, the sizzling of air, the shouts, the grating of huge screw-levers. Then came the toot of the hoarse whistle and the roar of the reaction-motors.

In a moment the two traveling-men had turned away and were deep in argument about the cost of some commodity. They were always arguing about prices. A newly-married couple who were making a honeymoon out of the trip, were whispering excitedly to each other. The little lady whom Burgess had already observed coming aboard, had her face set hard; the emotion of the moment was almost too much for her. She was a Miss Waterbury, a Pittsburgh school-teacher who had been saving her pennies for years in order to make the trip to Mars. Possibly her expression was due partly to the sickening sensation which was felt for a few moments by all, as one feels a sinking when an elevator starts.

One by one the passengers trickled away from the after-gallery, down the corridor, into their staterooms or into the drawing-room at its opposite end. Burgess' stateroom was at the middle of the corridor and just opposite that of the fat man, whom he could see sitting glumly in the corner as he went into his own room. Next to him he could hear an elderly couple fussing vehemently; later he became acquainted with them as Colonel Thayer of the Air Guard, and his wife, en route to the Colonel's new post on Mars.

At the dinner-table, Burgess got a good look at all the passengers. Always there was in his mind the question: Why are these people taking this trip? What motives prompt them to risk their lives to get to Mars? One by one he checked them, and all of them seemed to be quite in place, except the poor, nervous, timid old fat man. Next to Burgess sat Kaufman, a keen, able-looking man, who was on his way to look into some business openings, which on that new-old world, with its degenerate inhabitants and its wealth of heavy-metal ores, looked wonderfully promising. Across from him sat the fat man, anxious, worried, thoroughly miserable. Next to him were a wealthy young society couple, utterly bored and *blasé*, hoping to find new thrills in a new world, because everything on Earth was tame to them. Then there was Kaufman's secretary, a very pretty young woman who was just now in the thrills of delight because the young engineer, Harry Flynn, going out penniless to seek his fortune on Mars, had turned out to be an old home-town acquaintance of hers.

One could understand why these people were on the trip. But the red-faced fat man was the soft, comfortable type of person, who groans when he has to get up out of his chair. He looked timid. He looked as though he ought to be by the fireside in bathrobe and slippers. What did he want on the long, hard, dangerous trip to Mars?

Mystery on Board

AFTER dinner, Burgess managed to stroll down the corridor, just behind the fat man, in the hopes of getting better acquainted with him. Several of the passengers went out on the after-gallery to contemplate the marvelous wealth of brilliant stars in their inky black setting; but the fat man headed for his room. As he stepped into his door, Burgess touched him on the shoulder, intending to start a friendly conversation. The fat man gave a violent start and whirled about; and Burgess found himself looking into the muzzle of a big forty-five automatic pistol.

The fat man was white and trembling; one could see that he was not used to handling a pistol. But that made it all the more dangerous for Burgess, at whom the thing was pointed. With a quick movement, Burgess ducked to the ground and knocked the pistol out of the man's hand. It fell with a crash to the floor. Hoping that no one else had heard it, Burgess swept it up, pushed himself into the stateroom, and closed the door. He sat down with the gun on his knees. The old man was backed into a corner facing him, pale as a sheet, and panting desperately. Burgess was tremendously sorry for him.

"Now what's the trouble?" Burgess asked kindly. "I certainly wouldn't do you any harm."

"Who are you?" the old man panted.

Burgess flipped his coat lapel and showed his badge.

"I am a *Times* reporter. Tell me what you are afraid of. These little affairs are right in my line, and perhaps I can help you out."

The fat man studied Burgess for some minutes. Finally, without a word, he reached into his pocket and handed out a letter for Burgess to read. It was written in white ink on a brilliant scarlet paper:

"Most of the recipients of the red letter have been wise enough to hand over the money promptly. Three were foolish and refused. They were Lowell, Hirsch, and Carlotti. Do you remember what happened to them? No one can save you from the same fate unless you fork over at once.

"I need another million dollars for my project. You can spare it as easily as the ordinary man can spare a quarter. Have it ready in twenty-four hours in liquid securities or banknotes. A man will call for it at your home. He does not know me nor where I stay; therefore, if you have him followed, the money will be lost, and I shall be compelled to use you as an example to the next man upon whom I call for help.

"If I do not get the money, there is no way in which you can escape me, no place where you will be safe. I'll get you, no matter what precautions you take."

"I got it early this morning. Do you remember Lowell, Hirsch, and Corlotti?" the fat man asked.

The reporter nodded.

"Three hideous murders of wealthy men within the past year, and unsolved to date," he mused. "The letter seems to have been written by a man who is intelligent, but somewhat insane. That's the most dangerous kind. Have any idea who it might be?"

The fat man shook his head.

"Now, I'm worried because of the impulse which made me rush to this ship as soon as I got the letter. I thought this the best way to escape. But, after I had thought it over, I realized that to anyone else, it would obviously be the first thing I would do. I'm afraid I bungled."

"Why should flight on a space-liner be so obvious?" the reporter asked.

"Well, you see, I'm Johnson, the president of the company that owns this line, *The Mars, Ganymede, and Callisto Transportation Company.* I was so scared by the letter that I did a very simple-minded thing to come here."

There was a rap on the door, at which Mr. Johnson started violently. It turned out to be several sailors, making the routine search of the ship for stowaways. Behind them came the Captain of the ship, and peered into the room.

"I got your letter of introduction," he said gruffly to Burgess. Then he spied Mr. Johnson.

"Oh, how do you do, sir," he said, all meekness and courtesy. "I've got to be careful," he explained to the President, who was virtually the owner of the vessel. "There has been too much of this stowaway stuff. There's danger in it, and the law has recently made it a capital offense. A few weeks ago, on the *Aristotle,* a

little overcrowded ship twenty-one days on the way to Ganymede, a stowaway used up more air than had been figured on; this in turn resulted in a deeper breathing on the part of the passengers, which exhausted the oxygen supply prematurely, and the ship arrived in port with half a dozen passengers unconscious from asphyxia. If I ever find one of those rats on my ship, I'll—"

He strode down the hallway, finishing the threat into his whiskers.

"Unless a stowaway is discovered, your enemy, if he is on board, must be one of the passengers," Burgess said to Mr. Johnson. "Could that be possible?"

"I don't know any of them. And he might be anybody." Mr. Johnson looked very much depressed.

"Well, I'll stay here with you and keep an eye open. You're not afraid that I might be the man who is trying to kill you?"

"I don't think so." Mr. Johnson studied the reporter. "There is your badge, and Captain Scott knew you. I shall be glad to have you stay."

"Or," suggested Burgess, "perhaps it would be better yet for both of us to move into my stateroom."

Mr. Johnson nodded in acquiescence, and started to push the button to summon the porter. Burgess stayed his hand.

"I'll carry your things. The fewer the people that know about this move, the better."

For eight hours of the twenty-four, the lights were turned down, and "night" prevailed on the ship. During the "evening" the wild young society couple were playing bridge with the two traveling-men. Mrs. de Palogni's voice grated unpleasantly on Burgess' ears; but the sight of the honeymoon couple close together on the after-gallery again served to redeem his attitude toward his fellow-men. He could imagine the thrills that the two young people got out of being all alone out in space, with nothing but stars in all directions, and the brilliant disk of the Earth below. In another corner, Miss Waterbury and Cecilie May, Kaufman's pretty secretary, already well acquainted, were lost in wonder at the Heavens beneath them. The porter came croaking down the corridor. With a whispered "good-night," Burgess put Mr. Johnson into the upper berth and took the lower one himself, for strategic reasons.

SOME time in the night, Burgess woke up with a start. He glanced out of the port at the brilliant stars and the dense black sky, and felt his heart pounding in some unconscious alarm. He lay still and listened. There was a faint clicking sound, which came, was silent, and came again. It issued from the door on the opposite side of the corridor.

Burgess got silently out of bed, taking his pistol in one hand. Then, suddenly he threw open the door of the stateroom. A dark figure was just opening the door of the stateroom opposite, the one that had been Mr. Johnson's. It whirled and ran up the corridor. In an instant Burgess had snapped on the corridor light and was speeding in pursuit.

The dark figure ran ahead and into the drawing-room, with Burgess in pursuit. The drawing-room was dark; Burgess went in rather cautiously, pistol in hand. He found the switch and snapped on the light. There was no one in the room. With amazed glances he searched the room, but no one was there. He hurried to the door opposite the one by which he had entered, but found it locked. It was always kept locked, for it led to the officers' quarters. It could not have been unlocked and locked again during the second or two that it had taken him to turn on the light.

Burgess stared blankly around. The fugitive had disappeared!

The Stowaway

DOWN the corridor, doors were opening and sleepy heads were poking out. The porter stalked up, the whirring of his gears audible in the night's quietude.

"Do you want anything?" he asked in soft, courteous tones.

"No," said Burgess. "I couldn't sleep, and came to find something to read." He had decided to say nothing for the present. Then he was assailed by a foolish little feeling: the porter could understand his "no" but nothing of the rest of the explanation. It was difficult to keep in mind that these things were only machines; one felt like treating them as conscious human beings.

The passengers retired sleepily to their respective rooms, and the porter returned to his niche; his faint croaking stopped and the night was quiet again. The hum of the ship's reaction-motors was barely audible, for once the ship got under way, very little power was needed to maintain velocity.

Burgess was tremendously puzzled. The crew's thorough search had found no stowaway. It must be one of the passengers. Which one could it be?

He studied them all over at the breakfast table. They were all present except Mr. Johnson and Colonel Thayer's wife, both of whom were a little ill with space-sickness. Though the artificial gravity-fields had pretty well overcome space-sickness, some people were still susceptible to it. After breakfast he talked the matter over with Mr. Johnson, who lay in his berth, pale and nauseated.

"If anyone wants to kill me, why don't they do it now?" he asked with grim humor at his illness.

"Here they are." Burgess checked over the passenger list. "Kaufman is a big business man; the Colonel is a soldier; Cecilie May, Miss Waterbury, and Mrs. Thayer can be left out; they are not criminals, especially not murderers. The de Palognis are too rattle-brained; they couldn't even think up such a scheme. That leaves the two traveling-men and Flynn, the young engineer, and they're impossible. It *can't* be any of the passengers."

Mr. Johnson called for the Captain, who appeared in the stateroom shortly. The matter was explained, but the Captain was inclined to laugh at it.

"Impossible!" he snorted. "We went over this ship with a fine-toothed comb last night."

"Could it have been one of the crew?" Burgess asked.

"Say!" exclaimed the Captain. "Those fellows have to work. If one of them left his post for ten seconds, he'd be missed."

It was decided to take young Flynn into their confidence. He looked to be a very honest and earnest chap, with just the alert type of mind that was needed to help solve such a riddle. The plan was that either Burgess or Flynn would be constantly on guard.

By noon Mr. Johnson felt better and was up and around. In the afternoon the Captain sent word that they were passing quite near a large asteroid, and all the

passengers were gathered in the after-gallery. Most of the passengers gazed in puzzled silence at the bleak and jagged surface of the huge, rocky fragment outside; only the de Palognis were trying to crack a few cheap jokes about it, comparing it to a French pleasure resort, where they had tried to amuse themselves last summer. Mr. Johnson left the group early and went back to lie down. Suddenly his cries resounded from the corridor:

"Porter! Porter! Help! Help!"

"Buzz! buzz! buzz!" came the porter's busy-signal. It meant that he was engaged on some other job and could not come at once.

Flynn and Burgess were in the corridor in a couple of leaps. There they saw Mr. Johnson struggling and panting—alone. He was dishevelled and breathless, and as they appeared, sank slowly to the floor.

"What is it? What's the matter?" Burgess demanded.

"Something—somebody grabbed me by the throat," Mr. Johnson gasped. "But I couldn't see anything."

Burgess wondered if Mr. Johnson's illness and terror had begun to derange his mind. The porter came up and helped them carry the old man to his berth. No, the old fellow was, in spite of his nervous timidity, too shrewd and level-headed to go off that way. Something must really have happened. The passengers, remembering the scare during the night, gathered in the drawing-room and questioned each other.

In a couple of hours, Mr. Johnson felt better and was trying to be cheerful. Burgess, who had been at his side all of the time, noting that the old man was dozing, decided to let him sleep. He called the porter.

"Watch him while I walk about a little," he directed. "If he wants anything, call me."

As he came into the drawing-room, Burgess was assailed by a hundred questions. Mr. Johnson's identity had become known to the passengers; and this occurrence, combined with that of the "night" before, had roused their curiosity. He was still puzzling, trying to decide how much to tell them, when a pistol shot crashed out, down the corridor. Everybody turned in that direction, to see the tall form of the porter sway in Mr. Johnson's door, topple backwards, and fall with a great crash to the floor. There he lay still.

"Murder!"

"It's the porter, poor fellow!"

"Someone has shot the porter!"

Cecilie May screamed, and Flynn was soothing her in a wonderfully tender tone of voice, though everyone was too tense to notice it.

"It's only a machine," Flynn said to her. She shrank toward him, also quite unconscious of her action, and laughed nervously.

Then Mr. Johnson appeared at the door of his stateroom with a smoking pistol in his hand, looking very sheepish. The Captain came in through the dining-room, disgust showing very plainly in his expression.

"Too bad," Mr. Johnson said to the Captain. "I was half asleep and saw the robot bending over me, and it rattled me. My nerves have been pretty shaky."

The Captain growled something and called two sailors to drag the porter away. Later on he announced that the apparatus could be repaired, but that it might take days, for the bullet had cut over a thousand wires.

"In the meanwhile," the Captain said, "you'll have to wait on yourselves. I can't spare a man from the crew, and we haven't any extra robots."

The Colonel groaned and the two traveling-men looked worried. Flynn grinned hugely at their concern. The porter did nothing but foolish, trivial little tasks, which everyone could have done just as well for himself. But most of them felt helpless. There was much running to and fro. Burgess heard the Colonel and his wife fussing in the neighboring stateroom about the proper way to make up a bed, and Kaufman walked ostentatiously down the corridor fetching a pitcher of water.

"Be sure and let me know if you need anything," Flynn said to Cecilie May.

Flynn sat up with Mr. Johnson until midnight, and was then relieved by Burgess.

"Why is it that we can't radio from the ship to the Earth?" Burgess asked the engineer; "this would be a cracking good story for the *Times*."

"There is a layer of charged particles about sixty miles above the Earth's surface, and no radio wave has yet been sent through it. It would be convenient if we could keep up communication with the home folks, all right."

Burgess sat and studied about the mystery, while up and down the corridor sounded the snores of the passengers through the dim illumination. There was something creepy about a night way off in space, millions of miles from anywhere. Something creaked down the corridor, and there was a swish and a rustle.

"Sh-h!" came a whisper from the darkness. "Mr. Burgess!"

Burgess leaped to his feet, pistol in hand.

"Don't shoot," came the whisper. "It's me."

Burgess snapped on the light and stood there aghast. *"Chick!"* he gasped. *"You here?"*

The vicious threats of the Captain about stowaways flashed through his mind as he stood there in horror and looked at the grinning boy.

"How did you get here? How did you elude the search?" he demanded.

Chick laughed proudly at his own cleverness.

"Remember the box that came aboard at the last moment? I was in that."

"Well, hurry back there and hide. The Captain is fierce on stowaways and he'll murder you if he finds you. I'll bring you food and water."

"I've got all the food and water I want, but I'm tired of being shut up. I want to see what space-traveling is like."

Burgess' jaw suddenly fell. Down the corridor came the Captain, on his nightly rounds about the ship. Burgess felt a cold perspiration break out all over him, as the Captain peered into Chick's face.

"Aha! the prowler!" exclaimed the Captain.

He grabbed Chick's collar and blew a whistle. Two husky sailors ran up and seized the boy roughly.

"What are you going to do with him?" inquired Burgess in consternation.

"Throw him out of the air-valve with the garbage," growled the Captain. "I've got enough stowaways. Besides—prowling around and causing a lot of trouble."

The Disappearing Killer

SEVERAL people in pajamas and bathrobes arrived on the scene. Mrs. de Palogni was gurgling with real excitement. For once her jaded senses were getting a real thrill out of something.

"Poor kid!" said Flynn, as the sailors gave Chick a shake that made his teeth rattle.

The grunts of Mr. Johnson could be heard coming from within the stateroom, as he got off his berth and came to the door.

"What's up?" he groaned, sticking his head out of the door.

Suddenly his eyes widened, as he saw the boy in the clutches of the two sailors. He straightened up and became all at once very severe.

"Charles!" he said sternly. "How in the world did you get here?"

"Father!" exclaimed the boy, going all to pieces in a hysterical laugh. "Father! Are you on this ship. Well, don't let them kill me."

"Well, I should say I won't," the old man said, a sudden tenderness coming into his voice. He studied the situation for a few minutes while everyone else stood silent. The Captain looked from father to son. Mr. Johnson's next words showed, however, how a meek and nervous man like himself could have succeeded in building up a gigantic corporation like the *Mars, Ganymede, and Callisto Transportation Company.* He could think quickly and to the point.

"We need a porter," said Mr. Johnson. "Charles wants a ride. All right. Charles, you're the porter, and can work for your ride, even if you are the President's son."

There was a burst of cheering from the passengers at the clever way in which a difficult situation had been solved.

"Thanks, dad!" said Chick simply.

"But—" gasped Burgess. "What about the red letter? And the attempts on your life?"

"Well, it wasn't Charles," Mr. Johnson said with a gentle finality in his voice. He was proud of his son, but did not believe in spoiling him.

And the next morning Chick was making up beds and shining shoes. Most of the passengers protested against accepting these services from him, but the boy was a good sport, and did everything that his job required of him. During his spare time he spent every moment watching the ship's mechanics repairing the mechanism of the televox-robot. By evening Chick and Flynn were firm friends; they were talking about reaction-motors, meteorite deflectors, three-dimensional sextants, and such things with a fondness that only the two of them felt. Also, Chick's alert eye promptly noted Flynn's partiality toward Cecilie May, and that young lady was the recipient of real service from the new porter. The son of a millionaire seemed happy to lift suitcases, carry pitchers of water, and brush coats. And whenever he saw Burgess, he grinned at him triumphantly, as if to say, "I told you so!"

That evening was a pleasanter one for the little group of passengers. Everyone's space-sickness was over, and the tension of the past twenty-four hours was relaxed. A jolly party gathered in the drawing-room. Games of cards, ping-pong, and backgammon went gaily forward. Finally, the furniture was cleared away, a phonograph requisitioned, and a dance was started. The ladies, being in the minority, were very much in demand. Even the cranky Mrs. Thayer, the Colonel's wife, smiled and flushed as one of the traveling men gallantly offered her his arm and whirled her about in the dizzy steps of the new *whizzarro,* while the school teacher, floating in the arms of Burgess, was positively radiant. Mrs. de Palogni was trying to split up the bridal couple and get a dance with the young husband, but he was sublimely unconscious of her existence. However, he did give the Captain a dance with his bride. Likewise, Cecilie May gave her first courtesy dance to Kaufman, her employer, who then went back to his chair and watched the group abstractedly, undoubtedly figuring the prices of pitchblende and zirconite in his mind. Chick bustled about with a tray and glasses, and even Mr. Johnson seemed to have forgotten his nervousness for the time being, and beamed happily on the group as though it were his own family enjoying a good time. However, he slipped away early from the dance, looking rather tired, and went to his stateroom.

Burgess also withdrew from the activities and stood in the corridor, watching the crowd. The little by-plays of human nature appealed to him. However, before many minutes were up, he had a feeling that somehow, somewhere, all was not well. He did not believe in premonitions, realizing that they were always explainable on the ground of some sensory stimulus that had set the subconscious mind alert, some faint sight or sound not registered in the consciousness. He therefore kept his eyes steadily on Mr. Johnson's door; in fact, he had up to the time that he noticed the queer unrest, maintained an uninterrupted watch without thinking, ever since Mr. Johnson had stepped into his room. He had seen nothing

Now there was some sort of a vague thumping. It seemed that he had already been hearing it for some minutes in the back of his mind. Now the thumping was growing weaker, and gradually it stopped.

In sudden alarm he leaped down the corridor in big strides. A man dashed out of the door of Mr. Johnson's stateroom, and ran swiftly down the corridor in the opposite direction, toward the dining-room.

"Now we've got him," thought Burgess. "He can't get away this time."

With a shout, the reporter dashed after the fleeing figure. In the dining-room he stopped to snap on the lights. The room was empty. He hurried on through into the after-gallery. That also was empty. It contained no furniture, and the bright lights illuminated every nook and cranny of it. There was no way out of the two rooms except the corridor by which he had come in. What had become of the man?

There was a commotion behind Burgess in the corridor, exclamations and babbling of voices. He hurried back to find a crowd about Mr. Johnson's door. As he ran up, the people stepped aside and opened up a path for him to get through. Inside the stateroom Mr. Johnson lay on the bed motionless, his face a dark purple. He was not breathing. On his throat were five black marks.

"Strangled!" exclaimed somebody in the crowd.

Burgess tore open Mr. Johnson's shirt, and detected a faint flutter of the heart. The next moment the Captain was on the scene and in charge. Cold packs were put about the throat and artificial respiration instituted. Soon their strenuous and persistent efforts were rewarded by a flutter of the eyelids, several gasps, and finally a groan. Mr. Johnson turned over and sat up, choking and gasping, trying to talk.

"Hagan," Burgess could distinguish, though it meant nothing to him. "Wanted the money again," came in a whisper. "I hit him but he was too much for me."

A LUMP rose in Burgess' throat. The fat, flabby, nervous old President, on the inside, was a good sport.

The reporter counted the crowd. There were ten people. The Colonel's wife was in the drawing-room, fanning herself. The human face hides emotions, rather than displays them. Not the least suggestion of a clue could he find in the countenances of any of them. Could he but see behind the masks of astonishment and horror, would it be possible to guess which one had done it? Yet he had to admit that the probability of any of these people having done the cowardly deed, was exceedingly remote. Everyone of them had been behind him, absorbed in the dance at the time when had had heard the thumping, which must have been the struggles of Mr. Johnson while he was being throttled.

The Captain came in and picked up Mr. Johnson's pistol, which lay on the floor beside the berth. Burgess was telling him the story:

"None of these passengers could have gotten past me, and I was between them and Mr. Johnson's room. The time I spent in the dining-room and after-gallery was only a few seconds, certainly not long enough to give anyone a chance to choke a man. I chased the fellow into the dining-room, and when I got there, he wasn't there."

"There's something fishy about this," the Captain growled into his beard.

Burgess was determined to solve the puzzle, and made up his mind to work as he had never worked before. "TIMES REPORTER UNRAVELS INTERPLANETARY MYSTERY" he could see the headlines say in his mind's eye.

"You're sure it couldn't be one of the crew?" Burgess asked the Captain.

The Captain laughed.

"That shows how little you know about discipline on an interplanetary liner. I can account for the presence of every man during every minute of the time. But, we're going to go over this ship again. One man got by our first search; there must be another. And from now on, an armed guard stands by Mr. Johnson's door, day and night."

The man with a rifle was already in his place. The search of the ship began at once. The searchers began in the passenger section, going through trunks, looking into corners, searching the most impossible places, far too small for a man to hide in. They proceeded systematically, beginning at the drawing-room end. The rest of the night they could be heard down below, shifting the cargo, hammering on boxes and cases. The noises began at the forward end and gradually moved aft. In the morning the Captain showed up in the dining-room, tired and cross.

"How is Mr. Johnson?" he asked.

"His condition is good," replied Burgess, "except for his pain and discomfort. He will get over it perfectly."

"If there had been anything on board bigger than a rabbit, we would have dug it out last night," the Captain said. "We opened every case of freight that weighs over seventy-five pounds, unscrewed every hatch, threw light in every corner. It beats me."

The Captain clicked his jaw shut and looked fierce. Burgess grinned.

"You think that's a puzzle?" he said. "Well, what about this one? I chased a man down the corridor into the dining-room. He was not in the dining-room when I got there. He was not in the after-gallery. He did not pass me.

"What became of him?

"Is there any way of getting out of the dining-room or after-gallery except by the way I came in?"

The Captain stared at him.

"No. The only communications with the rest of the ship are the food service tubes which are four inches in diameter, and a hatch that it would take twenty minutes and a lot of noise to unscrew."

The Captain stopped and thought a moment.

"How did the man get out?"

Burgess was puzzled. By the strongest kind of logic, there was a man hidden on board, and this logic was confirmed by material proof on poor Mr. Johnson's person. Yet this man had disappeared before Burgess' eyes, and a thorough, systematic search of the ship had proved that he was not on board.

Technical Assistance

THE reporter took his turn at nursing the President, while the guard stood at the door with his rifle. Noon lunch and the dinner meal in the evening were gloomy, nervous occasions. Everyone started at the least noise. Kaufman's brows were drawn and dark. Only the de Palognis seemed to be getting a thrill out of the situation, whereas the honeymoon couple were quite impervious to it. The young engineer carried Cecilie May's service plate at both meals, and the two ate together, one talking enthusiastically, the other listening raptly. The girl seemed to feel safer near the young man, and was afraid to be about the ship except in his presence.

Burgess was intensely worried. The villain had almost gotten away with his nefarious scheme this time. There was still time enough before they reached Mars for many things to happen. He strolled to the after-gallery, and found himself in a secluded corner where he could think undisturbed; he stood there and looked out upon the deeps full of countless stars, and tried to marshall his ideas about the mystery.

He was roused from the depths of his reverie by low voices behind him. He was conscious of having heard them for some time without having paid much attention. A sudden embarrassment made him keep silent. They did not know he had overheard, and he did not want to break up the occasion. If they never found out he was there, it would be just as well.

"I love you," said a man very softly. It was Flynn.

"I love you, too," Cecilie May whispered timidly.

"I'm glad I found you."

"Isn't it wonderful?"

There was a long period of silence.

"I'm terribly sorry," the man's voice said, "that it will be so long before we can get married. I haven't a cent, and I don't even know what I'm going to do when I get to Mars. I'm afraid—that a professional man's start is a slow and difficult one."

Cecilie May cheered him with soft words and kisses.

Right there was where Burgess got the idea that eventually led to the solution of the mystery. It developed slowly while he was having to keep quiet as a mouse in order not to interrupt the lovers. Eventually the newly engaged couple wandered away, and Burgess hurried back to spend a little time at Mr. Johnson's bedside.

The old man could whisper a little, but swallowing was still terribly painful. The guard stood motionless at the door. After he thought he had allowed plenty of time, Burgess went out to look for the young engineer, and found him getting ready for bed.

"Would you like to help solve this mystery?" Burgess asked him.

"Anything I can do—" Flynn said. "I'm not much on mysteries."

"In two days we reach Mars," Burgess said. "Here, in closs quarters it is possible to watch Mr. Johnson carefully. When he gets to Mars the killer will have free rein, and the old man will be in greater danger. That's still a pretty wild country, you know. We've got to catch him before we land."

"I don't see how you're going to," the young engineer said. "The ship's been searched—"

"Well, I got an idea last night. I was thinking about you and about your work. You're an engineer?"

Flynn nodded.

"You know all about scientific things?"

Flynn laughed.

"I wish I did," he said.

"Well, this mystery needs science to solve it."

"I'd be mighty proud if I could help any."

They went into Burgess' stateroom and sat and talked and figured with pencils on paper; they leaned back and planned. Finally Flynn said:

"That ought to work. Now to see the Captain. But it will take me several hours of work in the ship's shop to get things ready."

They put their plan before the Captain.

"It's all right with me, as long as you don't interfere with the guard," the Captain said, but looked incredulous.

"We only want to move the guard ten feet up the corridor. He can stay within plain sight of the door, where he can reach it in one second; and we shall both keep our eyes on the door."

The Captain looked dubiously from one to the other.

"Burgess has a good reputation. Flynn looks as though he knew his stuff." This to himself—then aloud: "Go ahead. But I'll be around, too, and keep an eye on it."

As they came back into the corridor, they found Chick standing horrified with a piece of paper in his hand. The guard looked worried and frightened, and the Colonel was sputtering incoherently. It was a note that had been found on the floor of the sick man's room. Yet the guard insisted that he had not taken his eyes off his charge for an instant; and he was a tried and trusted man.

> "You cannot escape me," the note read. "In spite of your precautions, I'm going to get you. Fork over the million or you won't reach Mars alive. A check will do; leave payee line blank, and lay it on the doorsill."

Burgess and Flynn nodded to each other and smiled.

"That confirms our idea," Burgess said to the Captain. "Do not blame the guard; I'm sure he is right in what he says. But there is no need to pay any attention to the note."

Flynn was busy all day in the ship's shop. But the next morning the passengers saw Flynn and Burgess playing catch with an indoor baseball down the length of the corridor. A crash and the tinkling of glass announced an accident: the smashing of the light-bulb over the middle of the corridor. Then Flynn attempted to replace the bulb; he tried several bulbs from different parts of the ship, but none of them would work. Finally he gave it up and left a dark bulb in the socket.

"It doesn't matter," he said. "There is plenty of light from the bulbs at the ends of the corridor."

However, some of the passengers were worried, for the dark bulb was right over Mr. Johnson's door, leaving it the darkest portion of the corridor. Chick was dispatched into the lower regions of the ship with a suitcase, and returned dragging it as though it were immensely heavy. Burgess and Flynn spent the whole afternoon in Burgess' room. Everyone was restless, and wandered from one thing to another, not knowing what to do. After dinner Burgess appeared among them, leading one of the traveling men by the arm.

"Ladies and gentlemen," he said. "I have just learned that Mr. Banks here knows a lot of astonishing tricks with cards. You are all in need of diversion at this time. Let's get everybody together."

They gathered in the drawing-room, and the traveling man stood up in front of them with a deck of cards in his hand. He pulled his coat-sleeves up on his forearm, and spread his cards fanwise.

"Now, ladies and gentlemen," he began. "Will one of the ladies please step forward. I shall turn the cards face down, so that I cannot see them. Now, Miss Waterbury, you draw out a card. Be careful not to let me see it, but remember it well. Now put it back. Do you all remember what the card was—"

He pattered on, and Burgess slipped out of the room as soon as Banks had the attention of all of them. In his stateroom he and Flynn bent over a strange conglomeration of apparatus. On one end was a great quartz lens, borrowed from the ship's bolometer. The other end looked like the receiving portion of a television apparatus, with a hood drawn over the screen.

"Is everybody busy in there?" Flynn asked.

"He's got 'em going," Burgess smiled.

"Then give the guard his signal."

The guard pretended to become interested in the card tricks, and gradually edged his way up the corridor, away from Mr. Johnson's door.

"I don't see the Captain," said Burgess, "but I'll bet he's somewhere on the job.

"Take a look into it," Flynn said. "I've hooded the screen because the light from it on our faces would reveal our presence in here. This way it is absolutely dark.

Burgess looked into the hood, at the screen.

"What about it?" he asked. "I see the corridor. It looks just the same as per naked eye."

"Look again," Flynn said, keeping his voice low. "Without the instrument the corridor right here is rather gloomy because the middle bulb gives no light; all the light there is comes from the bulbs at the ends of the corridor. Now look into the instrument."

"Ah," said Burgess. "I see. In here, the middle of the corridor is brilliantly lighted, and its ends are dark. Just the opposite. How do you work that?"

"The middle bulb is not dead. It gives infra-red light, which is not perceived by the human eye. This instrument sees by infra-red light; all visible light is screened off by a colloidal-silver filter. The lens gathers the infra-red image, throws it on the infra-red sensitive photo-

electric cells, which project it on the ordinary television-screen as visible to our eyes. In other words, this is a viewer for infra-red light.

"But why—"

"Sh-h. Suppose we wait. We've been talking too long now. Let's keep absolutely quiet. Tell me, after I have my face under the hood, if there is the least bit of me visible from the door? And let me have your gun."

There was a tense, silent wait. The sounds of the party in the drawing-room came to them, exclamations, titters, sudden floods of argument, a period of silence, a burst of laughter, rustling and commotion, and the performer's patter.

However, they had not long to wait.

There was a creak down the corridor, exceedingly faint. Then a faint swish. Flynn grew tense at his instrument, his breath coming fast. The reporter exerted his utmost to maintain silence in his excitement, for he could not see a thing anywhere. The corridor was empty, search it as he might, except for the guard half way toward the drawing-room. He breathed with his mouth wide open, for he was so excited that when he closed it, the breath shrilled loudly through his nostrils.

Unveiling the Inscrutable

SUDDENLY the engineer shouted out into the corridor:

"Hands up! I've got you covered. Now take that cape off! I'll count ten, and if it isn't off by ten, I'll shoot. Your cape won't stop bullets."

The next instant his shot crashed. He leaped up, knocking Burgess in the ribs with his elbow. In two jumps he was across the corridor and in Mr. Johnson's room. Burgess dashed out after him, to see the Captain emerge from an adjoining stateroom. In another instant Chick was also on hand. The sounds of the party in the drawing-room suddenly stopped, and open-mouthed people trickled down the corridor. For there were sounds of a terrific commotion coming out of Mr. Johnson's room.

First there was a hoarse shriek from the sick man. Then there was the spectacle of the young engineer fighting violently all around the room—with nothing! His arms were out, as though locked around somebody; he heaved and grunted and staggered—all alone. A couple of times he almost went down. The rest of them, even Burgess, were too astonished to do anything except stand there staring and paralyzed. Mr. Johnson lay in bed like a man frozen stiff. Flynn staggered back against the wall as though someone had hit him.

After what seemed like an age, though it was only a few seconds, Burgess began to grasp the situation, and stepped into the room to see how he could be of assistance. But already, it was not necessary. Flynn was on his knees, six inches above the ground, as though on top of something, though there was nothing there. He was pummeling terrific blows with his fists; and then desisted and began pulling and tearing at something under him. There was a loud rip, and a swing of his arm revealed a strip of clothing and a part of a face beneath him. Another pull disclosed another strip of clothing, an arm and a leg. Flynn was pulling something off a man who lay prostrate on the ground and who was becoming visible in long strips. In a moment Burgess and Chick were on the prostrate man and had him pinioned down.

Then Chick recoiled as though he had been shot. The man on the floor was ugly as sin and had a purple birthmark on his cheek!

"Pug!" cried out the boy, deeply hurt. "You?"

Burgess chuckled.

"I'm sorry it makes you feel bad," he said to Chick, patting him on the back. "But I'd call it a valuable piece of instruction."

The President sat up in bed. The prisoner stood between two husky sailors, with the Captain behind him.

"So you're the pretty fellow who wrote the red letters?" Mr. Johnson said, his sore throat wheezing in his excitement. "I've seen you about my place a time or two. What'll it be, Captain?"

"You can have him put in irons and brought back to New York for an expensive and long-drawn-out criminal trial. Or, I can take him under the space-navigation laws on two counts, as a stowaway and on insubordination, and put him out of the air-valve."

"Take him yourself. I should regret it if I took one chance too many. Brace up, Charles. We are sometimes mistaken in our friends. Your dad has learned lots of little lessons like that." He motioned to Flynn.

"You seem to have managed this business," he said, again displaying his innate shrewdness. "Tell he how."

"Very simple, sir," answered Flynn, rather confused by the limelight suddenly turned on him. "Mr. Burgess presented to me the two facts: (1) There was a crook loose on the ship, and (2) He was not one of the passengers, officers, nor crew. Therefore, in some way he must be hidden, and had eluded the searches. The question was *how?* The fact that Burgess saw him go into a room from which there was no egress, and yet did not find him there, rather simplified the question.

"There popped into my head an item from *The Engineering Abstracts* about some experimental work with a double-refractile fabric made of a cellulose base combined with silicon salts, which will refract a light-ray through itself and continue it in its original straight line. If a light-ray is bent around an object and continued in its original straight line, that object becomes *invisible.* Objects in the laboratory where these experiments were carried out, were practically invisible. Only some rough preliminary work was described in the abstract.

"That offered a perfect explanation of the phenomena on this ship. Here the conditions are perfect. The light from these helium lamps gives a narrow wave-band and can be much more perfectly refracted than daylight. It occurred to me, in my effort to think of a way to discover this person, that if I could see by the light of a different wavelength, it would not be properly refracted, and I could detect the crook's presence. But any attempts to use such a light would give away our plans and put us all in serious danger. Therefore, I would have to see him by means of some invisible wavelength. Either the ultra-violet or the infra-red were available. But ultra-violet is difficult to generate, while the infra-red is easy: I merely blackened an old-fashioned nitrogen-filled incandescent-wire bulb. Then I rigged up an infra-red viewer and watched for him. I saw him sneak into Mr. Johnson's room, at a moment which we had purposely prepared, so that everyone's attention was obviously distracted elsewhere. I intended to shoot him, but he got in line with Mr. Johnson and I was afraid to take the chance, and had to jump on him."

(*Continued on page* 1139)

Television Hill

By George McLociard

Author of "Monorail," "Terror of the Streets," etc.

Part II

THE scanning disc system of television, which was until very recently the only method of picture transmission, is soon to be replaced by the employment of the cathode ray. The disc method is, by virtue of its mechanical limitations, impractical for extensive commercial use. The new cathode ray method provides, among other benefits, a larger picture better transmitted and a much greater range of vision over which to transmit. The possibilities for improvement in the field of television must now go on apace, for the cathode ray solves a great many television machine. What these possibilities might be are pictured for us in the concluding chapters of this thrilling serial. Who knows but that some of these problems and is the first really important finding since the invention of the disc "ideas" may not become facts before very long?

What Went Before:

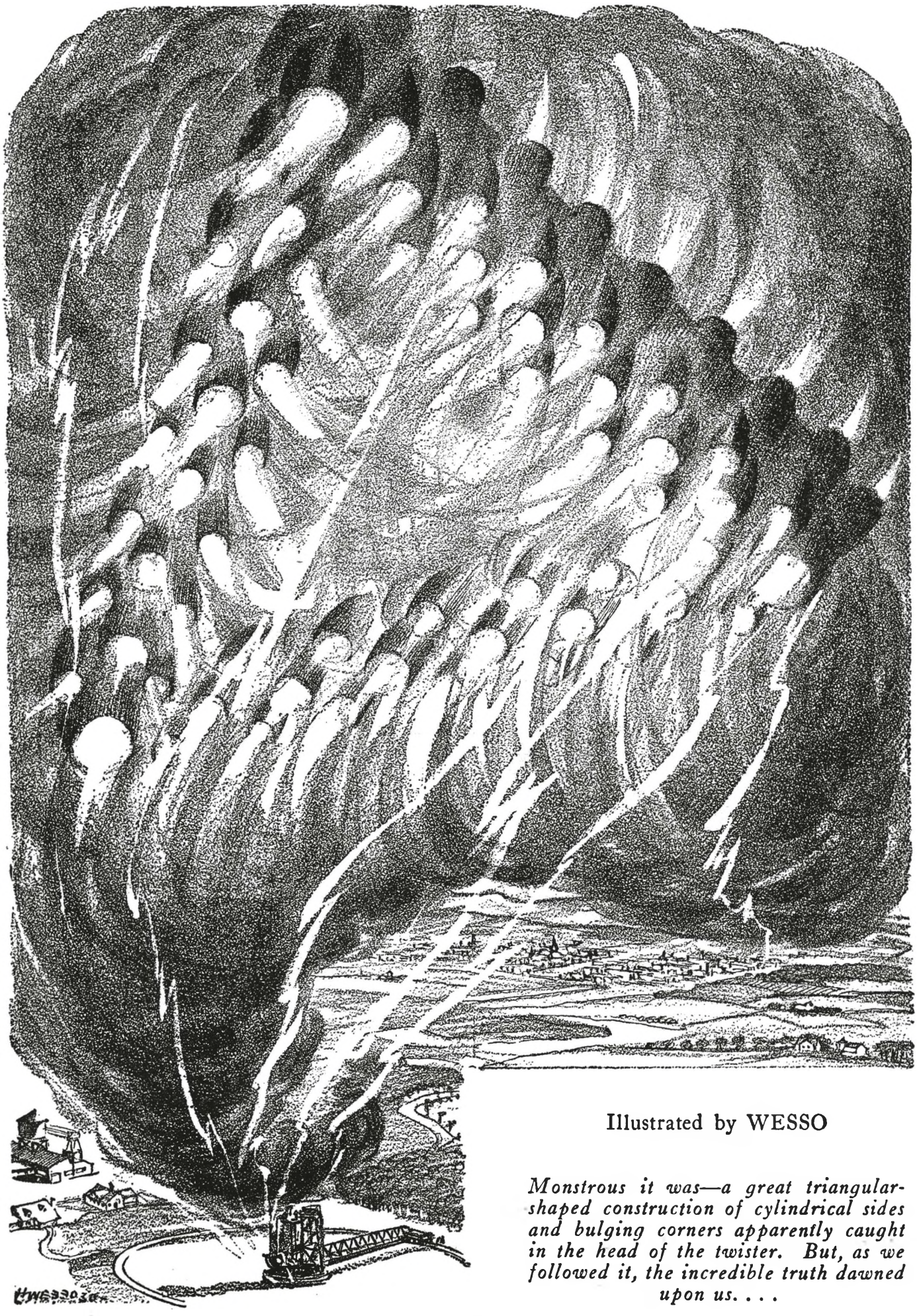
TOM McMANUS, a reporter, and friend of Cyrus King and Bob Wentworth, scientist-inventors, is invited by these two scientists to watch the astounding developments of a new system of television, upon the discovery of which young Jim King had accidentally stumbled. McManus arrives in the outskirts of Chicago, where Television Hill is located, shortly before Diane King, King's daughter, arrives from a five years' stay in Europe. Later he is introduced to Chalmers and Smythe, the two chief confidential engineers of this revolutionary project.

McManus is taken around the various plants and is tremendously impressed by the gigantic generators, the mighty Diesel engines and other enormous pieces of machinery.

It takes only one demonstration to convince McManus and Diane King, the latter showing an unusually vivid interest in the whole plant, of the immensity of the undertaking and the brilliant success awaiting them. That is—until unanticipated events begin to take place—things absolutely unexplainable as yet.

"AW, rats," I muttered after a moment, "Here I am with the most wonderful girl in the world and all she wants to talk about is—machinery. Bah!"

"The projecting house," I began half-heartedly," is divided into two parts. The projection theatre and the screening tunnel. The amplified current is led to the immense Kino-lamp your father has developed. Its fluctuations, about five hundred thousand a second, are scanned by a miniature disc of two hundred apertures driven in direct shaft speed conjunction with the shaft of the transmitter shaft. (Another miracle of engineering science.) These light "shots" are impressed on King's liquid film, which, as you probably know, retains in its chemicals the image of the object scanned upon it until an electrical current sent through it breaks down the state of exposure. Sixteen times a second images are built up and destroyed. At the point when the Kino-lamp scanner is about to begin anew its covering of the liquid plate, and while it still retains the black and white image in the liquid, a shutter, with a plane mirror set in its interior face at an angle to reflect the light from a powerful lamp off to one



Illustrated by WESSO

Monstrous it was—a great triangular-shaped construction of cylindrical sides and bulging corners apparently caught in the head of the twister. But, as we followed it, the incredible truth dawned upon us. . . .

side, comes around, shuts off the light from the Kino-lamp, opens the shutter to the side arc-light whose beam strikes the mirror and is reflected upon the liquid plate. This flash is only momentary—a hundredth of a second in duration, but it projects a sharp image upon the next plate—our positive, from which, by means of a system of shutters and the required synchronism, an extremely powerful light is shuttered through the positive, thus projecting a perfect image on the last and final screen. That is all there is to it. Although it sounds rather intricate and almost impossible, it's exactly how it operates and the result is perfect reproduction of images hundreds of miles away from here.

"And with all this delicate synchronism of the whole affair, there are vexing periods when the various parts get out of time, and then it is one herculean task to retime everything. Everything has been studied to the *nth* degree and the mechanics in charge during operation can tell by their instruments the instant and place of fault.

"Looking at it, Diane, one must admit that your father and Wentworth have exploded the established opinion that we of today do not build as carefully and thoughtfully as our fathers did. They have accomplished one of the greatest feats of precise, scientific engineering ever attempted. Their names will go down into history along with Edison, DeForest, Bell, and will, without a doubt transcend even the names of Michelson and Einstein."

"Not only to Dad goes all the credit, Tom," asserted Diane, "but to all those intelligent men who are giving their every effort toward the fulfillment of my Dad's dream."

"Yes, it started as a dream—and has developed into the marvel of the twentieth century. Just think of what it really means, Diane!"

"TELEVISION!"

"Television breaks through the last barrier to man's intimate knowledge of his world! Truly the mountains will be leveled and the valleys filled under the revealing sweep of television! Why, haven't we made pictures of Dick Byrd in the Antarctic? Films we had to destroy for fear of revealing how we had taken them? What about the amazing news-reels we have 'scooped' the photographic world with? What about the interesting news-travel films we have made of the unexplored regions in South America, Alaska, Arabia, and Africa? What about the furor we raised when we exposed that secret Monorail system operating along the western coast of Canada and traversing Alaska? Just pause to think what this machine will do once it is released to mankind.

"What will become of travel; of the average man's curiosity for looking upon scenes in other lands? Why travel thousands of miles when with a flip of the wrist you can see and chat with distant relatives and business associates? You could 'drive' over the entire country in an evening, seeing the wonders of the land right in your own parlor!

"And then give solemn thought to the strange effect it will have on the social life of the race, on mankind.

"Once seclusion is removed from our private lives by the penetrating eyes of commercial television, what will we do and think? Will we act as we do now; will we be calm and reserved in company with strangers and throw aside all restraint when in our own intimate circle? What will the reaction be? Frankly, Diane, that is a question I cannot answer. Only time will tell!

"Will the standards of education undergo a similar change? Education today is based on knowledge gained through the medium of books, because books are the convenient and ready source to facts gleaned from widely scattered sources. Even today educators are leaning toward the 'talkie-motion picture' as a means to illustrate and convey to the young sights and customs of people far distant. With the front of the school-room, a screen opening upon the whole wide world, there is no telling what the children of the future will learn.

"There would be no need for the movie theatre or the drama, the newspapers and periodicals, or the present methods of bringing the life and blood romance and tragedy to our attention—we will be able to see these as they actually occur.

"As a class, the type of human who cares little or nothing for the conventional limits of law and order, will have a hard life, for when police and Federal stations are put in operation, there will be no such thing as concealment! Publicity and secretiveness would be a humorous farce, with the whole world watching!

"Wars would become impossible, for each side would be watching the frantic attempts to surprise the other—and a successful war, we know, depends on one adversary conquering the other by surprise moves.

"And then what of the commercial value of television? Imagine the release of thousands of workers from monotonous tasks at machinery requiring only intermittent attention. Of how the transportation companies, especially air lines, could send Television watched—robot controlled machines across the country, through all kinds of weather, with no risk to a pilot's or driver's life. How quickly it would be put to work aboard ships and planes, giving them eyes to peer miles ahead through the thickest fog! The Weather Bureau will increase its scope by permitting the department to watch the movement of storms and hurricanes hundreds of miles away.

"Then into industrial life! Geological surveying from thousands of miles away in search of oil, coal, and gold deposits. Mapping and exploration as never before attempted or thought possible! Why, Diane, you cannot begin to realize what a stupendous marvel television really is! There is one possibility it holds that is going to bring universal acclaim from builders of machinery: Suppose, for example, a customer reports to a manufacturer that a certain machine he had bought is out of commission due to a broken part. The manufacturer puts in a call to a television exchange and requests an investigation be made of that certain machine for broken parts; he might even send a service man to the television station: The part being found, it is dispatched by air mail to the nearest service station, saving time and expense for both customer and manufacturer.

"That, Diane, is what Television holds for mankind; it tears virtual blindness from man's eyes."

Diane had listened to my outbreak with a soft smile and now she murmured, "and to think my brother and Dad started it all! Oh, I realized what it means! It thrills me with joy and pride." She clasped her hands tightly and her glittering eyes reflected the pleasure animating her being.

Suddenly in a serious turn she inquired. "But, withal, Tom, don't you honestly believe it came too soon? That the world has not yet developed to a point where it can stand the shock of its presence?"

"Well," I drawled for a moment, studying her beauti-

ful, questioning face. Here was the chance I had been waiting for! "Whatever the world may do and think about it, I, for one, am most thankful that it was the work of your Dad, for it has brought *you!*"

For a moment her lips twitched, almost forming a smile. "Silly," she declared, jumping to her feet. "I might have known you couldn't stay serious very long."

"I am serious, Diane," I said, catching both her hands and drawing her to the sofa beside me.

* * *

ONE afternoon in late January, after we had run off some particularly good news-shots of an airplane wreck in Ohio, I found King and a few of the engineers in a huddle on the balcony over the projection map. I joined them.

"—and we have not been able to solve the problem of synchronizing New Glarus and Lake Geneva in the direction of New Orleans and points past. In every other point of the compass we have been able to cover a radius of seven thousand surface miles."

"I'm sure it isn't in the control system or the driving mechanism at either place," stated the lean-jawed, sharp-eyed chief engineer.

King turned to him, a frown on his forehead.

"Now," he said softly, "the entire assembly is driven from the rack——. Say, I wonder if any of the teeth might have been crushed in some way? They were O. K. when I was up there two months ago. I paid special attention to that point."

"Perhaps," murmured Smythe, looking about with a foolish grin, "that is it."

"Well," said King, "you take the Lockheed and take a run up there and look at them. While you're up there, hop over to New Glarus and see what kind of a job Williams has done in the installation of the new 'receptor scanner.' He expects to be finished about three this afternoon."

TWO hours later the phone call came in for King and as he placed the receiver on the hook, he appeared agitated and alarmed. He motioned for me to follow him. He paused over the projection map.

"McManus, you have seen this map in operation so many times; you know it is the only check we have, outside of the visual screen, of where the intersecting televise beams come together.

"For months we have not been able to get the two northern stations to bear on a line south by west—the direction of New Orleans. Now, Smythe has made an investigation of the rack in this particular place and finds that the teeth on the driving racks of *both* stations have been mutilated to such an extent that it is actually impossible to bear in that direction. There's something mighty funny about it, for Smythe says the teeth were *milled* so as to cause the slip or leap when the driving gear meshes."

"Perhaps it was in that condition when first laid—and it's luck that they line up as they do," I hazarded.

He shook his head. "No, McManus, it isn't a coincidence that this trouble lines up in one direction. Smythe is the one who personally inspected each rack section when it was being milled and he says the two faulty sections are not of our manufacture!"

"What!" I ejaculated.

"There's something back of this——"

"What do you mean?" I ventured, when his brooding silence had become unbearable.

He glanced about, then said quietly, "I've got a hunch that someone inside our organization is trying to put us out of action! I've said nothing of this before, because I wanted to be sure. Plans and calculations have been disappearing at regular intervals during the last few months."

Astounded, I stared at him. Despite their precautions, was someone actually stealing their plans?

"What steps have you taken to—to apprehend this person," I asked.

"I did all I could do under the circumstances. I have had a search made of everyone I suspected and finger-print tests made of everyone in the plant—excluding you. Whoever the fellow is, he certainly is working cleverly. But, I have my eyes open. And, McManus, please keep this quiet—I don't want it to get out."

I was more amazed to learn of this news than to feel surprise at someone working against us. And I had thought I knew of everything going on about the plant!

King started downstairs, but recalling something, returned. "We will replace the sections of rack in the spoiled spots and then—get this—we're going to make a sharp survey of everything in *that* particular projection line!"

FROM that January day I lived with the subconscious sensation of being on the top of a volcano which might, without warning, blow us all into eternity. It was an impression gathered when Wentworth informed me that under each projector assembly was mined over ten tons of dynamite! Switching arrangements made it possible to set off any one projector from any station. And the reason: safety to the interests of King and the world!

As I ran my bank of cameras, viewing the spectacular sights, now becoming more and more familiar, I felt, at times, as though other eyes were constanly watching our every move. I drew King's attention to this fancy and he admitted that he, too, had felt something decidedly strange was in the air.

"I can't fathom the reason of those curious electrical interferences that disturb our screenings when we run toward New Orleans," he continued. "I am almost tempted to say it is similar to the parallelogram of disturbance our projectors cause when they are in focus on an object. But, I am more than sure that there isn't another Television machine in the whole world—at least not down that way." He laughed at that supposition.

"Has anything else disappeared since last time?" I asked.

"Yes, even though I've posted Diane to watch my room and installed a capacity alarm system. I'm telling you, Mac, it's so deep I can't see the light."

FOR a time he was silent, beating a thoughtful tattoo on the guard rail. At length he spoke.

"We have beamed the entire length of the line through New Orleans, down past the Federated Republic of Central America. We discovered nothing of any note."

"I wonder," I mused, "why you didn't try further?"

"What for? All the rest is water. The Pacific One of the least traveled sea stretches in the whole world, once you get past the Canal Sea-tracks."

"All the more reason to try it," I announced.

He smiled. "Well, if you expect us to find some uncharted island down that way with a bunch of crooks trying to put us out of commission, you're going fur-

ther than that fantastic fiction Wentworth likes to read and laugh at. Seriously, I think we'll try it tonight."

"Tonight, gosh!" I spoke with dismay. "Diane and I had a date this evening."

"For the love of mud," he ejaculated. "Some picture show?"

I nodded.

"Well, you've got me! You're like the sailor who takes his best girl out motorboating. However," he stroked his cheek in a thoughtful manner, gazing at me with a humorous twinkle in his brown eyes," it won't be long now until you will come stuttering and hot under the collar—wondering if I'd care if you and——. Go ahead, Tom. I've been watching you two since that first day and I can see the inevitable end." He took me by the upper arm and inflicted a comradely slap across my shoulders as he turned and retreated down the stairs.

IT was well after one in the morning when I guided my coupé across the guarded bridge to the eastern shore, and after admission, took up the steep climb to the garage. Diane and I had spent a wonderful evening attending a lengthy drama in Rockford and had stayed twice to listen to the startled exclamations of the audience when the New Era Newsreel was thrown on the screen. Returning, we had loafed along the moonlit highway. The projector was dark and some premonition warned me of impending evil. I drove the machine into the garage and Diane and I paused to take one last look at the waning moon, just peeping over the western tree-lines.

The lights were on in the parlor and as we entered, we came upon King and Wentworth sitting at opposite ends of the room; Wentworth smoking his pipe with steady contemplative puffs; King with drawn lips, staring into the widespread leaves of an atlas. Both looked up at the same moment and in their eyes was mirrored such startled amazement that Diane gasped in fear.

"What's the matter? What happened?" I asked glancing from one to the other.

King closed his book slowly while a slight forced smile twisted his lips. "Shall we tell them, Bob?" he asked Wentworth.

Wentworth still seated, nodded, "Tom, yes. Diane, no!"

"Diane," King went to his daughter and placed his arm about her shoulders. "Listen, dear, don't be alarmed, but something happened here tonight that I think you ought not to know—for the present at least. *No*—No one was hurt or anything like that. Please go now. We wish to talk to Tom."

Diane's arms went about her father. She pulled his ears. "All right, Dad—see you in the morning." She waved to me and tripped from the room. In the meantime I had removed my overcoat and seated myself on the sofa.

King took his stand beside the library table, one hand on the huge atlas.

"Well, we did it!" he announced, his voice strangely vibrant with a temper that sent queer chills into my being.

"We swept along the line of trouble, increasing our range, until I felt we were at the limits of our power. Then," he paused to open the atlas, "we found—an island, a big one too, in direct line with the damaged teeth in the rack!"

"An island not on the maps!" broke in Wentworth.

"Yes, an unknown island some fifty or more miles in length and easily thirty in width, mountains in character—and, most astonishing of all—inhabited!" he looked to Wentworth for verification.

"Amazing and impossible as it may seem, there were indisputable evidences of a people whose cities and artificial constructions were of the types found in highly civilized countries!"

"We can't begin to tell you, McManus, of some of the things we saw—we actually are afraid to speak of it, after what we came upon. Why, it goes into the realm of fiction, into those wild fantastic tales of no particular value other than to amuse. We spent close to three hours wandering about over this island and probably would be still exploring if we didn't bump into a construction housing a Television apparatus similar to ours! It happened to be the screen room and——" King choked, overcome by his emotion and with a futile motion of his hand signalled Wentworth to go on.

"It's almost impossible to believe, but it checks up with the sensations we've been subject to for the last month or so—that we felt as though we were being watched. We *are!* On that television screen was mirrored our projection theatre! It covered the balcony on which King and I were operating the machine. I'm telling you, it was some shock! It seemed incredible!

"And as soon as those watchers down there became aware that we had found them, there was a flurry, much running to and fro, and there came a wave of interference, a counteractive wave, that broke into our secondary radio wave, rendering it inactive to that region. Just listen to the radio."

Wentworth turned the switch and there was dead silence until the tubes had warmed up. From the reproducer came a steady, heavy, snapping crackle and pound that increased and decreased in volume.

"There it is. There is the reason for that curious rat-a-tat static radio fans so often complain of. Do you know what that means, McManus?" demanded Wentworth, knocking his ashes into the smoking stand.

"It means that those fellows have had Television just as long as we have, if not longer?" He declared.

King had reseated himself and was staring into the atlas he had propped on his knees. "I'd say this island is located somewhere around 130 degrees west longitude and 60 degrees south latitude. About one thousand miles south west of Cape Horn; out of the regular steamship lanes; in a region temperate in climate, foggy in summer due to the northward drift of icebergs, and extremely cold in winter. Withal it seems ideally situated for seclusion."

I just sat there listening to these remarks, thoughts running rampant, trying to picture the fantasies that they told me. An unknown land to the south of us inhabited by progressive scientists! Never! Impossible!

I gave vent to my unbelief. "Mr. King, this is too much. It's too wild for me to believe. To even imagine a large island undiscovered and unknown lying at any place on this earth is going beyond common sense. It smacks of sensational fiction, but not of hard, convincing fact."

Wentworth shook his head slowly. "I understand, lad. We have spent a half-hour debating on that very question and have come to the same conclusion. Our friends to the south have a reason for wishing not to be found out!"

I could stand no more of this nonsense.

"Bosh!" I laughed, jumping to my feet. "Wait until the sun rises and then think this thing over in daylight—sanely." With that I gathered up my coat and hat and hurried from the room, followed by their solemn gaze. As I swung around the doorway, I discovered Diane making every effort to gain the top of the stairway without attracting my attention. I was after her in swift silent leaps. At the top she grasped my arm with a little smile of understanding. Her finger to her lips cautioned me to silence.

"Tom, what was it they were talking about," she whispered. "Poor Dad acts as though he's seen something terrible."

"Oh, it's nothing, Diane. They are excited over some discovery which they think is of grave importance. In the morning they'll have forgotten all about it. Goodnight, dear."

In the quiet of my own room I sat thinking over the stories of King and Wentworth. Though it was all very indefinite, that they had undoubtedly seen such a place. Now, the fun would start around Television Hill!

At breakfast in the morning little was mentioned about last night's episode other than a remark by King that the heavy static interference had ceased. In silence they finished their coffee and immediately set out toward the projection house. I followed at a distance. I did not feel like going into any retrospective ruminations concerning the likelihood of another secretive people sharing this globe unknown to the world. I would hold back all thoughts and ideas until I was certain that this discovery was not some freak of the televise rays or a practical joke devised by one of the engineers. Once before we had been fooled by Smythe who had hooked up a movie projector in the light tunnel and took us, apparently, into a little known region in South America, showing us amazing scenes of animal life we knew to be of the long past ages.

In the early morning the projection theatre always held an air of hollow vastness and promise of future life and action. Today there was a suppressed current of excitement throughout the entire plant—that electric and unspoken communication of trouble ahead, which every man feels unconsciously, but is unable to tell from where it is coming, or what its nature is. The mechanics hurried about their duties, touching up the delicate mechanisms with their usual silence.

King leaned over the balcony rail, staring at the projection map. He switched on the duplicating spots and their beams intersected on a point about a thousand miles southwest of the tip of South America.

"See," he pointed. "An isolated region to be sure." He rubbed his chin reflectively. Turning he called to Wentworth, "Bob, let's have another trial this morning. But, clear the building first."

It was almost nine-thirty before the attendants had completed their work. Wentworth settled into the driving console with King at his side, while I took my elevated position near the camera banks. The many-toned buzzers rattled out their calls as the warning went to the power house and the two northern stations. The screen began its wavering flow of flashes and lines as the dome lights dimmed.

Gradually, on the screen was built up a scene, faint and hazy, of a rough and awe-inspiring cliff. From its upside down appearance I needed no second thought to tell me we were looking upon something at a great distance: that we were cutting pretty deep into the depths of the earth due to the curvature of the globe. Under Wentworth's control we ascended the cliff—the impression was one of flying downwards. Reaching the top, we started to travel in a curious distorted fashion, on account of the acute and unnatural angle of vision, across the countryside. One had the sensation of sliding just under a film over the surface of the ground, comparable to a submarine skimming under the surface of a river, looking upward at the trees and objects on the shore. Once we passed a lake of considerable size which proved upon investigation to be artificial, being impounded by a small, well-built concrete dam!

On and on we went, I gasping my amazement and utter surprise in shouts and exclamations pardonable under the emotions sweeping over me. Power-lines, towers, steel constructions of sizes and shapes new and puzzling, swept by; paved roads, over which dashed swift-moving two-wheeled vehicles, were sighted at times; and the astounding discovery of a monorail system exactly similar to that we had uncovered in Canada!

"Hold," commanded King when we had picked up the monorail train. "Just look at that, Wentworth! No wonder Alaskan Monorail officials tried their best to silence all our newsreels by discontinuing service immediately after our exposure! I'm wagering there is something BIG back of all this!"

But we continued on, looking into homes and buildings of architecture wholly new, all the time climbing the rise of land toward the northwest. At length, dropping down the ridge of mountains we came upon more and more evidences of a highly civilized people—homes were more frequent, people more numerous. We approached a city, which, as it flowed upon our screen excited in us a desire of seeing it in person. It was apparently the most beautiful metropolis in the world, efficiency and beauty seeming to have been welded in the formation of those appealing three-storied structures, homes and business palaces, that rolled on unbroken for almost four miles down the tree-lined, extremely wide avenues.

The people, those whom we were able to glimpse with momentary clearness were of the white race, apparently of average height, possessing figures speaking of athletic tendencies, clear-featured, and almost without exception light haired. Apparently we had little to fear from them, for they were obviously a sociable lot. The street clothing of both men and women was simple—a two-piece suit with leather puttees and stout shoes.

At the central section of the city the buildings seemed to have cast aside all restraint; all their somberness and humility; rising with utter abandon to great heights. To be sure, there were only a few of them, but their futuristic beauty and towering sweep were impressive in the extreme.

King and Wentworth went into raptures of verbal delight.

Grouped about this central section were many other structures not quite so high, but more sedate, leaning heavily to early Grecian designs. The predominant feature over all was landscaping; trees and grass plots being laid out with mathematical preciseness over open courts and other superstructures such as viaducts and bridges.

Beyond this section, to the northwest, was a vast sheet

of water which we took for the ocean. On its surface we found several ships as we roved about like a submarine. We came upon a few rusty tramps conveying cargoes of machinery—thus the penetrating televise rays revealed. Once we had the good fortune of finding the ship in position so that we could read its name. It was "Winterboro" of New York City, and the flag it displayed was that of the Comet Shipping Lines of that city!

Again we moved on, speeding through the water until we came to a wide range of docks, at which were moored steamers from all over the world! Quite a few under foreign registry were rusty, decrepit tramps, but almost every one bearing the American Flag was a well-painted, trim steamer of the combination type. To convey the thoughts that beset our minds is impossible—we just stared with uncomprehending eyes, silently wondering in dazed stupor. Their cargoes were mostly foodstuffs, wheat, corn, barley, rye, sugar, meats and fruits, with quite a bit of machinery interspersed. Steel plating, nitrates, coal, cotton, oil, were transferred to the dock monotrain system with amazing rapidity by giant cranes that seemingly gored into the very hollows of the hulls. This disclosed what their cargoes were.

Suddenly across the screen moved a shadow. Wentworth sighted and focused on the shadow, until there appeared the hull of a flying boat, of a size comparable to the mighty German DX-O, scudding toward the water. It connected with scarcely a splash and, turning about, headed toward the docks. A tug, a fast motor launch to be correct, picked it up and towed it into a slip. Many passengers disembarked, some hurriedly evidently knowing where they were, others having to be led, giving signs of confusion and alarm.

A close-up was even more surprising. These latter arrivals were undoubtedly Americans, judging from their dress and actions. They were of all types, ragged derelicts, leather coated aviators, one policeman, and several well-dressed men of wealth and leisure. One we saw was a newspaper photographer, and he was busy snapping pictures, until a guard came over and politely took the camera from his hands.

After a time Wentworth shifted the scene, following a fast motor launch over the water straight west—and so we thought—out to sea. After about ten miles of travel we were amazed to see another shore line rise abruptly a hundred feet or more. The speed boat made for the wall of rock and disappeared into a channel. We followed it.

Another of the never-ending surprises leaped upon us!

Stepping down into the very depths of the earth, or so it seemed, were a series of locks, walled in on both sides by the sheer cliffs which were of such enormous size that the Panama Canal locks were put to shame by comparison. We descended these watery stairs, commenting on the completeness of the entire work. Finally, after traversing five miles and dropping over four hundred feet, we came into a great circular basin in which several hundred wrecked ships were beached. Some of the early modeled craft, now just wooden hulks rotted away until only their sturdy ribs remained, must have been old when the United States was born! Among the later arrivals there was one beautiful seventeen-thousand-ton combination freighter, lying stern-first on the beach, its prow sunk in fifty feet of water. Evidently some sort of work was being done on it, because several squat barges were moored alongside her lean flanks. Wentworth let loose a gasp of utter incredulity, when closer investigation proved it to be the *Ramsday* the lost flagship of the Pacific Mail and Transport Lines. She had been lost to man's knowledge, since the day she had fearlessly plunged into a typhoon off China in August 1927.

"THERE," pointed out Wentworth, "lies the solution of many a mystery of the sea! There lies many a ship that left port and never was heard of again! Pirates!" For my part I was now so steeped in wonderment, I took what came into view with a puzzled chuckle and exclamation.

Television was without a doubt the revealing light of the world—but what was it revealing?

Continuing on—there was no stopping us now!—we scouted until we found the channel leading away from the locks. It was a narrow canal, hemmed in by vertical walls rising upwards of six hundred feet! A mere crack, extremely tortuous, in which the seas boiled and whirled in terrifying violence, speaking eloquently of instant destruction to any querulous ship daring to come up that passage, leading as we discovered, from the broad Pacific!

After a moment we began to retrace our way up the channel when there came a muffled explosion from someplace in the theatre. Soon after, to our startled ears, came the sound of a great hissing and almost immediately a cloud of brownish smoke broke from the stairway leading to the developing rooms below.

"THE film racks in the basement—they're afire," I shouted, dashing down the stairs intending to close the fire-proof door. As I struggled with the release catch, Wentworth threw off the Television machine and turned on the lights. Already the lower part of the theatre was filling with the choking fumes of the released bromine, and after the door slammed shut, I was glad to dash up the balcony stairs. We opened the exit door leading to the fire-escape just as the fire-whistle began screaming at the power-house, giving the location of the blaze by three short blasts.

Plunging down the steel stairs we raced around the building until we came to the ramp-way leading into the basement.

"McManus," directed King, as he unlocked the doors, "Run to the powerhouse and intercept those men coming here. Tell them to get the masks. There's no great danger of the fire spreading, but it's certain death to enter the building now without protection."

I turned and dashed along the narrow path, meeting the men before they were half way to the scene of the fire. Three of us took the Ford chemical engine, while the rest ran back to get the masks.

The fire had gained headway by the time they had returned and heavy clouds of smoke were pouring from the shattered basement windows, while the roar of burning celluloid could be heard a hundred feet away. Protected by the masks and carrying the chemical extinguishers between them, the men dived into the doorway.

As the minutes passed, additional reenforcements came into action and soon fifty men were in the basement. The sound of the streams from their hoses, and of their battering and tearing, came dully to our anxious ears. I made several attempts to don one of the masks

and plunge into the doorway, but King's curt command to stay out of that "hell hole" and the two husky guards, made it impossible.

The women-folk gathered at a respectful distance, awe-struck and fearful.

Half an hour later the fire was under control. When the last of the smouldering debris of a once complete developing department had been dragged out into the open and the excitement had somewhat relaxed, it was almost supper time!

* * *

IT was well into the evening before King, Wentworth, and I were together again. Diane had been sent down to the village to visit those unfortunate men who had been injured fighting the fire. Doctor Howard, the company physician, had accompanied her.

To lead off the impending discussion, I asked, "did you find out the reason for the fire?"

"No," said King. "It must have been spontaneous combustion."

"Nothing doing," I dissented. "Do you know what I found in the bottom of the film vault? I mean the big one which had its door blown off? The shattered remains of an alarm clock and something attached to the case that apparently was one of those pyrophore-cigar lighters. There was a piece of sheet steel still bolted to the lighter and it's my guess this steel plate might have come from a cylinder originally. I've got it in my room."

"An incendiary bomb!" ejaculated Wentworth, leaning forward.

"McManus, are we going crazy?" asked King after a moment of quiet. "Or is that damned machine playing a trick on us?"

"Neither, Mr. King," I declared. "It's real. We have stumbled into something so wonderful, so fantastic and yet so real, that we ought to shout out our discovery to the world without a second's hesitation. Why, from all appearances I'd say that island is the domineering power of the earth, operating secretively toward its goal, whatever it may be. At any rate, we ought to let the various governments know of the new rival."

"I think I'm beginning to see things your way, Tom," agreed Wentworth. "But I'm afraid we won't be able to go through with it—first because of our own desire for secrecy on account of television, and secondly, if they, whoever they are, seem to have kept their presence entirely unsuspected all these years, what would happen if the world actually found them out? It would probably mean a sudden change in their plans, a sudden wild fear from the nations upon learning of this cancerous growth, and probably a war, the like of which the world has never witnessed before. I think I have an idea of the scope of their operations but I just can't get up the courage to tell you without drawing some doubt as to my sanity. Another thing is worth considering. If they have been following our actions by means of their television machine, it is no guess to state they have progressed far in the sciences, and the fact that they have placed operatives, spies, in our midst shows they are well aware of what we are doing. Then what chances would we have of telling the world? That bomb was nothing but a warning to keep away from that region and to keep our mouths shut as to what we have seen."

IT was no use to try to keep anything from Diane. After a sort of an effort on my part I gave in and told her of the things we had seen in the theatre previous to the fire. She listened with rapt attention until I concluded. "Now, if your Dad learns that I've told you, he'll never trust my word again."

She clasped her hands. A pensive smile was on her lips as she exclaimed, "Isn't it thrilling? It's just like a story."

"Yes, Diane, and believe me, there are going to be some *real* 'thrilling' incidents happening around Television Hill in the near future—or I miss my guess by a mile. This latest affair has broken your Dad's spirit; he's terribly worried lest something disastrous occur. Wentworth says little, but you can see he's doing a lot of thinking. Both of them are undecided as to the right course to take in this most unusual condition of things. Put it up to me, I'd call in the War Department and give them a look at this mysterious island."

"Might not that start a war?" she asked, a troubled light in those violet depths.

"War? It's strange your Dad and Wentworth think the same thing! I don't think there's the slightest chance of a conflict arising out of this revelation."

"What if these people of the south do not wish their identity to become known for reasons of their own? Might not they become enraged if we were to intrude upon their rights, and retaliate in the same temper as does a total stranger when we became so bold as to ask him his personal plans?"

"Even so," I returned, laughing at her serious demeanor, "it's our right to ask such a question when we and our interests are involved in apparent danger. Besides, what could one little island do against the combined world, if it came to that?"

There was a petulant smile on her lips as she returned, "A man can choke himself to death, but unless his brain desired death, his hands could not kill him by their own volition!"

FOR the next few months things went on as usual around Television Hill. We kept away from the region surrounding our interesting island, finding enough work to do in the usual run of news reel stuff. Now, however, our eyes were opened for incidents we could trace back to our silent friends of the south. We kept a check on ship arrivals and were not in the least surprised to find the *Winterboro* making her appearance in San Francisco with a cargo of fruit she had picked up at Honolulu. How we wished we could safely question the master of that ship!

Although our guards had been doubled about the entire plant, we were troubled more and more by determined persons who tried to gain entrance under various pretexts. Somehow, word was being passed about that we were experimenting with a new system of television, and newspapers and magazines stormed us with interviewers and telephone calls for the rights to publish accounts of our work. King denied all rumors, calling on the War Department to back his statements. After they had made a report to the newspapers telling of the immatureness of the equipment, and the poor exhibition we had presented, we were left alone. Of course, it was understood, between King and the officials, as a scheme planned long before, to quiet just such rumors as were flying about the country.

One morning while engaged in filming a dizzy specta-

cle of a flag-raising on the almost completed Merchant's Mart in Chicago, the screen unexpectedly went dark. Shortly after there came a phone call from the power-house telling of the breakdown of two of the Diesel engines.

Hurried investigation revealed the center left Diesel had burnt out three connecting-rod bearings through the sudden clogging of oil feed lines. The other five units were in bad shape, for we had been driving all at their maximum limits for the last six months. Despite the tremendous output generated, it was not enough to satisfy the insatiable demands of the giant projectors. Accordingly, King ordered a general shutdown for the period of two weeks until the necessary repairs could be made. The period of inactivity allowed Wentworth time to increase the defenses of the plant and to carry forth new additions and refinements to the various mechanisms.

Meanwhile I took advantage of the opportunity, having quickly completed the changes in the bank of cameras, and the final installation of the new developing machinery to replace that damaged in the fire, and drove to Auburn, Indiana, paying a week-end visit with my parents. While there I saw and purchased a wonderful passenger sport sedan—a powerful appearing, low hung, sleek, chrome-trimmed, front wheel drive beauty, complete in every detail, even to a compact radio set built into a wide ledge behind the front seat.

I drove this sparkling creation back to Television Hill, impatiently watching the miles purr swiftly under the almost dream-like motion of the car. It was late afternoon when I finally did reach for the parking brake on the gravel drive before the cottage stairs. With an expectant smile I pressed the two tone trumpet salute and its not unmusical blast reverberated over the hill.

From within the cottage came a commotion and Diane appeared at the door. Under the lowered brim of my hat I watched her as she stared with open-mouthed surprise at the machine.

Frowning, she descended from the porch and came alongside. Then she saw!

"Why, Tom!" she gasped, throwing her arms into the open window and taking my caress mutually. She stood back appraisingly. "Oh, it's wonderful!"

"What is?" I asked, feigning innocence.

"Why, the car, of course! Silly—did you think I meant—" the flush appearing on her cheeks and throat conveyed the rest of her sentence.

AS the bank of cameras went on clicking their record of the unusual scenes on the mighty screen, Diane became daily more and more interested in the camera balcony, claiming, without even so much as a quiver of her level eyes, that the view was better there than any other place. Needless to say, I did not dispute with her. Her questions concerning the operation of the machine were becoming exceedingly technical, as she became acquainted with the principles involved in the system.

"See here, Diane," I expostulated once, "I'm sorry to say I cannot go on. You have me stumped. At present you have outdistanced me in your knowledge of the theories and machinery around this plant. Why in the world does this stuff appeal to you?"

"There now, Tom, don't fly off the handle. Possibly you are under the impression that I'm not aware of the things going on about here, since that January night Dad stumbled into the mysterious island? I know Dad is worried almost to a frenzy over those strange fires breaking out over the place, the breakdown of the Diesels, and the disappearance of his plans. Then, you know, some of our best men are leaving and that constant electrical interference is daily becoming stronger. All this seems to point to one thing—that these unknown island people are earnestly striving to put us out of commission. Daddy has been beset with several appealing offers for the outright disposal of the entire system by tall, wonderfully educated men, supposedly representing the War Department. More than ever now, Dad does not wish the plant to get out of his hands, claiming it to be too great a risk—since he is afraid of what might happen should others uncover that —that 'Terra Incognita.' So it is that he, himself, has begun to teach me and acquaint me with the details of everything, saying that if the worst came. . . ." Here she paused to stare with compressed lips at the screen. "If the worst came, I could help to carry on from where he leaves off." Her hand lying under mine on the guard rail clenched the pipe tightly.

I think I began to see the seriousness of the whole affair from that moment. Before, I had merely dwelled upon the thrills revolving about the announcement of our exposure; but now I became cognizant of what that selfsame knowledge meant to our own safety. If King thought the danger great enough to teach his daughter how to carry on—well, it was high time that I, too, looked at it in a different light.

THAT we were not alone in our knowledge of a foreign power resting quietly on the earth's surface was a chance discovery I made one May day immediately after dinner. I had settled myself on the veranda for the purpose of glancing over the morning "Tribune," which had been brought from Chicago by one of the returning planes. As I was basking in the pleasant spring sunlight, my eyes swept swiftly over the various articles, noting that nothing of any importance had happened in the city beyond the average run of news. However, on the last sheet I came across a story which made me call King and Diane to my side.

"Say," I said as I spread the sheet before me, "here's a real find! Listen!"

McDOWELL SAILS INTO THE SOUTH SEAS

Transport Chief and Party Aboard Private Yacht "Astra"

Silent on Details of Mysterious Quest

San Francisco, May 23—Enshrouded in a cloak of mystery, the four hundred foot palatial sea-going yacht *Astra* set sail early last evening bearing J. C. McDowell, sole owner and president of the Pacific Mail and Transport Lines, and a large party of guests.

From various sources it was learned McDowell had been preparing for this voyage for the last two months, equipping the *Astra* with a rapid-firing gun on the fore deck and making provisions for launching an amphibian plane from the boat deck. The plane was absent at the time of departure last evening.

The party includes such well known figures in the scientific world as Mr. H. Sommers, late head physicist at University of California, Mr. E. M. Sollett, assistant astronomer from Mount Wilson: Mr. John J. Anderson, well known in political

circles as an international investigator; and Mr. A. Rogers an agent of Lloyds, who lends the air of substantiation to the rumor of McDowell's reputed search for his lost freighter, the *Ramsday*.

It is recalled throughout shipping circles that McDowell once made a statement declaring the seventeen thousand ton freighter never sank, but disappeared in some strange fashion unknown even to him. The *Ramsday,* burdened with a hold full of heavy machinery, ran into a typhoon several hundred miles off the coast of China three years ago and the fate of her and her crew of 110 men remains a mystery.

Perhaps it is to follow up the sea trail of the ill-fated vessel that this present voyage is planned.

"YOU see!" I exclaimed, with the joy of having come upon something important. "McDowell suspects something about his ship, the *Ramsday!* Somewhere, someone has slipped and he's hot on the trail of our island friends! And he means business, for he's carrying the planes. I know the *Astra.* She's a real boat; not one of those fragile egg-shells millionaires dress up with paint and brass-work. She's a rebuilt cruiser, one the Navy rejected immediately after the war, an experimental ship capable of turning up thirty knots an hour! And she looks it, too."

King was watching me through narrowed eyes during this outbreak. "You know McDowell?"

"You bet I do," I returned.

"How much—to what extent?" he demanded. I knew what was in his mind. He thought I had passed the word along; did he?

"I met him several years ago while working on the coast: we were shooting a movie and used his yacht as part of the setting of the story."

"Of course, I know you better than to suspect you might have let something slip about what you saw of the *Ramsday* down south." There was more of a question than a statement in the tone of his voice.

I could not control the rush of anger sweeping through me. "You have had my word of honor!"

He raised both hands in a complacent manner. "Please, Tom, don't take it that way. I know you didn't, only it—it's funny." He stood for a moment, a worried frown on his forehead as he stared off into the distance. After a long sigh, he turned and went in the cottage, where I heard him call Wentworth on the phone. Wentworth was at Lake Geneva.

"Daddy surely did get a shock from that" murmured Diane, sitting down beside me and taking up the paper.

"It's great, Diane, old girl! Don't you get the real significance of this little bit of apparent ordinary news? The dénouement supreme is on the way! I know 'Scotty' McDowell and his tenacious frame of mind, once he sets out to do anything. He'll find that island, if no one else ever will, and then! Boy!"

I don't know how long I might have gone on in this wild state, if it hadn't been for the interrupting hum of a plane. It couldn't have been Wentworth, for King was just then talking to him over the phone. Curious, I descended to the walk, craning my neck about until I espied it, high in the air overhead and slowly circling. Though it was at a great height, in fact so high that its details could not be distinguished, the throbbing, resounding vibrance of its roaring gave me the idea that it was a multimotored ship. As the minutes passed and it continued circling immediately above us, my interest changed to perplexity. There was something strange going on up there! At length it appeared to be getting larger and gradually I could make out the lines of the craft. Closer it dropped until it thundered barely a hundred feet above the trees on the highest part of the hill, seemingly interested in the projector.

In size and build it bore resemblance to a Boeing thirty-passenger liner, with the exception that it was equipped with pontoons instead of wheels. There was no mistaking its intention of alighting in the river close by, and with a shout to Diane I dashed down the path toward the hangar. Arrived there, gasping from our run, we were just in time to see the mighty aircraft settle on the surface. Motors booming, it swept swiftly to the rampway, a man making his way across the lower left wing with a rope in his hand. This he tossed to the mechanics, instructing them to pay out the rope at his signal, but to keep it taut. Then the left wing motors roared and it appeared as though the plane were trying to pull the mechanics into the river. However, the dozen odd men gathered in the building rushed to their aid and to our amazement the plane swung about until its tail section overhung the dry portion of the ramp. It was the neatest bit of maneuvering I had ever witnessed.

A doorway opened near the tail section and a ladder swung out and down. One by one four leather-coated, helmeted men climbed down, their keen eyes taking in everyone and everything in swift discerning glances.

Our men drew apart from them. Somehow it seemed they brought with them a chilling atmosphere of antagonism. I felt a strong desire to ask their business and order them from the place.

"Pardon our unexpected intrusion," began the evident commander of the plane with a disarming smile as he looked over our party for one with whom he could speak. "I'm looking for a Mr. C. King."

I stepped forward. "Mr. King is up at the cottage. Shall I call him?"

He shook his head. "No don't bother, we'll have to see him at the cottage anyway."

"I see," I said. To Diane I whispered, I don't like the looks of this. You take them up to the house, and I'll stay here, and make sure nothing happens—you know what I mean."

After a brief introduction, Diane led the four mysterious men from the hangar, while I called our men together and told them to be ready to return any suspicious overtures our self-invited guests might make. What had strengthened my feeling that all was not well was the fact that the ship's motors had not been shut off, but were idling. Their sharp, steady, liquid pulsations brought exclamations of delight from the pilots and mechanics who stood in groups scanning the lines of the strange ship. I heard one fellow shout to another, "Hi, Jim, just take a listen to some real motors!"

There was continual movement of several men still within the plane. Now and then one would stop to stare out of a porthole.

With a wink to the group nearest the plane I ambled over to the ladder and cautiously made my way up the rungs. One fellow came to the door and with a smile filled with amusement and welcome invited me to come right in.

The plane was divided into two compartments, the rear being fitted up with comfortable seats while the

middle section was occupied by a square construction with many gear racks and hand wheels. It took me just one glance to recognize it as a powerful telescopic camera! Two men were busily engaged about a portable motion picture film developing tank.

I moved into the forward end of the ship. This was no ordinary plane. One look at the unique system of framing and construction assured me of that. It was too well built, too staunch, and bore too much evidence of careful design and refinement to be an American or Continental craft. It had a new, fresh, foreign atmosphere about it. At a word from one of the men at the developing tank the rest of the four men gathered about him, holding up to the light several glass negative plates. Their comments were low-spoken and serious.

"TOM, Oh, Tom." It was Diane. I hurried to the door and found her at the bottom of the ladder.

"Dad—he wants you to come to the cottage—immediately," she gasped. Her face was deathly pale, even though she must have run the entire distance from the cottage.

"Keep your eyes on that plane, boys," I instructed as we departed.

"What's up, Diane?" I asked as we strode swiftly up the path.

"Oh, I don't know, only Dad has called Wentworth from Lake Geneva, and has sent for Chalmers and Smythe. Those men seem to know everyone about our place and asked where you were."

THE parlor was filled with men. The four men occupied vantage positions at the four corners of the room, facing each other. King stood at the table, his narrowed eyes anxiously darting from one to the other. There was no welcoming smile on his lips as Diane and I entered, only a firmer drawing of the muscles of his jaw. Chalmers, a puzzled and mystified frown on his features, was nervously twirling his greasy cap; apparently he had been called from some repair work at the power house. After a glance in my direction he returned to his intent study of the design on the rug. Smythe was the least concerned of the lot—he had a slight smile on his lips as he sat smoking a cigar, with long satisfied puffs. Diane slipped her arm into mine as I stood aimlessly near the door.

"Mr. Thomas McManus?" inquired the leader, arising to his feet.

I nodded, scrutinizing the fellow. He was of average height, with an athletic figure and a poise that told of military training. He was clear featured, and had the keenest, discerning gray eyes I ever looked into. He turned to King.

"Mr. King, I understand it will take half an hour for your partner, Mr. Wentworth, to come from Lake Geneva?"

King nodded in assent.

"Well, in that case we will have to do without him. You can inform him when he arrives of what I am about to say." The fellow glanced at his mates. "You, Mr. King, are a man of precise speech and are not wont to quibble or 'to beat about the bush' when it comes to direct talk. So am I.

"You have developed a successful and proven system of television and by doing so you have few equals in mental skill and patience. You have accomplished an unequaled feat in mechanical design of a higher order than the world of today thinks possible. And, as we suspected, you discovered traces of our work, found our island home, and thereby placed us in a precarious position. We have kept watch on you through all these years and partly in respect to you, and partly because we planned to let your research work go on unmolested, we have made no serious efforts to hinder you until several months ago. You have proved a foe of such resourcefulness as to be worthy of our admiration. But you have gone too far. We are now ready to strip all evidences of secrecy from our presence and put before you a proposition which you may take or leave. Either way it means the dismantlement of all the machinery here at Television Hill, and the loss of your system of television to the world for a few centuries."

If a bomb had been thrown into the parlor of the cottage, the shock would not have been any greater. I was stunned into complete stupefaction. Chalmers had risen, with anger contorting his face. I expected him to hurl himself at the speaker at any moment. Smythe's cigar hung from his gaping mouth. This certainly must be a shock to Chalmers and Smythe, for they were not aware of our previous television exploration down south.

King placed both hands on the table top to steady himself. "I don't know who you are, or what you represent," he began in a low composed voice, "but, if you have an idea that you can scare me into turning my plant over to you, or even stopping my experiments, on account of my knowledge of your presence here on earth, you're absolutely insane!"

The leader gave a little resigned motion with his hands.

"I understand perfectly, Mr. King, your righteous attitude toward a proposition calling for such a complete disposal of the marvelous result of the labors of both you and Wentworth. But I don't believe you know just what you are opposing! I'm not making this demand. I'm just an envoy, sent here in the interest of seven million people who are directly involved; indirectly the entire human race is in—well, danger! If you take the foolish choice of trying to fight back at us, I warn you, you have not the slightest conception of how effectively we can strike back at you. The odds against you are greater than you know. We are too well established in world affairs to let any one man disrupt our plans. Come, now—what is the answer I am to carry back—— Are you willing to turn over Television Hill for fifty million dollars and forget you ever built a television machine, or must we take it away from you and put you and your associates out of the way, and thus safeguard your secrets?"

"If what you say is the truth," snapped King, now thoroughly aroused, "you can go back to your people, those damned parasites of the earth, and tell them I will never concede to such a demand!"

"So be it," agreed the man, nodding.

"Go now," blazed King. "This is final."

"Presently, Mr. King," drawled the leader with a complacent motion of his arm. "But first, permit me to say a few things which might give you food for thought."

"Please do not think you will be able to bring our presence into the light of the world, if I may put it that way, we want you to remember this: If this is going to be a fight, and it's very likely to, if you do not concede to our pardonable demand, we can force you into silence far more easily and more quickly than you

suspect; with such indisputable evidence on your side as motion picture newsreels!

"You have looked on some of the sights about our island home and you know just what kind of people, what class of intelligence, resides there—but you don't know of the origin nor the power of these selfsame people. I'm sorry I cannot relate to you a few instances that have happened recently, just to give you an idea of what you are standing against."

King laughed, a cold, disdainful laugh. "What are you trying to do; scare us by such insane threats?"

"Whether they are insane or not, the future will reveal. However, I'm sorry to see that your present state of mind cannot be won over. You know what that means? Virtual war!"

"War!" King turned the word over as though he had never heard of it. "Between whom? Between your bunch and the United States?"

"Mr. King, I regret our meeting has turned out as it has. May I wish you the best of luck in your fight?" The leader drew on his helmet. The three other men arose to their feet and drew together at the door. The commander went to King and thrust out his hand in a friendly gesture. King, after a moment of indecision, slowly grasped the man's hand, regarding him in bewildered perplexity. At the door, the leader paused beside Diane and murmured, "We beg pardon, Miss King, for being so—so rude and inconsiderate to your father and his work, but some day you might understand the great good we are doing." With that, and a nod to me, they tramped down the hall and out on the veranda.

JULY came. Swiftly. It was on the morning of the tenth, the dawn of a hot, sultry day, when scarcely a breath of air stirred in the clear, steel-hot skies that the first murmurings of danger came. It was in the form of a radio weather report from an eastern Missouri station bearing the mutterings of disaster in the form of a widespread storm sweeping northeast at alarming speed.

The arms of the teletype machines seemed strangely silent as the stifling morning hours dragged on. About eleven the house phone took King away from the projection house. Some ten minutes passed before he returned. There were serious lines on his face as he trudged up the stairway.

"Well, I guess the fun is to begin—shortly," he said. "New Era just connected with our pay phone in the cottage hall, saying they have been sending half-hourly reports *via* our regular lines since seven this morning, following the path of a twister in Missouri. Somehow the messages have been intercepted or the lines cut. I have reasons to believe it's the latter. Anyhow, they gave us some interesting news. The Weather Bureau has plotted the path of the storm and they believe it will pass close, if not through the Rock River Valley. So, if it comes this way, New Era wants some good pictures of the twister in action."

"If one doesn't get us before we see it," I laughed.

"This isn't a laughing matter, McManus, Wentworth and I have feared such storms ever since we came out here. We had a narrow escape in the fall of 1928 when the twister or tornado tore through Rockford. If one heads this way all we can do is to take to our heels. We have a storm cellar down near the hangars, but that is filled——" He checked himself suddenly when Wentworth gave a warning motion with his hands. "Yes, all we can do is skip," he repeated.

We sat on the balcony for another half hour, telling each other of experiences we had during storms. At length Wentworth rose and said he was going to the cottage.

After he had gone, King sat for a long time staring toward the screen.

"McManus," he said softly, "I've got a feeling something's going to happen here today and that it isn't going to be pleasant. Do you know that one of the twisters is already as far north as Galesburg, only eighty miles away?"

"Already," I queried, wondering why he had kept that news to himself. Yet the reason was as plain as day. He did not wish to needlessly alarm the plant. Wentworth would probably warn the men to be ready to move.

"Yes, one is that close. What do you say to our getting a look at it?"

I could see by his expression that he wished no one else in the theatre and with a few commands I sent the attendants and film men on their way, telling them to be ready for instant recall.

King seated himself at the controls and shortly had the screen on the region round and about Galesburg.

It wasn't long before we found the twister and by expert maneuvering he followed the swift erratic movements of the swaying lash of destruction. Then, drawing back on the vertical wheels (on the screen, of course) we began to climb up the whirling thing. Up we went, seemingly flying into the very teeth of the gale, as we pitched and rolled in the effort to keep in advance of it. We drew toward a bank of clouds, which King made clear and distinct by a sudden leap from the controls to the mixing panel. At the top of the spout a veritable fountain of shattered, wind-torn debris sprayed.

"Look at that," commanded King as something black, huge, and utterly strange, appeared on the screeen. He made quick adjustments to the controls, grabbed the telephone, dialing the cottage. He pushed it to one side, while he made further corrections at the console.

"That you, Wentworth?" I had picked up the phone after finally overcoming my stupor.

"Yes, Tom, what is it?"

"Come to the projection house immediately. Hurry!"

"Thanks, Tom," grunted King frantically working the controls in the attempt to get a comprehensive view of the whole blurr. It was not natural, we saw at once. Monstrous, it was—a great triangular-shaped construction of cylindrical sides and bulging corners apparently caught in the head of the twister. But, as we followed it, the incredible truth dawned upon us.

Instead of being helplessly enmeshed in the cone of the twister, this ghastly thing was the GENERATOR of the twister! It was, without the slightest doubt, a man-made creation of stupendous size, whose three sides gave evidences of thousands of shifting and whirling beams of light or rays.

At this moment Wentworth rushed in, followed closely by Diane. Their sudden gasps of amazement were amplified in the silence. We all stood there awestruck and dumbfounded—all except King, who was tuning the focus so as to get a view of the interior.

"What's the idea of that thing?" burst out Wentworth, his common sense overriding his surprise.

"That's just what I'm trying to find out," replied King.

The screen seemed to halt and slowly one of the corners of the triangle drifted toward us. The penetrating beam of the Televise rays cut through the metal covering and there flowed over the screen a cross-section of the whole construction—long corridors filled with intricate machinery, whirling and spitting flame. Nowhere did we find an operator, although the entire interior was combed as diligently as only television rays can comb. We did find one room, which we thought was carefully insulated, because of the extreme difficulty we had in getting a clear reproduction. This room enclosed a switchboard filled with a great number of automatic switches that were opening and closing at regular intervals.

"Remote control," decided Wentworth, "being run from another place. But, what's the damn thing making a twister for?"

"I think," declared King, beads of perspiration rolling down his face, "I've got an idea. That thing is heading this way for the express purpose of wiping us out for good."

"Not while I'm here," returned Wentworth. "Come on, King, we're not going to let them scare us away." He grabbed the phone, dialing the power house. "Chalmers? Say, Alex, open the Diesels wide and give us every watt you can kick out of the generators. Slam the storage cells into full amperage for a 'shock.' Get the twin high frequency generators going immediately. Chalmers, listen, get this, stand by—this is no test, this is the actual thing!"

At that he slammed the phone down and tore down the stairway. At the bottom he pulled open a side door revealing, with the spotlight he carried. a shallow switchboard. He was busy for some minutes making deliberate and studied connections with a number of flexible cables. Closing the door, he raced back up again, a dancing circle of light fleeting over the floor from his spotlight. At the mixing panel he drew a deep breath as he flipped over a number of switches.

"All set, King, old man. Just keep your controls following it—and we'll blast it from the skies."

"But isn't it too far?" queried Diane anxiously.

"Eighty miles or eight thousand," snapped King. "It's going to go!"

Wentworth rolled over a row of toggles with one sweep of his hand and the screen went dark. Instantly I felt as though some titanic force had seized upon every muscle in my body, contracting the sinews until they seemed about to snap with the tension, while in the darkness of the theatre I almost fancied a million stars were blazing in blinding splendor. Almost as quickly, the sensation had passed and the screen was alight. Diane's face was white—even in the semi-darkness I noted that. She shook with fright.

King was sweeping the skies for the strange machine, but when a half hour had elapsed without our finding a trace of it he gave it up.

"We seem to have won that move this time," smiled Wentworth, after he had returned from disengaging connections from down below. "Do you know what we did?" he asked me.

"Not exactly, but I've got an idea," I returned.

"We only beamed, or rather intersected, twenty-five million volts into the control room of that mysterious machine. No wonder it ran away, eh?"

AFTER a short time the men were recalled and we began to take our usual shots of the wind-torn sections of Missouri. Diane and I stood near the console and watched the regular operator as he picked his way through and between the shattered buildings and homes.

Then, without warning, the screen again went dark; but not black as before, for it retained a misty image that might have been construed to be anything.

Wentworth was in action immediately at the panel. "New Glarus is dead. We're running on Lake Geneva alone."

The dome lights were thrown on and we stood around silent, the attendants staring wide-eyed at our group on the balcony. They all knew something out of ordinary was occurring. As the phone buzzed, I reached for it. The voice was incoherent and hurried.

"This is Williams at New Glarus. Lightning just struck the projector, killing the guard in the tower, and fusing the left tower legs. The high wind struck the projector and we are afraid the whole thing will collapse at any moment. Will call again in a few minutes."

King and Wentworth were aghast at the news.

"We'll take a look up there," declared King, ordering the man once more from the theatre and setting the machinery in operation again.

It was all as Williams had said. The Television screen pictured the scene at New Glarus with its usual faithfulness. A terrific bolt of lightning (only we had very good reason for the suspicion of its not being of natural origin) had struck the lower end of the outer tower leg, weakening the entire supporting members. The high wind was bearing with force against the wide surface of the projector housing and it was swaying slightly. The men and Williams were working like demons trying to turn the projector so as to relieve the strain. Even as they struggled with the driving mechanism another shaft of this strange lightning tore into the upper part of the projector. It hit somewhere near the pivots. The projector leaned further. Already the three foot thick shafts were tugging at their foundations, bending slowly as their retaining bolts held. Age-long minutes later they majestically dropped the seventy ton housing to the ground. We almost imagined we could hear the tearing and snapping of steel members and popping rivets as the entire construction collapsed into a meaningless wreck. Williams and his men then retreated across the field after entering the watch tower and bringing forth the inert watchman.

Disaster, mysterious and diabolic, was upon us!

WE needed no second thought to come to that conclusion. It was enough. The television machine was closed down and the lights turned on. King and Wentworth stood staring in downright stupefaction at each other. King, after a shrug of his shoulders, shivered. Perhaps I stood, mouth agape, like some senseless lout. I don't know, one never knows how he looks or acts in such moments of stress.

"Come on, let's get out of this place," commanded King suddenly, grasping Diane's arm and propelling her ahead of him down the stairs. Once outside I drank in the sultry air with relief. The sky to the west and south had become heavily black with the storm sweeping upon us.

"Say, McManus, did you ever see or hear of a storm that's reported to be coming from Missouri, taking a

leap up into Wisconsin before it strikes here? Funny, isn't it, that it should put one of the bearing projectors out of commission, just at the right time so that we cannot interfere with the plans of our friends down south?" King's laugh was forced and filled with suppressed nervousness.

Wentworth answered, "Sure is. It looks as though Television Hill is going to be a hot place when the storm hits it."

Diane and I kept silent. I, for one, was trying to to calm the wild thoughts their words and past incidents brought up. We arrived at the cottage. King and Wentworth went inside while I seated myself on the porch stairs. Diane stood nearby, leaning against the door frame, watching with fearful eyes the sullen approach of the storm.

Everything was dead quiet—the quiet that heralds the storm. The trees along the river were standing in expectant attention, awaiting the impending outburst of nature's titanic forces. A poplar leaf came sailing down in a whirling spin, while afar off came the dry chirp of a robin, and faintly, from the shallows of the river, the deep croak of bullfrogs. I stared up into the soft, beautifully molded features of the girl, until she became aware of my gaze. There was a momentary flicker of a doubtful smile as she settled down beside me.

I rose to my feet and started down the stairs. A light restraining hand was laid upon my shoulder and I turned to her questioning eyes.

"I'm going down to the garage, Diane. This silence is getting unbearable. I need action." I did not wish to let her know of the fear creeping into my heart.

She stood where I had left her and as I turned the curve in the drive I glanced back and saw she was watching my movements. Down at the garage I busied myself about my sedan, changing the oil, greasing the steering wheel quadrant and helix and the front universals. Long before I completed my work I became aware of the distant rumbling of thunder. When done I took a look at the other machines. The Ford roadster was completely out of commission, for someone had forgotten to put in oil the last time it was used. The limousine was at Dixon, being overhauled. Diane's smart roadster had a flat tire. I could not withhold a grim laugh, when I found the spare tire flat also. If we had to leave this Hill in a hurry, my sedan would be the only machine in condition to move. I expected rather than suspected foul play and rather than think more about it I climbed into the front-drive and headed for the cottage. It was safer there.

Diane came down and seated herself beside me. There were tears in her eyes which I laughingly wiped away telling her we had not, as yet, seen any signs of danger involving us directly. I did not tell her of the things I had discovered in the garage.

"Oh, Tom, I just know we're going to get into terrible trouble; something tells me to flee, to run away, to hide, to get away from here. I don't know what to do." She gave herself over to hysterical sobbing.

"Here, listen to this," I turned on the radio and the speaker pounded out a sprightly orchestral selection. The ether was filled with interrupting, shattering static. I turned the set off.

The cloud formation had drawn nearer and now we could see the leading band of white cloud rolling in the vanguard. Soon the skies grew darker, while closer came the deep booming roll of thunder. The grey storm-leaders came up and passed over with the distant sound of rising winds. It grew so dark I turned on the parking lights. Diane shivered when the first heavy drops came plopping on the taut roof of the sedan. As usual, there was a let-up, and we took advantage of the break to leave the car and hurry to the veranda. King and Wentworth were there, with calculating eyes on the rolling clouds overhead.

A moaning sigh arose and the trees on the west side of the river leaned in our direction.

"Here she comes," I warned, setting to and turning the porch chairs upside down. A newspaper eluded my grasp and distributed itself with much slatting over the veranda floor and against the side of the house. Under the steady blast the trees fought to retain their vertical positions, while their loose leaves and torn branches flew through the air on horizontal paths. The hollow roar of the wind whipping about the porch and sending spray sheets of rain slanting inwards, forced us into the cottage where we settled in chairs, closing our eyes as the lightning seared the storm-tossed world outside. Bolt after bolt came and the thunder crashed in stunning splendor, Diane quivering as though she expected every moment to be her last. The cottage shook at each reverberation of thunder.

Between crashes, King tried to speak to me.

"New Era just sent in word that the twister at Galesburg petered out just about the time we sent our paralyzing beam into it. Reports are that everyone in the district was stunned by a terrific thunderbolt." He grinned.

"Maybe you blew the thing into atoms," I suggested.

"Maybe. We don't know what might have been in there you know. Williams also phoned in saying the guard he thought was killed was only stunned, and outside of being injured during the fall of the towers, is feeling all right. The storm is raging pretty badly up there—sweeping east." Now that the excitement had been dampened by the rain outside, he was his old collected self again.

"Say, do you realize we're late for dinner? The cook's been raving about for the last hour and a half."

Dinner, nevertheless, was a period of strained silence. I could not help noticing Diane's nervous actions. She would gasp at each searing flash, biting her quivering lips when she became aware of my stare. She did not eat, but toyed with her fork.

At length even King became aware of her fright and threw his arms about her shoulders, laughingly telling her to quiet her fears. Thereupon she began sobbing and without further ado she left the dining room, going upstairs to her room.

FOUR o'clock came, tolled off by the Telechron. The storm was breaking all precedents by increasing in intensity as the hours passed. Phone calls, *via* the pay phone, came in constantly from New Era, informing us of news of the storm, which was becoming widespread over entire northern Illinois.

The lightning display was awe-inspiring. Television Hill, being the highest point of land in the vicinity, seemed a lodestone for the heavy discharges crashing everywhere. These flashes were not of the usual jabbing streak, but more in the order of sheet lightning, dropping with deliberate speed to the ground and holding there for periods, almost as long as several seconds at times.

Once more the library phone rang and Wentworth answered it. He reported to King. "Several of the cottages down at the village have been struck by lightning, and someone has spread the report of a twister heading this way. The men want to know if we'll allow them to take their families out of the valley. They're all ready to go."

"Surely, let them go," agreed King after a moment of deliberation. "It's better and safer. This storm might get worse, and to tell the truth, I think we're in for a real cyclone or something like that. Tell the bunch to head northwest; they'll clear the storm path sooner."

King then went into the rear quarters of the cottage and told the house servants to join the party leaving Television Hill. They, thoroughly frightened by the storm and the whispered stories of danger, were only too glad to dive out into the rain and await the long string of private cars and trucks that shortly appeared on the bridge.

A PHONE roll call of the plant found that Chalmers and several of his assistants had elected to stay at the powerhouse, while in the village several strong-hearted families made light of the storm, laughing at the fears of the others who had fled. In our cottage were King, Wentworth, Diane and myself. Diane had not appeared since she had taken to her room. Another age-long hour passed, while I tried to concentrate my thoughts on a novel I had picked up in the library. However, the predominating sensation of disaster intruded constantly.

There was a scream from upstairs. Diane! I was on my feet instantly. There came the rapid clatter of her feet down the stairs and she burst into the room, wild fear in her eyes.

"Fire!" she cried. "The hill is on fire! Upstairs, you can see it!"

Upstairs in her room we crowded about the windows facing the powerhouse and watching the leaping flames coming from a point half way up the hill on the east side

"The oil storage reservoir!" was my exclamation, while Wentworth nodded, with a pained drawing of muscles about his eyes.

"Sixty thousand gallons of crude up there; the powerhouse is going to get the worst of it, if those tanks have burst wide open." cried Wentworth. He clenched his hands tightly.

To the north we could see the fragile looking towers of the projector, which still stood unscathed atop the hill, although it must have been the target of countless thrusts of lightning all that afternoon. A blinding flash illuminated the entire countryside and in the short interval the hot pencil electricity played about the water towers of the projection house. For a moment later darkness descended, and the glow of the oil fire could be seen again.

I saw a moving light, red and ominous, flickering in the windows of the projection house, just about where the lightning had struck.

"Look! The projection house is afire, too!" I pointed, when my doubting senses had made certain is wasn't a fantasy.

"My God," murmured Wentworth. "What next?"

"Come, let's get down stairs before a bolt hits the cottage," cried Diane, drawing me out of the room.

I was for donning raincoats and dashing over to the projection house and fighting the fire, but Fate or some other force was planning otherwise.

There came a running of many feet up the porch and Chalmers and his two assistants dashed into the parlor.

Chalmers drew off his rain-soaked hat. His wrinkled face looked older and strained. "Well, they got us! It's all over! I don't know how it happened but the oil tanks up the hill blew up and the oil has seeped into the battery rooms below the powerhouse. A regular hell is blazing away down there and the gases—Whew!"

"What about the projector house," I cut in.

"You saw it—It's too late now. We ran in there thinking it only a little blaze, but we found the upper floors soaked with gasoline. Man! But there certainly is dirty work being done around here. It's terrible, King, all the work of eight years going up in smoke."

The lights flickered and began to dim. "Guess the fire is getting at the batteries now," explained Chalmers. The bulbs dimmed until just a faint line of glowing filament stood out in the darkness during the intermittent blazes of light outside.

"WHAT are your plans? Going to stay here?" asked Chalmers.

"I've not decided what we're going to do," returned King, out of the darkness.

"Well, we're not going to stay here and risk our lives. How about it, boys?"

"Nothing doing," they agreed. There was a sudden movement and they ranged near the door.

"So long, Mr. King and you Mr. Wentworth; hope things come out all right. *Au revoir!*" sang out Chalmers with a hollow rasping laugh entirely out of place in the present state of affairs. It was almost mocking I thought, as I leaped to the window to see where they were going. The three paused a moment beside my sedan and then climbed into Chalmers' powerful coupé which stood near by.

There was a hollow tube-like whine as the fast machine started and sped down the drive. "King," I said suddenly as a suspicion dawned upon me. I turned from the window.

"What is it?" he asked in a curious tone of voice, as though he already knew what I was going to tell him.

"I'm ready to stake my life on the supposition that we'll never see Chalmers and his assistants again! Chalmers may be connected with those people of the south," I declared.

As I expected, a silent agreement met my words.

"I've got it," I exclaimed. "We'll get them at the bridge." I leaped toward the phone and lifted the receiver. There was no answering buzz. Of course, the power was gone!

"Come on," broke in Wentworth. "We've had enough of this. Let's be going, too. We don't know what may come next. Let's get out of here."

I guess we all must have had the same idea but didn't have the nerve to express it, for at his suggestion, we dashed about getting into raincoats and locating flashlights. I went to my room, and scattered my belongings about, stuffing only those valuable things I wanted into a suitcase. We gathered in the parlor where Diane had lit a candle. A sorry group of humans, we were, too. King in his leather flying jacket and helmet, appeared a stocky gnome. Wentworth, tall and perfectly fitted in his light coat and black hat, was a

duplicate of the stock movie detective—even to the unlighted black cigar he held in his teeth. Diane. She was a picture! Her close-fitting hat was pressed over her blond hair and her trim figure lent an air of romance to the scene we presented. At my appearance they selected the various burdens piled near the door and we filed out of the door.

The projector house was already ablaze, long licking tongues of flame leaping high above the dark silhouette of the nearer water-tower. Back on the east side of the hill rose another roll of flame; clouds of black smoke by lightning flashes and crimson glowing in the darkness ensuing.

I splashed out to the car and opened the doors. They piled in quickly. The motor, though well protected from such water immersions as occur in wet weather, at first refused to start, and when it did, coughing and spitting, we moved down the gravel drive. I kept in second gear so as to get the engine warmed up quickly and to keep the sliding machine under better control.

"Head for the hanger," directed King tapping me on the shoulder. I ran the car close up to the door on the concrete shoulders. By the time we had gained access to the interior, we were wretchedly wet, despite the raincoats.

Our searching beams of light traveled over the hangar, disclosing it to be deserted with evidences of hasty departure everywhere present. The crimson Lockheed airplane, which had been kept ready for instant use early that morning, stood on its landing wheels, awaiting its call for duty. The giant Sikorsky plane, standing over the Lockheed and the other two seaplanes, looked like some mighty bird guarding her brood from the tumultuous rage of the storm which shook the steel building.

King drew us together, "You know, it would be safer for all of us to split up? They might be watching us with their television apparatus, and it would be a simple matter for them to keep tab on us if we stayed together. Although it may be of no use to try to get away from them, we can try it. Wentworth and I will take the Lockheed, and you and Diane will take the safer route by your machine, which, thank goodness, can make real speed. Diane, I know, will be in good care, safer in fact, than if she were with me. Head northwest for this storm is moving northeast."

He opened the cabin door and made his way into the pilot's compartment. There was a sob from Diane as the battery-operated inertia starter engaged. The ringing whine of gears rose to a high pitch as the flywheel was spun. Suddenly the singing whine changed to a labored grind as the five hundred horsepower Hornet chugged over easily. After one or two false explosions, its bull throated roar thundered in the closed hangar. Wentworth and I tugged at the cables opening the immense overhead doors, straining every ounce of our strength to get it into motion. As the hinged sections rattled upward, the wind tore into the opening, sending a spray of rain over the planes, rocking them in its cyclone blast. The river, already high, was rolling and splashing on the rampway. At best, the bright fuselaged plane seemed a frail construction in which to fight that storm and I said so to King.

"I know it," he shouted as he climbed out of the cabin, "but I've an idea we'll have a better chance this way." He gave me a hard, determined glance, that would brook no opposition.

He drew Diane to him, embracing her, looking over her shoulder at me, mute appeal in his eyes. God, if anything went wrong while she was in my care!

"Tom," he said as he was about to enter the plane again, "we're going to hop up to Lake Geneva and await further developments up there. If, at the end of two hours, you have a chance to get to a 'phone, get in touch with the municipal airport at Chicago and we'll let you know where to meet us. O.K? Now close the doors after we leave—and beat it. God have mercy on you."

Without another word he climbed into the plane, followed by Wentworth, who shook hands solemnly. I tossed in the pile of bags and suitcases they had brought with them.

At Diane's side I watched the plane taxi across the floor and slip into the water. King was forced to give the ship full throttle to keep the wind from sweeping them against the northern wall of the hangar windbreak. It seemed to be making very little progress as it rolled and tossed in its fight for the center of the wind-torn river. King was driving it on by sheer determination. Struggling praiseworthily into the gale, it gradually worked up speed.

Suddenly it lifted its pontoons from the water and rose sharply, zooming upward with a blatant snarling heard even above the thundering, as the powerful Hornet pulled the ship from its immediate stall. King courageously banked, losing much of his precious altitude as he swung with the wind. At terrific speed he was hurled into the north, barely clearing the tree-tops, the whine of his motor dying into the distance instantly. They were gone!

Diane aided me in drawing down the doors and as the long horizontal sections clanked over the ways I felt as though the curtains were being drawn on our fantastic drama. As yet I could not reasonably convey to my consciousness the indisputable fact of the impending total destruction of Television Hill and the scatterings of its peoples. It was too much like a dream, a horrible nightmare from which I hoped to awake before witnessing the inevitable climax. One did not know of the temper of these resourceful people of the south!

That they were intent on crushing the revealing presence of Television, could be envisioned in the their unprecedented use of a machine to create a cyclone. If they had succeeded in reaching Television Hill, the world would have had only a few crumbled ruins to gaze upon, representing what had been the King-Wentworth experimental radio plant! Perhaps the two other transmitters might have been wiped out of existence in the same manner. But King's sudden electrical thrust must have brought an unlooked for change in their plans. Once their work of removing this point of danger had begun, there was no chance of withdrawing—they must carry through, despite the resultant cost.

King and Wentworth might escape by taking the unexpected course through the air, while the safety of Diane and myself depended wholly upon my retaining presence of mind.

To escape! It was not natural or sensible to go rushing wildly across the country with the blind fear of an unknown enemy following; an enemy whose intentions seemed of no greater evil than to destroy inanimate machinery. However, since the present situation called for such procedure, I had better call off these ruminations and start moving.

In the dimness of the flashlight-illuminated hangar I led Diane toward the door. She had given herself up to hysterical sobbing, which my consoling words seemed to augment rather than alleviate.

I helped her into the sedan and ran around to the other side. The motor, idling the while, was now at normal temperature and anxious for action. Into reverse I jerked, cutting a short circle on the concrete shoulder. Then a wrist snap into low speed; a slap into second as the forward gears whined—the spinning front wheels gradually taking traction on the flying gravel. A quick jab at the brakes and we were rolling easily across the rain-swept bridge. At the opposite postern we were forced to halt until the guard opened the heavy steel gate. As we slipped past, he waved his shotgun suggestively and set about securing the barrier again.

We set forth up the slight grade toward the highway, lights blazing their way through and among the close growths of foliage. Near the entrance I experienced a start. Set in position so as to halt any machine coming from the bridge, was the huge bulk of Chalmers' coupé. All my suspicions as to his connections with our present state returned in a single convinced flash of thought. He meant to stop us, to hold us, thinking King and Wentworth were in the car! I acted upon impulse, instantly. Snapping the car into second, my whole weight went on the accelerator pedal. With but one choke the powerful motor breathed in the sudden influx of gas an emitting and ever rising stuttering bellow from the exhaust, leaped up the rise toward the blockading coupé. Within ten yards of his machine I spun the wheel to the left, lurching down into the shallow rain-filled ditch behind the car and after a series of skidding jerks brought it back again to the road surface. Still in second, I gunned the respondent machine all the way up the lane until we were skimming along on the hard concrete, heading north. The perfectly balanced motor under the polished bonnet settled down to a steady whining murmur.

I glanced at Diane with a satisfied smile hovering on my lips. The incident had evidently frightened her out of her hysterical mood, for she reclined against the seat, holding her handkerchief against her mouth. She closed her eyes in a shuddering gesture, signifying she did not countenance such reckless maneuvering.

The slanting rain pelted against the windshield so hard that the fast swinging arms of the wipers failed utterly to keep it clear. There came to our ears the intermittent sound likened to escaping steam as the balloon tires sucked at the watery pavement, sending a splattering spray over the entire width of the roadway.

For several minutes we sped along at a reasonable speed. The wheel bracket mirror reflected the dazzling beams of a car fast creeping upon us. I permitted it to come up close so as to identify it. A flash of lightning revealed the black coupé. Chalmers was after us! He came up and began to swing to the left side to pass. For a moment I thought of stopping and confounding him with an explanation of his actions, figuring he'd have little chance for hostile actions on a public highway, even though it was almost deserted, but a glance at Diane decided me.

Well anyway, Chalmers would have a chance to prove his long-held argument that his coupé was the better car when it came to sustained speed!

I rested my foot on the accelerator and the quivering speedometer rolled steadily around. The road swept up to us illumined at close intervals by the daylight flashes. of lightning and the reddish glare of the headlights. The machine took every bit of my attention, for the high wind and the wet pavement created a hazard not to be disregarded. For a while Chalmers hung doggedly to our rear, the fingering beams of his driving lights playing on my mirror, told me that, but as the miles tore past, the pace began to tell upon him. His machine, old in design though not old in years, could not, with safety, hold the increasing rate of mileage on the sharp turns and curves. He dropped back little by little, striving to make up his lost distance on the straight stretches.

We flashed through Oregon at sixty miles an hour. Holding the center of the black line, we roared along at reckless speed and thirty minutes later we were gliding easily through the residential section of Rockford.

As I slipped into second gear, preparatory to awaiting the change of lights at the junction of Route U.S. 20, my eyes lighted upon two huge sedans drawn close by on the opposite side of the street. As several raincoated men were grouping near the machines, evidently looking in our direction, I didn't feel any too great reassurance.

As the light changed, I was off with a leap, but instead of continuing on as I had intended, I cut a sharp left turn. Then, throwing all caution to the winds, I stepped on the gas and sped out of Rockford, clearing the way with every forward light blazing and the trumpet salute shattering the unusual quiet of the streets.

Soon we were far out in the country, spinning along undeterred, at seventy miles an hour. Now, I felt more secure—we had something more tangible than wild fear to drive us on. The storm gave no indication of abating, the rain still falling with the same sullen relentlessness, gving me the impression that it would continue indefinitely.

Diane, to my sidelong glances, seemed resigned, her hands clasped in her lap, closing her eyes in fear as we careened around turns and twists of the road. Once, when the rear wheels left the road during the blinding period following a dazzling burst of lightning, I felt her hand fall lightly on my shoulder as I spun the wheel, Straightening out, I glanced into her face and found a mute appeal in those deep eyes.

The liquid slap of the tires, the singing howl of the air through the radiator webbing rose in a crescendo above the vibrating beat note of the motor. In my mind's eye I tried to picture the sight of those eight pistons reciprocating fifty times a second—second after second, minute after minute. The sound and the resultant mental impression seemed to thrust me into another universe, another wet, dripping world, in which a thin wheel in my hands guided a rectangle of raindrop-studded transparency along a hard-to-follow, slick, blackened ribbon. I stole many a sidelong glance at the girl's face until she noticed it and cautioned me to watch the road. I was trying to fathom the set appearance of her lips and jaw.

"Diane," I said at length, breaking the silence which had held for the last sixty miles. "I'll have to stop for gas pretty soon—— The way we have burned up the sixty odd miles since we left Television Hill over an

hour ago is telling on the car. I'm going to stop at the next station—I'll get some sandwiches, too."

"I wish you would," she smiled faintly, "but do you think we can do it safely?"

"I think so. I think we've outdistanced anyone pursuing us enough to warrant our taking a brief halt. At that, I wonder how your Dad and Wentworth made out."

"Please, Tom, don't, please! As it is, it's almost driving me mad. Why couldn't they have come with us, so we would be together?" Once more she began to cry—softly this time.

"Well, your Dad seemed to know what he was doing—he wouldn't pull such a foolhardy stunt as flying in a cyclone without some good reason. Even we haven't done so badly."

"I hope so," she murmured.

THERE appeared the far-off glow of many lights and easing up on the throttle; the machine rolled gently into the cindered esplanade surrounded on three sides by gaudy painted shacks. It was essentially a gas station, around which had grown a repair shop, a small garage, a now deserted roadhouse, and a lunch stand of inviting appearance. I braked at the roadside filling pump. A toot on the salute brought the attendant on the run through the puddles.

He grinned pleasantly. "Some night, eh? What'll it be, sir?"

"Whatever she'll take. High tests. And see how the water and oil are."

The hose clanked hollowly in the tank. I opened my bill fold, extracting a crumbled piece of currency. "Diane, you pay the fellow. I'll run into the lunch stand and get a few sandwiches." I struggled out of the car and sprinted to the house.

As the door slammed, the woman at the counter came forward.

"Fix up a half dozen assorted sandwiches," I directed my eyes lighting on several thermos bottles, fetchingly arrayed in their paper cartons. "And fill up two of those bottles with coffee," I added.

The door opened and the attendant entered. His face was a study as he scrutinized me. My glance fell to the bill he held in his hand.

"What's the matter, can't you change the ten?" I queried, puzzled by his strange action.

He came closer, biting his cheek, nervously, I thought.

"I didn't get a chance to change it," he exploded.

"Why, what happened?"

"What happened? Why, that girl you had with you pushed it into my hand and told me to keep the change."

"What do you mean," I demanded, "*had* with me?"

"Yes, *had*. She's gone!"

I stared at him. Uncomprehending, yet alarmed, I pushed out of the way and dashed to the door.

He had told the truth—the car was gone!

A choking welled in my throat, my knees went weak, and for the moment the floor seemed to rock under my feet.

I turned to his stare. "I think she's just turning the car around," I muttered, although knowing full well she would never dare to do such a thing.

"Nothing doing," he explained. "She handed me the bill and then sliding into the driver's seat started the motor. Before I knew what was happening,, she was moving out of the driveway."

"I didn't hear anything."

"She went slowly at first, sneaking, I thought. I was tempted to leap onto the running board and stop her, but I didn't know what was up and I didn't like the idea of getting mixed up in any trouble. Fact is, I had the idea it was a trick to get me away from the station so's you could hold up the wife," concluded the man.

"I don't blame you," I began, staring out into the downpour of rain. Then I lapsed into silence. What did it all mean? Why in the wide world had she deserted me in this lonely spot? No one, to my knowledge, had forced her to drive on. We had at least ten minutes or more clearance before the fastest of the pursuing machines would reach this station. That meant I must get away from here as quickly as possible, for they might stop and ask questions I dared not warn the attendant to evade. I must get away and get in touch with King and Wentworth, informing them of what had happened. Really, I ought to give chase to Diane.

"Say," I paused in my wild pacings before the attendant, whose eyes followed me tirelessly. "Have you a machine here capable of overtaking her?"

His face broke into a suspicious smile, "No, I haven't." He signaled his wife to silence when she broke in with, "The Lincoln, Jim——"

"But, if you can wait a few minutes I'll call a young lad, the son of the local sheriff, who lives just a half mile off the road. The kid's a bug on speed and has the fastest little car you ever laid eyes on." There was a meaning wink to his wife as he said sheriff.

"Well, get hold of him!" I exploded.

"Just as you say. I'll phone." He took his way leisurely to the wall phone, cranked the generator, and sent in his call, his eyes never leaving my person. He certainly did not trust me!

He spoke for quite a time. He asked, "What are you willing to pay the lad?"

"Anything he wants—a hundred dollars, if he gets here within five minutes," I snarled—at my wit's end at the vexing deliberateness of the man.

I strode to the door, noting the sandwiches were ready. I paid for them and motioned for the woman to take them away.

One westbound car hummed past as I stood near the partly opened door. At length there came a far-off whine of an unmuffled motor. Two intensely brilliant lights came leaping from the east and a machine came to a sliding halt close to the filling tanks

A young fellow, water dripping from his short leather coat and helmet, dashed into the door which I held open. He pushed his goggles up on his head and wiped his wind-reddened cheeks with a piece of cotton waste. "You the man who called for me?" After a sort of introduction and a recounting of what had happened he grinned slightly, "pretty bad night for you to walk home, eh?"

"Not that," I thought quickly, "she's run off with a lot of valuable notes and plans of a new invention of mine," I lied.

"Oh, that's it. Well, come on. I'll get her or burn out Lizzie in the attempt."

WITH his aid I managed to squeeze myself into the tiny cockpit of the machine. It apparently was the product of a home workshop, the chassis being originally a model A Ford. The body had been replaced

with a slim, streamline racing shell, scarcely wide enough for two to draw a deep breath in its narrow confines. There was no top, only a diminutive, slanting windshield to protect the rider. I could tell of the extreme care and perfect timing by the sharp, even murmur of the exhaust. Ray, (his surname had sounded like Heinen, but I wasn't sure) had to take on gas and I fretted at the loss of every second, for those in pursuit might be nearing the station any moment now. At last I gave a relieved sigh as he climbed in. Amid a shower of cinders and water raised by the fenderless wheels, we skidded out of the drive onto the concrete.

Man! How that machine climbed into mileage! It was a racing car and the willing way it took to high speed and held it without a quiver of complaint was amazing. Ray was an expert and the speedometer clicked off the miles to the deafening tune of a rocketing roar from the unmuffled motor. Withal it was making an impression on my memory that would stay with me until my dying day.

The car was much too light for the pace it was maintaining, and it slipped and skidded around the curves at unslackened speed. I no longer blamed Diane for becoming frightened, when I was driving at almost the same speed and with the same degree of carelessness. The fenderless wheels whipped a disc of water high into the air, from where it was thrown into our faces when the front wheels deviated from the straight path. Muddy water was trickling down into the corners of my mouth, mixing there with the salty tears of my wind-irritated eyes. My spectacles were poor protection.

At intervals the wet concrete was hurled under our car at eighty miles an hour and we overtook the machine I had seen pass the gas station. Ray gave just one short blast of his exhaust whistle and we flashed past as though it were at a standstill.

I began to wonder how far Diane was ahead of us; how fast she was traveling; if she had turned off on some side road; or if she would in some manner return to the gas station and find me gone.

"You'll know the car by the tail-lights on each mudguard and the leather trunk," I shouted into Ray's ear as he restlessly juggled the wheel.

We zoomed up a steep grade, the speed dropping quickly. "Cross Roads" warned the yellow sign. A car stood on the road and a man with a flashlight signaled us to stop.

"What's the matter," demanded Ray. Our headlamps revealed the other machine, a ramshackle touring car, to have the left rear completely battered in and torn, while the wheel was nowhere in evidence. The hub was riding the concrete over which it had slewed in a wide, grooving path.

"Oly yumpin' yiminy," exclaimed the farmer, "Whew! Here I come up the hill thinkin' I'm the only one on the road in this storm. I slow down to make my turn. Suddenly, right out of the sky comes bright lights and from behind me I hear a *Twat Twaa.* I get frightened, and before I can think—Wham! The whole car sails into the air. I look for the locomotive or whatever it might have been and I find it's one of those new, long cars. I could look right into it and I saw a young girl at the wheel. She looked back and before I could lay hold of her she had scooted down the side road."

"Which way?" I interrupted, great joy overcame me.

"She went south, toward Baalton. She was making a lot of noise; must have had a flat tire."

"Thanks, old man. We're after her. We'll send you a tow truck," promised Ray pulling into reverse. Off we were then. We could not travel as fast on this road for it was gravel, rough and pitty, and very likely to throw us into the ditches. The rain still fell in a steady drizzle and the encompassing blackness was torn into confined brilliancy by the headlights. Up and down those choppy graveled hills we sped, the lights white hot and concentrated as we fairly leaped down the slopes, illuminating dimly the distant countryside as we poised briefly on the crests of the elevations. Afar off we sighted the lights of a town and a minute later we thundered into it, heading for the first group of lights marking a garage.

A commanding blast brought the heavy-set mechanic on the run.

He nodded, with a grin, at our questions concerning a girl driving a front drive.

"You bet. She left here about five minutes ago. Don't know how she did it but she came in here with a flat that was no more—the inner tube was in ribbons. I switched one of the fender wheels and pulled the mudguard out of the way. She said she was in a hurry—had slid into a fence up the road."

"Enough," I declared. "Which way did she go!

"Toward Adeline—south."

Off again. The chase was getting hotter!

As we sped over the gravel Ray commented, "Boy, she must be some girl! A little dare-devil. I'd like to meet her!"

The thought must have pleased him for he fed more gas to the leaping racer. Protecting my face the best I could from the wind, I wondered if the whole night was destined to continue this way. It seemed ages since the blithe moment I had stepped from the sedan. Diane!

Whatever was the cause of her sudden and unexpected action, it had evidently steeled her nerves almost to reckless abandon. Perhaps, the thought paralyzed me, the terrible strain and the racking experiences of the day had unbalanced her! I must get to her.

I doubt if anyone in the whole wide world had ever gone through what I had experienced since morning; witness the destruction of the only Television machine ever built, destruction wrought by some totally unknown enemies, escape, danger of capture, imprisonment, or even, perhaps of death, by fleeing wildly across the state in company with the dearest companion in the world—and the climax to have *her* desert me. And for what reason? I could not fathom it and gave it up. Now, I was pounding over shocking gravel in company with a youth I had never thought of existing an hour previous. Strange, indeed, are the tricks of Fate!

Many were the times that the rear wheels would ride on the rubber bumpers, rebounding to the road with a swinging slide. Turns were but chilling skids of the rear wheels which the driver corrected with a reverse turn of the wheel and a vicious jam on the accelerator. He was driving—hard, fast, and clean!

Stones, picked up by the tread of the tires, were thrown into the air, snapping sharply against the car body and close-by trees. The swishing grind of the larger ones was interrupted at intervals by the hollow "phlock" as the rubber impelled them with considerable force across the road. All the time trumpeted the barking exhaust, rising and falling in cadence.

"Those your lights?" shouted Ray suddenly.

Far in the distance two tiny points of red twinkled

for an instant. Yes, there she was! We drew nearer slowly, losing, for a time, the red dots as we dashed without caution around a series of curves. My heart now was filled with apprehension lest Diane crash into the deep ditches, for it was evident she was aware of a car following her and she was striving to stay as far ahead as possible.

However, when it came to driving, Ray was the more skillful, and the space lessened until our lights were playing about the rear trunk of the careening sedan. Our speeds were well in the fifties and I could not help but imagine the sight we must present to any of those farmer folk who might happen to see us pass.

First a far-off whining, blending into a rising roaring, increasing in volume as brightening, leaping lights on trees and road grew more intense; then two cars, one long and black slinking along, the other, white and small, thundering and screaming out a blasting exhaust whistle. A blatant disturbance in the stormy evening, fading abruptly with the lowering, pulsating cadence into a distant hollow hum, as red tail-lights dipped into the next declivity.

Seizing an opportunity, Ray tore alongside the sedan and after a brief radiator to radiator struggle, worked ahead just in time to clear a deep, water-filled rut. I believe Luck smiled upon us that one time, for had Diane held her pace, we might have had to run her into the ditch to prevent a serious crash.

Once in the lead, Ray began to slacken his speed regardless of Diane's threatening efforts to slip past us. Watching her every move, he cut down the pace slowly.

Then, without the slightest of warnings, her lights swung away to the left and for a moment I thought she had crashed into the ditch. But when I saw the darker bulk of the sedan flashing through the trees down a narrow lane, my chilling fear passed, to be replaced by utter admiration. Diane, though we had been traveling close to thirty-five miles an hour, had spotted a lane which we had passed without seeing and had made an abrupt swerve into it. Only the fact that the machine she was driving was low hung and pulled instead of pushed had made the feat possible. Otherwise, she would have turned turtle.

The stones ground as the speedster's locked tires bit into a quick halt. In reverse we roared back to the entrance of the lane. Rocketing in second gear, the light car sped in pursuit. Half a mile later we came to the end of the lane. A farmyard littered with the usual farm implements met our questing light beams. Our cursory investigation convinced us Diane had not got this far; that she was somewhere between here and the other road. Perhaps, even now she was retracing her way down the lane. As a querulous door opened in the house we sped out of the yard.

Working on an idea which had suddenly struck me, I told Ray to drop me off and to continue up the road and that I would meet him at the crossroads in a short time.

Silence, except for the patter of rain on the road and the rustle of wet leaves returned as the putter of the racer's exhaust died away. When my eyes became accustomed to the grayish darkness I began following him, stopping numerous times to peer into thick masses of foliage growing close to the roadside. Barbed fences bordered the road and it was the hardly indistinguishable wires that I scrutinized. I had covered about a quarter of a mile when I became aware of a groaning whine to my right. I halted. There was no mistaking it! The low growl of gears rising in pitch to a shrill grind were too well known to me to make a mistake. It was my car off the road, and stuck in the mud! With a chuckle of satisfaction I turned off the road, plowed through the mucky gumbo of the ditch, and felt along the brush lined barbed wire fence, until I came to the break I expected. Behind a copse almost a hundred feet distant from the lane I heard the whining again. How in the world had she succeeded in plowing through so much mud! I descried the dim glow of the dash-light illuminating the squares of the windows.

Creeping closer, crouching beside the bushes, I stole up behind the machine. Steadying myself by gripping the trunk, I chanced a momentary look into the sedan.

Diane, both hands on the upper part of the wheel, was intent in her work of loosening the car from the tenacious hold the mud had got on the wheels. The car lurched backwards unexpectedly and I leaped out of the way. With one hand on the running board I moved forward on the right side of the machine. One hand on the knob, I raised my head until my eyes were on the level with the lower panel. Then I stood upright and opened the door.

Instantly the girl's head jerked in my direction and the gasp she uttered came almost as a choke. Her eyes dilated with unknown fear and she made a movement as though she were going to flee through the other door.

"Well, Miss King," I heard my voice, harsh and strange, "just what do you mean by such unwonted actions? What was your idea running off like that? Deserting me?"

In answer her lips thinned to a narrow dark line. The lines of her chin became sharply defined.

I splashed around to the other side. Sullenly she opened the door lock and moved over to the other seat. I climbed in, switched on the dome light. She avoided my questioning gaze. Yet, as I studied her, I saw it was a mask, a forced shell covering deeper emotion within her. Her whole attitude held a listless despair that was reflected in those deep violet eyes, reddened by crying.

"Diane," I said softly, "What happened; did someone frighten you?"

After a moment she shook her head. Her voice was colorless.

"No—and yes. Oh, Tom," her sobbed, "I can't—I can't tell you. Please don't ask me. I knew what I was doing, but please, don't ask me now."

THOUGH mystified and anxious to have her explanation, I turned my attention to the freeing of the car. With a great deal of quick shifting from forward to reverse and spinning of the wheels, I finally had it grinding its way across the field toward the lane. Another stubborn fight was necessary to get it through the ditch and up the steep shoulder to the gravel.

Nearing the crossroads I came upon Ray's speedster standing to one side, lights out and motor idling. He started at once to roll alongside, but slackened when I signaled my intention to stop. He certainly took no chance of letting the sedan escape.

"Come inside," I invited as he came to the window. He entered the rear compartment, his wondering eyes settled on Diane, while something like a faint smile twitched in the corners of his lips.

Diane did not even glance in his direction, keeping a rigid stare out of the window.

"Where did you find her?" he queried, sensing the awkward atmosphere.

I recounted my experience since he had dropped me, concluding with my puzzled supposition as to why she had fled, though still laying much stress on my former statements concerning the plans of my fictitious invention.

He laughed when I had finished. "Well, whatever she did it for, she only knows," he agreed, adding, "There's one thing about blondes you have to watch out for—you can't depend on them—they're sly and tricky."

Thereat Diane turned quickly, regarding me through narrowed, tear-red lids.

"Cut it, Ray," I commanded, quietly, wishing him to be off as quickly as possible, "I am certainly glad to have met you." Reaching in my billfold, I gave him the sum I had promised.

AFTER the roar of his car had dwindled into the night, Diane and I sat gazing at each other; I awaited her explanation. She crouched in the corner of the seat, one arm resting on the seat-back. Her eyes became puzzled as the minutes dragged, swelled though they were by long weeping.

"Tom," she murmured at length in a low appealing voice, "I'm—happy that you followed and found me. Why did you do it?"

"Why? You ask me—why? Diane! Do you think I'd let you leave me without any reason or warning? At first it was a shock—an appalling climax to the series of disasters at Television Hill. But all those thoughts, everything, was wiped away by the thought of you, of your safety? Why, I don't know what I might have done had you managed to elude me."

"Goodness only knows what you've risked in following and overtaking me!"

"God knows I'd follow you a million miles, if necessary."

A shadow of a smile flickered in her eyes at that. A solemn light came into her face.

"You really do love me," she stated rather than asked.

I could not refuse that admission! "Enough to forgive you for running away from me." I told her.

"To whom are you referring—to me or Diane King?" she murmured, her hand touching my shoulder.

"You or—Diane King," I repeated in amazement, for suddenly I grasped a fleeting idea of what she was striving to make me understand. "Say, just what are you driving at—surely . . .?"

"Tom," she began, "I am going to tell you the reasons for my unexpected behavior tonight. First, I want you to believe me, when I say my love for you is as great as yours is for me.

"I—know I can't—Oh—Tom, I'm not Diane King," came her startling words, uttered with pleading light from her eyes. "The real Diane King is far away from here—down on that island that Dad—Mr. King found so unfortunately. I am just as the heroine is in your novel. I'm an agent—a spy, in simple, damning words—I'm a spy, who, on the verge of being discovered, tried to escape.

"My story, Tom, I know you would never believe it but for the indisputable facts and incidents you were witness to during the year you were at Television Hill with me. Why, even you unconsciously hit upon the real cause of trouble when you told me of the scheme you were using to get rid of your fictitious Television machine at the end of your story. When you first told me of it, I thought you had guessed my identity. It seemed too much of a striking coincidence that you should devise such a parallel sequence of characterization, to base it on fiction. You frightened me at first and I planned to draw your confession, your admission, or your knowledge, by pretending to reciprocate your attentions. That is where the change began. I found that you didn't even dream of such an affair ever being possible in life and that you even doubted it could be successfully undertaken in fiction. And that," she broke off to turn her attention to a car coming up the road, "—that is how I came to know and to love you."

"Diane!"

"Please, Tom, please hear me through," she begged. "Tom, you saw that island; you saw the civilization that has grown up there; you saw the great engineering feats they have accomplished. I have seen them, Tom. Not through the distorted eyes of Television, but with my own! I am native—that is my land—my country—my home, and the thought of what my people are working toward in their secretive, yet compelling way, fills me with pride. Tom, you know what patriotism is! You may have felt it during the last war period—that enlivening, thrilling, soul-tingling joy to put your hand, your life, if necessary, behind your cause, your home, and your ideals. If you only could realize what boundless joy it is for those of my country and race to aid in the continuance of the greatest plan, the most amazing policy, ever attempted for the sole purpose of saving the world from the impending chaos that daily is growing nearer and more evident. But, Tom, you don't know—you couldn't understand, even if I were to tell you everything I know. You would be filled with apprehension—if not horror.

"I dare not tell you more than you have seen. That island is not of late appearance; it has been there for untold centuries, and its people have mingled among the races of the world since forgotten ages, working, scheming, planning—for the great day!

"Just to give you an example of how we work, I'm going to tell you of my part in Television Hill. It was in 1920 that word was first sent to us through our Intelligence Bureau warning our leaders of a possible danger in the research being conducted by one Mr. King of Chicago. Promptly an investigation was made and King was 'spotted.' That is, he was kept under surveillance by operatives we caused to be placed in his employ. You know, Tom, Mr. King is very susceptible to men who are intelligent, and who are filled with ambition, and so there was no difficulty experienced in having such well recommended persons as Alexander Chalmers, John Somerset, and Ralph Smythe placed in responsible positions where they could aid and yet hinder King, should he become a hazard. But, we underestimated the combined knowledge of King and Wentworth. Together, they tore down the barriers these hardworking operatives built up and in the end they were successful in their quest. They had built up an actual Television machine.

"Now, Tom, this is where I entered. When Television had become an actuality, it was necessary to work along

with King in his desire to keep it a secret. Diane, the real daughter of King, was induced to go to Europe by a girl acquaintance, and there occurred the substitution! Diane and I have but slight physical differences, and as five years would elapse between the time she had left home, these differences would go unnoticed. I had plenty of opportunity to study the girl whose life I was to live, mimicking her in action and speech until, when the day came and I returned, Mr. King never suspected for a single second that a total stranger—an enemy in truth, was posing as his own child. Protected by this knowledge, I could act as I pleased—going where I wished—asking what I desired to know—and taking into concealment those plans and models Chalmers and Smythe wished to smuggle from the plant.

"Do you understand now, Tom, my reasons for being so interested in the machinery? You often would go into wild conjecture as to the cause of my open-mouthed wonder. You see, now?"

I had sat there, one hand clenched on the steering wheel, staring incredulously into her comely face the while she was speaking. Her eyes had never wavered once; she was telling the truth. The awful, impossible truth!

"Yes, Diane," I commented. "I understand. I see everything. I was going to ask you how it was you and Eloise got along so nicely, speaking so intimately of affairs and incidents since you had met at high school, thinking I'd trip your story there. But I see now how widespread is the influence of your people. Yet, Diane, there is one question I'd like to have you answer. What are you going to do if Jim, Diane's brother, ever comes to see you?"

For a moment I detected a laughing light in her eyes. "What will happen?" she countered. "Why, nothing."

"You mean you'll carry the deception through as you have before?"

"That won't be necessary. Do you know the G. E. people have been considering sending him and his wife to live in the Argentine, to take command of their interests there? Right now Jim must be somewhere off the coast of South America," she concluded.

"So that puts him out of the way?"

She nodded.

For another period I studied her.

"What would you do if I were to tell King about the things you have just related—tell him of your identity?"

"You see, Tom," she said, seemingly ignoring my question. "King did not have the least conception of the tremendous powers he was so rashly resisting, when he hurled his defiance at our envoy, who had been prepared to complete the whole negotiations involving the transference of the television plant peacefully and satisfactorily to both parties. He brought destruction upon himself—just after he had been warned. It is through him only that superior forces were forced to step in and carry through a series of maneuvers, which would crush into oblivion the one real danger point on the face of the globe. These same superior forces will take care of King and Wentworth, even though the latter manage to escape the welcome Somerset and his men are going to extend to them at Lake Geneva.

"And," she paused, while a quiet smile broke over those lips which had been twisted in tears so shortly before "—and as for you. I can take care of you! I took advantage of the chance at the gas station and intended to leave you stranded there with memories only—and a story you would not dare to tell the authorities for fear of being branded as insane. I drove like mad, knowing you would attempt to follow me, and would have disappeared altogether, if I hadn't crashed into the rear of an ancient touring car. After that, well, I did my best to elude you."

OF all the incredible tales I had ever heard of or read this was the climax of impossibility! Yet, stunned and sick in mind though I was, I knew it was the truth. Yes, this was the reason for her unique interest in things mechanical! And, too, this explained all her other strange actions; why she had always managed to be present at the various meetings and conferences held either among the men or personally between King and Wentworth.

And King had been so confiding to her! She, an enemy artfully concealed in a cloak of resemblance, playing as his daughter, leeching him of his secrets, his plans, his knowledge, which he would not even trust to Wentworth! Overcome with anguish and a wave of sudden despondency, I turned away from her.

As I gazed unseeing through the windshield, an electrifying chill swept over me. If everything was as she depicted, what was to be my fate!

I flashed a glance at her and saw she was watching me with steady contemplative eyes. With a deep breath I tugged at the starter button. Driving slowly, I stared dumbly ahead at the wet gravel, dodging the ruts only by mechanical inpulse. I could not think. The world was one madhouse of plotting and intrigue, and it mattered not what I thought; others could do that for me!

Shortly, we passed through Adeline, and making a left turn we rolled toward Mt. Morris. Meaningless miles of splashing, slipping gravel grinding under the tires slipped through the tunnel of night, while the right mudguard clanked and rattled in a steady shimmy.

Oregon appeared and I sought and found a drug store close by the railroad crossing.

"What are you going to do?" queried Diane, grasping my arm as I made to climb out of the car.

"I'm going to call up the Municipal airport at Chicago and find out if there is any word yet from your Dad—from Mr. King," I corrected myself, adding, as I removed the keys from the lock. "And you're coming in with me this time."

Together we entered the door. The clerk, after a start, stood gaping at us. We did appear rather strange. My hat was soggy and battered from the elements and my raincoat sticky with half-dried mud, as was my face where my handkerchief had failed to remove all of the evidence of the wild ride in the speedster. My shoes were enlarged lumps of mud. Altogether, I was as much of a wreck in appearance as I was mentally.

Diane, on the other hand, was a picture by contrast. Her clothing bore no signs of disturbance but were spotless and trim. Even the curling fluff of hair stealing out beneath the edge of her close fitting hat gave no indication of our recent thrilling chase. A few expert touches of a powder puff had comouflaged all traces of redness about her eyes.

She took command of the situation instantly.

"Isn't he a sight," she laughed making an attempt to cut away some of the mud from my features with her handkerchief. "We should have waited until someone came along."

"Right after the worst of the storm," she explained to the clerk, "we skidded into the ditch and Tom—he went out in all the rain and worked in the water and mud until we were back on the road. Why, he must have built a solid pavement of rails he pulled off some farmer's fence."

The clerk laughed with her and showed me the way to a wash room. Returning to the store proper, I found her perched on a lunch counter stool, sipping coffee.

"Hungry?" I inquired in a strange, husky voice.

"I'm famished," she nodded, closing one eye in a slow mischievous wink, which brought a responsive scowl from me. I retreated to the phone booth and put in a call to Chicago. The operator informed me it would be some time before connections could be completed.

While waiting I seated myself beside Diane and ordered sandwiches and coffee. The clerk was interested in us and imparted some information.

"We certainly did have one 'whopper' of a storm here this afternoon. For a time I thought the roof was going to be blown off this store."

"Much damage done?" I asked.

"Well, we don't know yet. Practically all the phone lines are down in the vicinity. The storm seemed concentrated east of the river, where it's said to have come close to being a cyclone. But talk about lightning! Why, it just rained from the clouds! Several motorists came in here about six o'clock and said that the big radio plant between Grand Detour and Dixon was completely in flames."

"Anyone hurt?" Asked Diane with concern.

"I really don't know. Must have been, Miss, as there were over a hundred men employed there. They lived with their families in a little industrial village close to the plant. Still, I remember a sudden rush of motor cars and trucks this afternoon when the storm first began; maybe they fled fearing a cyclone was on the way— We thought so, too, for a while."

The phone interrupted and I hastened to the booth.

"Municipal airport—Chicago, speaking," came the metallic reproduction of a heavy voice in my ear. Diane stood near the partly opened door.

"A plane—a crimson Lockheed Amphibian, Commercial 4956 was supposedly headed in your direction. Can you tell me if it has arrived?"

"Wait a moment—" I heard the voice fade away into a murmur with—— "Say, Roberts, what was the number of that crate——"

I listened closely, trying vainly to make out the distant murmur of voices, sensing unpleasant news. A moment later came the inquiry, "Who is speaking?"

"Thomas McManus, an employee of Mr. King and Mr. Wentworth who were in the plane."

"I see." There was silence. Then: "I'm afraid we have sorrowful news, Mr. McManus; a ship of the type you describe and bearing those identification numbers has been reported to have crashed and burned near Roselle, Illinois. The two occupants did not escape."

The receiver dropped from my hand and I turned a blanched face to Diane. She recoiled from the expression of utter anguish that must have aged my features in the space of a second. With a shuddering gasp I drew my senses together and picked up the receiver. My voice, dead and colorless, brought sympathy from the man at the other end. He told me to go to Roselle to complete the identification of the remains.

Leaving the booth, I moved in an unseeing sea of bewilderment over to Diane. Grasping her by the arm I led her to the door. On the step I paused, and gazed long into the comely, frightened face of the girl. "Diane," I mumbled thickly. "Your Dad—King and Wentworth crashed to their deaths—near Roselle."

For a moment she returned my gaze, then, with a little cry she drew away from me. Taking her again by the arm I led her to the car. Under the street light the once beautiful sedan presented an aged appearance. The entire right side was battered and dented, while the mudguards, once so sparkling and perfectly curved, were crumpled and torn. A deep gash compressed the panels of both doors.

Everything about me was going down in destruction!

And the perpetrator of destruction was this trim, lovable slip of a girl who stood beside me, her arm entwined about mine. I now was ready to resign myself to the fate that seemed to be the only logical end of this day's horrible experiences.

THE memory of that night will ever be imprinted in my mind. Diane drove south from Oregon, and we started the circling swing to the west around the bend in the river. Afar off we saw a glow in the murky skies and as we drew nearer, we came upon the smouldering ruins of the various structures on Television Hill. There were quite a number of machines parked about the entrance to the private lane. We paused for a while.

In the dripping silence we could hear a puttering of motor boats and I looked to Diane. What did that mean. The Bridge? We stole away then and took up the trail toward Chicago.

The following days were a hectic confusion, in which grief and joy were mingled in an intolerable mixture. Diane and I were subjected to a continuous round of questioning by newspaper men and state officials, who wanted an explanation of the strange affairs which had taken place before and during the storm. Diane held the center of the stage, representing herself as the daughter of King, which she was to all appearances, and carried on practically all the conversations. I only agreed with her when it was absolutely necessary. The latter part of the investigation had been held at Television Hill where only responsible men in the state's employ were permitted to enter the portals. When they had finally gone, Diane and I started out on a trip of exploration over the whole Hill.

The bridge still stood. What had happened that horrible night of destruction was that the inquisitive mobs were unable to force their way by the watchman, who guarded the barred gate at the bridge entrance. Therefore, a few had brought motor launches up the river to gain the other shore. But there, as we expected, the high fence had halted them.

Pausing beside the ruin of the projection house I studied it, wondering if it would be necessary to rebuild the flame-seared walls from the foundation up. The fire had gutted the entire structure with the exception of the reenforced concrete first floor upon which all the charred debris of the two upper floors had collapsed. The projection theatre, the projection tunnel and its secrets, and the well-equipped developing department was gone. Gone beyond recognition.

Turning aside, she and I passed through the trees to the powerhouse. With extreme care we picked our way over the burned timbers, through the control rooms to

the generator room. Tears came to my eyes as I gazed upon the destruction that had been wrought here. It was as though a huge shell had torn into the north end of the building, crumbling a section of the wall. The wood sheathing of the entire roof had burned away, leaving only the lattice work of steel arches silhouetted against the sky. The rain and burning embers had fallen on the generator assemblies; they were covered with rust where the flames had licked the paint away. Cautiously we made our way forward over the three-inch deep layer of ashes, hesitating a moment to regard the blackened windings of the two northern generators. It appeared as though oil had seeped into the wells below and the ensuing cauldrons of flame had done their worst. Although the transformer section was directly over the battery sub-basement, wherein the buring oil had seeped, it had withstood the terrific heat better than expected, and blackened by a thick layer of oil smoke which adhered to everything, little other damage seemed to have been done to the huge transformers. Nevertheless, much of the lighter supporting grill work had bent under its heavy burdens and all of the glass-floored balconies were only steel tracings—the glass having melted and dropped to the concrete floor from which all the rubber mattings had disappeared. It took me just one glance to see the utter shambles of mixed rubber-encrusting, melted glass, fallen wires and oil residue that lay in the evil-smelling sub-basement. I wondered, vaguely, if it ever would be possible to clear that mess out.

Sick at heart, I took Diane's hand and led her out and away from the place. Together we plodded up the hill. The oil storage tanks next underwent our investigation. Diane supplied the information of how they had been set afire.

"Tommy," she said, anxious eyes peering into my drawn face, "I'm a horrible wretch. I'm sorry I ever agreed to work against Mr. King. He was such a pleasant and lovable man, never once did he suspect my duplicity. After looking upon those ruins, I could almost wish myself dead. To think that I was responsible for the entire destruction. Oh, it's horrible."

"You? What part did you take in the burning of the plant?"

"I became frightened by those heavy sheets of lightning. You see, Tommy, that wasn't natural lightning—at least some of it. It came from—from above," she stammered indefinitely. "I was afraid they would hit the cottage, would kill someone; so I signaled Chalmers to go ahead and aid those above."

"Signaled Chalmers? How and when?"

"When I went to my room during dinner. There's a secret telephone concealed in my room connected up with Chalmers' line. It was put in when the cottage was built."

"When the cottage was built! Why that was over five years ago!"

"Yes," she asserted defiantly, "five years ago that phone was placed in that room, while dictaphone apparatus was installed in all the rooms of the cottage. All the wires led to Chalmers' office. There he could listen in to anything King and Wentworth might try to conceal from him. Similarly, the rest of the plant was wired."

"And—" I commented when she paused.

"Why, can't you see it? Can't you see that Chalmers and Smythe had as much to do with the designing of the plant as Wentworth, who in actuality, was the adviser? Everything here was laid out just as they wished. The reservoir was an important part in the plan and by means of proper handling, Wentworth was prevented from taking the logical step of running a spur track here to transport the crude oil. The tanks were built with a double bottom, in which benzine was placed with a valving arrangement to permit its being withdrawn quickly into an underground pit. Should its need ever be dispensed with, all that was necessary to send the tanks into flames was an electric spark, which was applied at my command that afternoon. The shattered tanks permitted the oil to flow down the hill toward the powerhouse—as planned."

"Diane! That isn't true! Such a thing couldn't be done!"

"No?" she queried, narrowing her eyes. "Well, take a look at those tanks."

I looked over the torn sheeting and saw that she had spoken the truth; the tanks had had a double bottom. There could be no doubt about that.

"I see," I said weakly, overcome by the intrigue of the whole affair. After a long moment, I started to walk up the hill. Diane falling in step beside me.

The projector loomed ahead of us. It had survived the crush of destruction without a trace of damage, and was still pointing toward the north, where last we had looked upon New Glarus. I unlocked the man-gate and we entered the enclosure.

I gazed about me contemplatively as we silently walked across the suspended bridge-way to the massive foundation flooring of the tripod towers. How I wished Wentworth were again beside me, showing me the wonder of television as he had done a short year ago! Espying the ladder ascending the tower leg, I told Diane I was going to go up and take a look about.

Hand over hand I climbed up the rusty steel rungs. Hearing a rustle below me, I glanced down into the upturned features of Diane just a few feet below me.

"Watch your step, Diane," I warned. "The top is sixty feet above the flooring." Anxiously, I climbed the rest of the way and awaited her. At length she stood in safety beside me on the level, guard-railed platform.

About twenty feet away was the companion platform and between both was slung the great bulk of the projector housing. I fully appreciated the weird appearance of the projector assembly now from my elevated position. Thick circular legs dropping down to the spreading mass of the flooring, a bridge-like extension running off to the encircling rack-rail track was the impression presented.

After a long interval I turned to the girl. The breeze was whipping her blonde hair about her fine features and a rare smile played about her lips as she stared, unaware of my gaze, off into the south. I could scarcely believe her to be the same cold, calculating, creature she tried to make me believe she was.

"Diane."

She turned with the same smile. "Why do you persist in calling me Diane?"

I frowned. "Why—because that's all I know you by."

"I'll make a bargain with you, Tommy. You tell me what you intend to do with Television Hill now that you are the remaining official and I'll tell you my real name. Remember, no secrets!"

"Who could keep a secret from you—you violet-eyed fay!" I laughed. "Since the moment you gave me the reassuring news that it wasn't King and Wentworth

who crashed in the Lockheed, but two other men of your people who were to lure me to Chicago and take me prisoner there, I've lost a lot of my fear of them. I've been thinking of calling upon the Government to aid me in rebuilding the entire plant."

She laughed merrily. "Oh, no, you're not! What do you suppose I'll be doing while you're trying to carry out those rash plans?"

"Why," I declared drawing her into my arms. "You'll be doing just what you vowed to do before a justice of the peace and two witnesses just two days ago! 'To love —and obey!' "

"To love? Yes, Tom. But to obey?—That is another question." Her lips held a ravishing, inviting bow, which faded away quickly as we heard the sound of someone coming across the plank walk of the truss below. She darted to the rail, gazed for a moment, then turned with her hand compressed to her mouth.

"Tommy," she pleaded, pushing me to the opposite side of the platform. "Please, turn around and don't look until I tell you. I want to surprise you."

Somewhat fearful, for I did not know what sort of tricks this resourceful bit of femininity might yet play on me, I did as she requested. I heard the scrape of feet as someone clambered through the opening in the platform.

"Dad," cried Diane. A man's gruff voice answered. Instantly I turned. Amazement, utter and surprising, shocked me into silence.

There was no mistaking the wrinkled, squint-eyed features of the man who stood beside the smiling Diane.

"Chalmers!" broke the exclamation from my lips. "You! What are you doing here?"

"Business, Tom, business," he grinned in his usual humorous manner, winking to the girl, who watched his every move with adoring eyes.

"First, Tom, I'm returning to take my former position so as to be able to prevent you from making any attempts to rebuild Television Hill, or cause it to be rebuilt; secondly, to do as much as I can in the silencing of those rumors which may later circulate as to the destruction of the plant being done by a foreign power; and lastly, to see how my little girl was getting along since she has become Mrs. McManus."

Diane, arm about his thin shoulders, smiled happily at me.

"She—Diane—your daughter?"

I stammered as I spoke, and everything began to take on more clarity.

He nodded, chuckling. "Where else did you suspect she'd got that devilish spirit of adventure? King's daughter, Diane, may look like my Ruth, but she's got to step some to keep up with my girl. What Ruth says —goes. Eh?"

"Sometimes, Dad," she dissented.

"Well, anyway, if Ruth says Television Hill stays ruined—ruined it stays, then.

There was no trace of humor in his voice as he uttered the last statement.

I turned aside, gazing toward the north and the wide bend of the river. Would it be worthwhile to attempt anything in the line of rebuilding this much-wanted marvel of the age? A marvel which our unknown friendly enemies of the south seemed to hold a great peril to their plans, and who were, therefore, determined to keep its revealing presence away from the unsuspecting world. I knew I could restore every bit of Television Hill even to the smallest tube with the aid of the complete set of plans King had hidden in a well-concealed storm cellar close by the hangar. The remark he had made previous to the storm had caused me to make an investigation of the grounds during a free period immediately after we had returned to Television Hill, the day after the disaster, and I had found it. But even with this aid I would need financial backing, a backing which would be willing to furnish ten, twenty, or even thirty million dollars. That is why I thought of the Government. As another associated idea struck me, I confronted Chalmers. "Say, Chalmers, what about those duplicate blue prints King sent to the War Department? What if Uncle Sam should decide to build a Television machine after hearing of the wrecking of this plant?"

"Don't worry about that, McManus—that was taken care of months ago. Some of the plans still are in the Governmental vaults, but the essential and important details are missing! Did you think we'd 'slip' there?" He laughed in downright amusement.

"And say, Tom," he chuckled. "I might as well be frank with you and tell you that Smythe is right at this moment digging out the contents of the vault near the hangar!"

THE END

The Valley of Titans

By L. A. Eshbach

(*Continued from page* 1079)

hangar. As we did so I noticed a network of wires covering the ground some distance beyond the spot where the great globe was. I had been wondering how it happened that the beastmen had not injured the plane; these wires, in all probability charged by ato-motors, had kept them away.

With the plane free from the building, we stepped inside the cabin, and I examined the controls. They differed little from those of standard passenger planes; I knew that I would have no difficulty with them.

"Dearest," I said to Claire then, "the way of escape lies before us; and soon we shall leave this valley forever. But before we go, I want to thank these Purple Beings for the incalculable aid they have given us. They may not understand us, but I want to thank them anyway."

Claire smiled into my eyes. "Yes, Jimmie, if it hadn't been for them, I'm afraid things wouldn't have turned out the way they have."

Together we left the helicopter, and faced the two Misty Ones who had borne us away from the peak, and the great, purple sphere.

"O, Beings from the world below, we thank you for all you've done for us, two creatures of a race alien to you, for without your aid we would have perished. We express our appreciation to Novad Thasor, the God of your world—he it was who gave us the deep understanding of each other that we have. We owe a debt to him and to you that we can never repay; all we can do is thank you. And that we do!"

Silence followed my expression of our thanks. Even though the Misty Ones had not understood, I had expected to hear their chiming voices. But they remained silent—they seemed to be waiting for something.

I had begun to feel rather perturbed, fearing that I had offended them, when from the heart of the great, purple globe came the voice that I knew so well, a voice that I can never forget. Novad Thasor was speaking!

"I accept your thanks, Jimmie and Claire, for I know you mean what you have said. . . . You are wondering how I knew that there was danger, so that I came with my Misty Ones to aid you. It was the mental plea for help that came from the girl that summoned us; I have been in communication with you since you left my world—thus did I hear her.

"But now I must ask you to go, for we have much work to do."

Quickly Claire and I entered the plane; and stepped over to the controls. A moment later the mighty helicopter arose from the ground and darted up into the air like a great bird.

Several thousand feet above the valley, which then lay like a green basin far below us, I brought the craft to rest. And there, in midair, I took Claire into my arms.

CHAPTER VI

Sunset—and Sunrise

"DON'T you think, Jimmie," Claire remarked at length, "that we had better start back. I'll feel safer traveling while it's light, even though you can fly by instrument. And it is getting late."

It was true; the sun was sinking low in the western sky. If we were to get back to civilization before nightfall, we had need to make haste.

"Just one last look at the valley, sweetheart, then we'll go."

Through a cabin window we looked down. An exclamation of surprise burst from the lips of each of us. Something was happening down in the valley. The Misty Ones were at work on a gigantic task.

The valley itself, and those peaks that were in close proximity to it, were obscured by a thick, violet haze. As we watched, the peaks seemed to shrink, gradually vanishing. For a moment the scene remained thus; then a sudden flash of fire leaped up from the floor of the valley. For a fleeting second we saw it as a mass of red flame; then the purple haze obscured all again. And after another moment, this haze, too, was gone—and where the valley and peaks had been was a great, red-glowing level. Even this glowing was transitory; only for a few minutes did it endure, then very slowly it cooled, and turned to a dull gray.

With the substance of the eternal mountains, Novad Thasor had sealed forever the entrance to His worlds. The way was closed—forever.

The monsters that should have been extinct for countless ages were gone; the beastmen were gone; Carcante and his diabolic inventive powers—all were gone; even the valley, the Valley of Titans, was gone. Gone, annihilated—and the world was better for it!

Slowly we turned away. Thoughtfully I turned the nose of the plane toward the west. Of all who had entered the valley, but two remained—Claire Maynard and Jimmie Newton. And we had escaped by the grace of the alien god of another world.

Even as my mind dwelt upon this, my eyes came to rest upon a sight of unparalleled beauty. It was a fitting ending to our strange adventure.

A deep blue sky, the resting place of innumerable white puffs of cloud arched the world, deepening to a dark purple horizon. Incredible, flaming rays streamed across the western sky. The myriad peaks before and below us were glazed, sparkling, arrows of swift light glinting from their eternal ice caps. On and on these peaks extended, emerald green, turquoise blue.

The world of civilization lay before us—it welcomed us! And we sped toward it joyously—it was bright, glowing; illuminated for us by the light of our newfound love.

THE END.

The Earth's Cancer

By Capt. S. P. Meek, U. S. A.
Author of "The Murgatroyd Experiment," "The Last War," etc.

"CARNES," said Dr. Bird suddenly, "how brave are you?"

The secret service operative looked puzzled at the question.

"Why—I don't know, Doctor. As brave as the average man, I guess."

"You're a great deal braver than the average, old dear; I know that from what we have been through together. I have seen you face armed men without a quaver, but how would you face an armed enemy that you could not see and that you knew no way of combating?"

"I didn't back down in that Mammoth Cave affair, Doctor."

"I know you didn't, but there you were facing at the worst sudden and probably painless death. Could you face without wavering one of the most painful and lingering deaths known, a death which is the apotheosis of the horrible? Specifically, could you face with equanimity the almost certain contraction of a malignant incurable form of cancer?"

Carnes' face blanched at the scientist's words.

"Mind you, Carnes," went on the Doctor, "I am not ordering you to do so, I am not even asking you to do it; I am merely offering you the opportunity to do what Walter Reed did, to sacrifice your life for the public good in a particularly unpleasant manner without reward and probably without recognition. I can't even guarantee your widow a pension if you accept my offer. In fact, I strongly advise you to refuse it, a thing which you can do with honor as it is not in your line of duty."

"Are you going to face that danger, Doctor?"

"Foolishly, I am. In the work I am about to do I feel the need of a man beside me upon whom I can depend in any emergency and we have worked together a great deal——"

Dr. Bird's voice died away in nothingness and he turned abruptly on his heel. Carnes leaped to his feet.

"You damned fool!" he cried huskily. "When do we start?"

Dr. Bird swung around and grasped the detective's hand.

"I knew that I could rely on you, Carney, old dear," he said feelingly. "Cheer up, it probably isn't as black as I have painted it. There is a chance that we will die of cancer before this case is finished, but I have a very strong hope that both of us will pull through all right. We start tonight. Pack your grips for five days on the train."

"I'll be ready, Doctor. Am I to work in the dark for the present or can you tell me where we are going and why?"

"I'll tell you what I know, Carnes. We are going to Lassen County, California, to the vicinity of Cinder Cone National Monument. As for the reason, here is an approved requisition for your services for an indefinite period. I had it made out before I tackled you because I knew—Oh, go to the devil!"

Dr. Bird turned away to hide a suspicion of moisture in his eyes. Carnes read the requisition with growing astonishment.

"Under direction of the United States Public Health Service!" he exclaimed. "What is it, a dope smuggling case?"

"No. We are going to Lassen County to try to ascertain the cause of an epidemic of a new and particularly virulent form of epithelial cancer which has cropped out in that vicinity."

"What can we do about locating the cause of cancer, Doctor? That sounds like a job for a doctor instead of a secret service operative and a Bureau of Standards man."

"Ordinarily it would be but there are some very peculiar features about this outbreak."

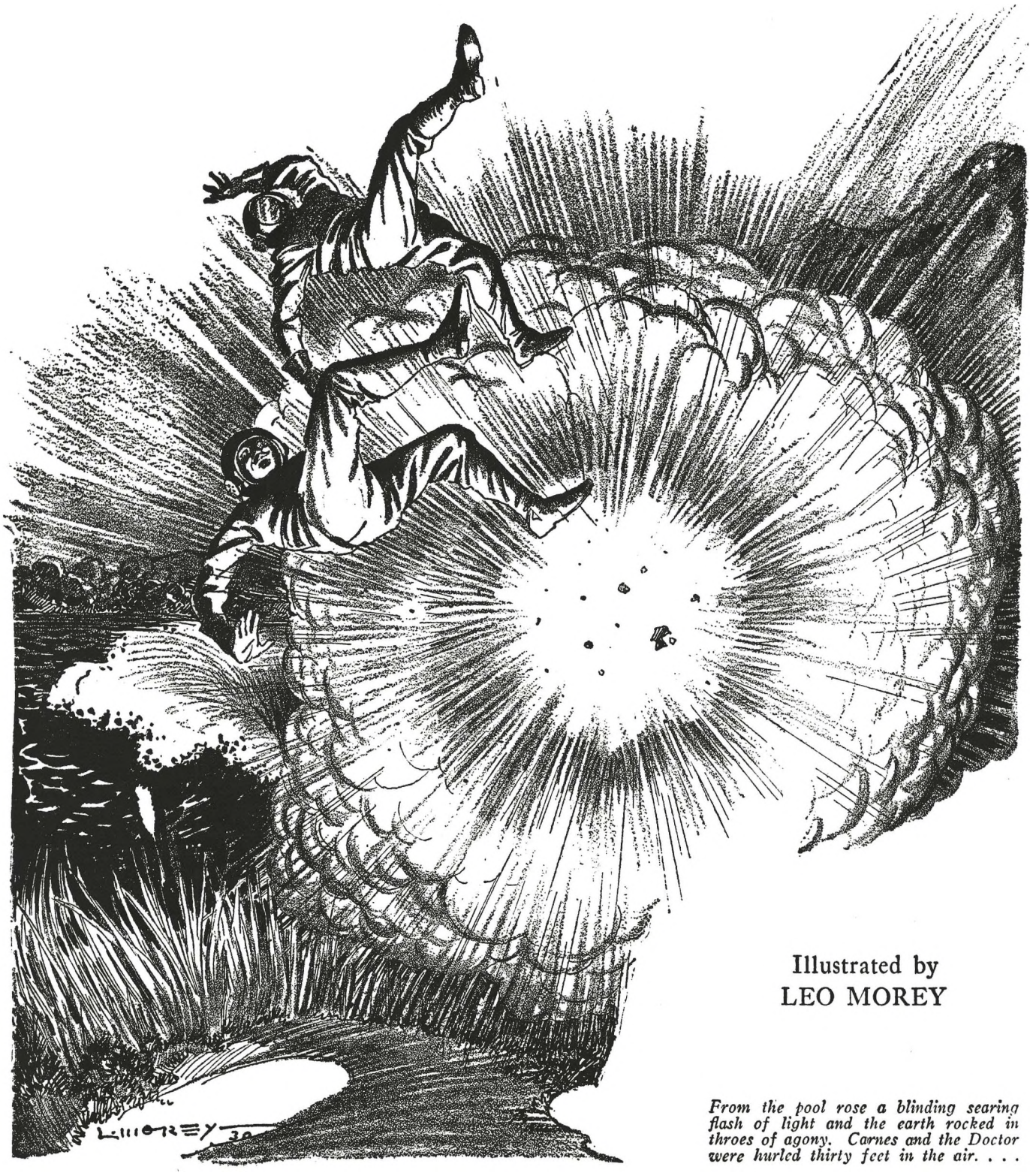
Dr. Bird consulted a file of reports on his desk and went on.

"The first cases broke out almost a year ago, not long after the eruption of Cinder Cone in June, 1929. At first it was thought to be merely a skin rash of some sort, but the cases did not yield to treatment but got worse and more cases developed. Furthermore, after the disease had run to a certain point, it became associated with a peculiar form of mania and the patients refused further treatment and left their homes and took to the woods. They eluded pursuit when they could and fought desperately when captured by their friends who tried to bring them back for treatment."

"Delirium is not uncommon in cancer cases, is it, Doctor?"

"Not in carcinoma cases, especially shortly before the end, but this was not delirium, it was mania. There was no wild raving, the patients talked rationally and knew

THE disease known as cancer remains one of the most baffling of malignant dangers to mankind, despite the untold sacrifices of numerous scientists and research physicians on the altar of cancer experiment. Still, it is fairly well established that cancer is not a germ disease. Radium, that very rare and expensive substance, is being rather widely used, if not as a cure, at least as an arrester of the growth of the disease. Its success is still more or less problematical, but we do know that radium causes a virulent necrosis. There is much that is speculative still in the field of medicine, and Capt. Meek shows himself as much a master in weaving a charming story of scientific fiction around the science of medicine as he does about future warfare, and just as thrilling and exciting.



Illustrated by
LEO MOREY

From the pool rose a blinding searing flash of light and the earth rocked in throes of agony. Carnes and the Doctor were hurled thirty feet in the air. . . .

what they were doing, but they refused treatment and evinced a strong dislike for the society of every one except those similarly afflicted. The things got beyond the powers of the local medical men to cope with and the Public Health Service was asked to send help. A surgeon was sent up there and after the first examination of a case, he pronounced the trouble to be a form of epithelial cancer, a diagnosis which the local men had missed.

"Other surgeons and nurses were sent into the stricken area and a field hospital established, but to no avail. Not only did the first cases refuse treatment but new cases went on cropping up, among them both of the local surgeons. Three Public Health Service surgeons and two nurses, who were sent there, have been stricken with the disease and have also acquired the peculiar mania which leads them to refuse treatment and to shun all persons except other sufferers."

"It would be rather natural for those working with the victims to contract the disease, would it not?"

"No. Cancer is not ordinarily considered to be contagious and naturally every possible aseptic measure was used by the surgeons and nurses. Public Health Service is completely stumped. They have made no headway toward checking the epidemic and since their own people have started contracting the disease, they hesitate about ordering more surgeons in, for they may be simply signing their death warrants when they do so.

"Such is the problem to solve. Since cancer is not a germ disease, at least the germ has never been isolated and identified, it is probably useless to look for a source of germ infection, but there is undoubtedly some reason for the outbreak and we are going to seek this reason."

"It sounds like the wildest of wild goose chases I ever went on, Doctor, but I'm with you. When do we start?"

"Tonight. I have been working for two weeks getting things ready and we have a drawing room on the 6:37 tonight."

"I'll be there, Doctor."

DURING the long trip across the continent, Carnes had abundant opportunity to examine the voluminous file of the Public Health Service reports on the case but he found little more than an elaboration of the outline Dr. Bird had given him. The Doctor consistently refused to discuss the case and Carnes knew his friend too well to try to force a confidence. The Doctor sat for hours poring over recondite volumes on cancer and related subjects and in making elaborate mathematical calculations. Although he worked miracles in chemical and physical experiments which had made his name a household word in scientific circles, Dr. Bird's knowledge of medicine was at best a superficial one. Realizing this fact, he bent his splendid mind to the task before him and by the end of the trip there was little that had been written about it that was not stored in his brain.

At San Francisco he broke the trip long enough to visit Crissy Field and make certain arrangements before they took the "Klamath" north. At Redding a Public Health Service surgeon met them with a truck and a passenger car and Dr. Bird supervised the loading into the truck of a number of cases with the Bureau of Standards seal on them. When the loaded truck departed, Carnes and the Doctor climbed into the passenger car and were whirled off in the same direction.

"What progress have you made, if any, Doctor Albright?" asked Dr. Bird.

"None at all, Doctor Bird, I am sorry to say," replied the young Public Health Service surgeon, who was both their guide and driver. "There are now, according to the best information we have, two hundred and seven cases, but there may be a good many more. That county is full of Indians and we have no way of telling how many of them have been afflicted."

"What particular type of cancer is it?"

"It is a very malignant and previously unknown type of epithelial cancer. Instead of eating in, it forms excrescenses on the surface and spreads very rapidly. The mania which is invariably associated with it after the development reaches a certain stage is also a new thing in cancer physiology. So far we have no record of any deaths, but there may easily be some, for all the advanced cases have taken to the woods and efforts to capture them have been futile. Three of our surgeons have gone into the woods hoping to do some good, but none of them has returned or sent out any word. Whether they had been detained by force or whether they have fallen victim to the disease and the mania which accompanies it, no one knows."

"Is the area where the victims have retreated well defined?"

"It is quite clearly defined. It is, or used to be, a patch of almost barren lava beds with only a few jack pines and a little bunch-grass growing on it. At present it is covered with a very profuse and exceedingly green vegetation, lush rank growth which is almost jungle-like in its density, while the old pines and bunch-grass seem to have died off."

Dr. Bird sat up with sudden attention.

"What sort of vegetation is this new growth?" he demanded.

"I'm not enough of a botanist to answer your question, Doctor. I have not penetrated deeply into it. It doesn't stop suddenly but sort of dies away from the center. When you approach that area you can see it ahead of you shoulder high or higher when it only comes to the knee where you stand and a short distance behind you it will be only ankle high. It rather resembles huge rushes or cat-tails but it can't be anything of that sort for there is almost no water around here. It is a funny thing but right in that area they are having the finest crop of grass they have ever had, despite the fact that it is an unusually dry season. On the other hand the usual vegetation, jack pines and bunch-grass, is dead or dying."

"What is killing it?"

"Some sort of a dry rot, I think. At any rate the things hold their exterior form but turn a dirty grey in color and they crumble into dust at a touch."

"Does this condition extend over the entire area where the disease is prevalent?"

"Yes, to a limited degree. Toward the outer edge the change in vegetation is hardly apparent except as an unusually good grass crop out of season. At the same time there are comparatively few cases of cancer developing around the edges and they are mild ones which spread slowly. When we get to Lassen National Monument where our field hospital is, I will show you a map with the dwelling of every known case plotted. It makes a rough circle about fifteen miles in diameter, while the part where the victims hide and where this peculiar vegetation really flourishes is a circle about three miles in diameter located right in the center of the larger area."

Dr. Bird changed the subject and did not refer to it again until the map of which Dr. Albright had spoken was laid before him.

"It is easy to see that there is a definite center of virulence," he remarked. "The closer you get to the center, the more cases are indicated."

"That is true. We have also noticed that when a case comes in that the rapidity of development is inversely proportional to the distance the patient has lived from the center of the disturbed area."

"Does the area of infection seem to be spreading?"

"It did at first, but from such reports as my predecessor left—poor chap, he contracted the disease and joined the madmen in the rocks four months ago, I can discern no spread during the past six months. There seems to be a quite definite limit beyond which the infection does not extend."

"Have you cleared everyone out of this area?"

"We have tried but we have met with poor success. Most of the inhabitants are Indians and while we may move them one day, the next day they will drift back again."

"It looks as if the spot we should explore is right here."

Dr. Bird placed his finger on the center of the shaded area.

"Undoubtedly you are right, but so far no one has entered the forbidden area, if I may call it such, and returned. Whether they have been prevented by force from returning or whether they have become mad and remained voluntarily, I can't tell you. Now we cannot get any one to go within miles of the center."

"Nevertheless, I am going to explore it. Is there a level place around here large enough to land a plane?"

"Yes, several. I may tell you that one attempt was made several months ago to explore the center by plane which resulted in disaster. The plane, judging from the reports which I will show you if you wish, flew directly toward the center. Almost over the center the motor started to miss and it lost altitude. As it dropped, the motor became more erratic and finally died and the plane crashed. A search party went in to look for it and found the plane but not the pilot. Two of the search party strayed and did not return. It is of interest to note that within ten days, every member of the searching party developed cancer. Their cases spread with extreme rapidity and within two weeks of its appearance, every one of them slipped away and joined the other victims."

"I'm going to explore that country. I'm especially interested in that peculiar vegetation you spoke of."

"I can show you some samples of that at once if you care to see them. I have some which were brought out by the searching party."

Dr. Albright left the room and returned with some long blades of vegetation of a rush-like appearance but of a very vivid and poisonous-looking shade of green. They were not smooth but were knobby with protuberances from which sap flowed. The odor was that of rank decaying vegetation.

"One of the surgeons brought out a root and planted it here to see what it would do," explained Dr. Albright. "It grew very rapidly at first but it isn't doing especially well just now."

Dr. Bird examined the plant with interest.

"I'll have to wait until my microscopes come before I can tell much about it," he remarked. "Let me see some of the dead bunch-grass and pines, if you have them."

Dr. Albright brought in some samples and Dr. Bird crumbled them reflectively in his hands.

"The microscope will tell the tale," he said at length. "You have a plane landing field marked out?"

"I expect that the markers are pretty well gone."

"Please have them fixed up at once. Here comes the truck, thank goodness. Carnes, stay here and help me get my apparatus unpacked and set up."

NIGHT had fallen by the time the Doctor and Carnes had completed their task and established an improvised laboratory. The Doctor cut sections from the vivid green plant which Albright had given him and put the slides under his microscope. He compared them with various plates in reference volumes and made drawings and photographs of some of them. When he had completed his studies he examined the dead bunch-grass with equal care. At last he shoved back his chair and rose from his instruments.

"What did you find out, Doctor?" asked Albright.

Without replying, Dr. Bird walked to the door of the building and stared out into the night. Miles away a faint flickering of colored lights attracted his attention.

"Those lights? I don't know what they are," said Albright as Dr. Bird called his attention to them. "I imagine it's either some sort of an electrical disturbance or else volcanic. It's evidently close to Cinder Cone and is directly over the center of the disease area."

"How long have they been going on?"

"Ever since the eruption of last June. That is why I think they may be volcanic, although they look a good deal like what I always fancied the aurora borealis would be."

Dr. Bird picked up a pair of binoculars and studied the distant lights for some minutes. Red, green, blue and purple, they flared and flickered with a weird, eerie brilliance. Carnes felt prickles run up and down his spine as he watched them and he felt a strong desire to seek them out and study them at close range. As he watched his face grew more and more rapt. Dr. Bird lowered the glasses and watched his companion. Carnes made a slow, hesitating step in the direction of the lights and Dr. Bird placed his hand lightly on the detective's shoulder. Carnes looked around with a start as though he had been wakened from a sleep.

"Beautiful sight, aren't they?" said the Doctor lightly. "I beg your pardon, Dr. Albright, I haven't answered your questions. I don't know what killed that bunch-grass, but it bears all the earmarks of having undergone a very rapid deterioration of the rotting type. Such a condition might be induced by a high voltage electrical bombardment continued for a long time. The fibres are torn apart as though by high tension electricity.

"As for the rank green vegetation, it is nothing more than ordinary meadow grass."

"But the size!" protested Dr. Albright. "I have seen it higher than my head!"

"Yet the cell formation is typical of meadow grass with one exception. The cells are enormous, over a hundred times the size of normal plant cells. Something has enormously stimulated the growth of those cells and had produced giant grasses. Those knobs and excrescenses on the plant are the result of still further stimulation. They are typical 'giant cells' of the type which breaks down the normal cell growth with putrefactive

effect. In other words, not only has that grass been forced to a giant growth, but it has also contracted a form of plant cancer."

"Plant cancer! I never heard of such a thing!"

"Neither did I, yet that is what that plant has. Further, it is a surface cancer and not a deep eating one; in other words, an epithelial cancer and not a carcinoma."

"But that is what the people here have!" cried Carnes.

"Exactly, old dear, and when we find what causes one, we will probably find what causes the other. Note, too, Carnesy, that where the grass grows tallest and thickest, the cancer cases are the most numerous and the most virulent. This opens a new line of thought for me and I expect that I will work most of the night. Doctor Albright, if you will examine the slides which I have prepared and compare them with the plates I have marked, I think that you will agree with my diagnosis of the trouble. Meanwhile, Carnes, you had better get to bed. I foresee a hard day ahead of us tomorrow. And Carnes," he went on as the detective started to leave the room, "if I were you, I would repeat the multiplication table or do something of the sort tonight instead of staring at those lights."

Far into the night Dr. Bird sat at his instruments smoking innumerable cigarettes, yet in the morning he looked as fresh as though he had slept the night through. Carnes burst into laughter as the Doctor made his appearance the next morning.

"What are you laughing at, Carnes?" demanded the Doctor. "My suit? I'll admit that it isn't so good looking but it's quite comfortable. Yours is laid out on a chair in the laboratory. Go and put it on."

With another laugh Carnes walked into the laboratory and looked at the suit of unionalls with gloves and shoes attached which lay on a chair. A glance at Dr. Bird showed him that the Doctor really meant that he should don the garment and Carnes reached over to pick it up. He gave a cry of surprise as he touched it.

"What on earth is it made of?" he demanded. "It weighs a ton."

"It only weighs seventy pounds," retorted the Doctor. "Put it on."

"I can't walk with that weight on me," protested Carnes, "it feels as if it was made of lead."

"That's exactly what it is made of," replied the Doctor. "Put it on."

With a shrug of his shoulders, Carnes obeyed. The suit resembled a diver's outfit except that it closed at the neck with a draw string instead of having a collar to which a helmet could be screwed. He examined the material and found that it was woven of fine lead wires with silk thread reenforcements. The feet ended in shoes with lead soles and set into the suit on the chest, back, thighs, and every other place where they would not interfere with the mobility of the wearer, were thin lead plates.

Exaggerating his difficulty of locomotion, Carnes walked slowly across the room, lifting each foot as though it taxed his strength to the utmost to do so and letting it fall to the floor with a thud. Dr. Bird grinned his appreciation of his companion's antics and disappeared into the laboratory. He returned, carrying two helmets which were designed to fit down over the heads of the wearers. They were made of thin sheet lead down to the shoulders with skirts of the lead cloth of which the suits were designed attached so that they could be tucked down inside the suits. The front half of each helmet was made of thick, greenish, lead glass and at the back of each was set a microphone, so that the wearer could readily hear and communicate with another person so equipped. He slipped one of them down over his head and handed the other to Carnes.

"Am I to wear that thing too?" asked the bewildered detective. "Doctor, I'm no gorilla like you are. This outfit weighs a hundred pounds and I can't walk in it. Can't I at least leave the headgear off?"

"You'll wear that helmet continually, Carnes," said the Doctor positively. "It will be as much as your life is worth to remove it where we are going. As far as walking, I can see by Albright's map that a car will take us well into the affected area and you'll only have to walk about three miles."

"What about that plane we were going to use?" demanded Carnes.

"The plane idea is out. There probably isn't a decent landing place nearer than three miles of the place we want to go and I don't care to make a forced landing on a lava bed."

"Couldn't we at least fly over and observe?"

"Not if my ideas are correct. That was tried once and failed."

"But he had motor trouble."

"So might we. No, Carnesy, old dear, well as I know your inherent laziness where physical exertion is concerned, this time you are going to get exercise and plenty of it. Let's get breakfast and shove off."

After breakfast, Dr. Albright announced his intention of going with them, but Dr. Bird promptly overruled him.

"I think that Carnes and I had better tackle it alone first, Doctor," he said. "I don't doubt your devotion or courage, but Carnes and I have worked together for years and each one knows just about what the other will do under given circumstances. Give us some pointers about the road and we'll get going."

DR. ALBRIGHT marked the road on a map and Carnes and Dr. Bird climbed into the car and drove off. Each of them wore one of the lead suits the Doctor had provided together with a helmet, and each carried a heavy automatic pistol with belt and holster strapped about their waists. Dr. Bird had loaded a number of pieces of apparatus into the back of the car and as they were starting, he handed Carnes a canvas pouch designed to fit on his belt.

"Hand grenades," he said in answer to the detective's question. "I don't know what we will want with them, but they carry a pretty good charge of radite, my new explosive, and they may be useful. One can never tell."

As they neared the affected area, the change in vegetation began to be noticeable. The grass, which at Lassen Monument, was dried up and dead, began to show itself rank and luxuriant, despite the fact that the ground underfoot was powder dry. The grass was a very vivid brilliant green, which seemed to hurt the eyes in the same manner as would a brilliant light, instead of resting them as a greensward would ordinarily do. The nearer they got to Cinder Cone, the more rank grew the vegetation and the more marked became the vividness of its green.

"We must be getting near our stopping place," remarked Dr. Bird as he consulted the map. "What the dickens?"

His exclamation was caused by a sudden miss in the motor of the Cadillac. He jiggled his spark and strove to restore the steady hum of the motor but the missing grew steadily worse until the car limped along with only half of its cylinders firing. Presently, without any evident reason, the car started to pick up and in two miles it was humming along steadily again. Dr. Bird stopped the car and got out.

"Are we there?" asked Carnes.

"We are a couple of miles beyond the place I was heading for," answered the Doctor, "but I want to make some tests here."

He took from the tonneau of the car a long glass tube with a stopcock on each end. He opened the cocks and connected a rubber bulb to one end of the tube and started pumping air through it. When he was sure that he had replaced all of the original air with air from the neighborhood, he closed the cocks and wrote the time, date and location on the tube. He replaced it in a carton and took out a square box with a glass front. Through the cover of the box ran a rod which terminated in a brass ball on the upper end and in two fine strips of yellow metal inside the box. He took a hard rubber rod and rubbed it briskly with a woolen rag and applied the end to the brass ball. The strips of metal inside the box separated into two parts which stood at right angles to the rod. As they watched the two sheets began to slowly close together again.

"An electroscope," explained Dr. Bird. "That metal is two sheets of gold leaf and when I charge them with static electricity by means of this rubber rod, they are repelled and stand apart. The rate at which they close together is a measure of the rate of leakage of the electrical charge."

He touched the ball with the rod again and timed the instrument with a stop watch. When he had recorded the time, he replaced the instrument in the car and turned the machine around. A mile down the road, when the motor began to miss again, he stopped and repeated his tests. The electroscope lost its charge more quickly than it had the first time. At the point where the motor missed the most badly he made a third set of readings and found that the pieces of gold leaf came together in about half the time they had taken on the first test.

"Here is where we leave the car and go on foot," he announced. Carnes groaned but climbed out of the car and prepared to accompany him. The grass was over knee high here and when Dr. Bird stooped and examined it, found that it was heavily encrusted with the knobby little excrescenses which he had pronounced a form of plant-cancer. As they moved forward and crushed the rank growth under foot, a sickening stench filled the air.

"I wish I had a gas mask," groaned Carnes.

"So do I," replied the Doctor, "but we haven't so we'll just have to make the best of it. Keep your eyes open and don't get caught napping."

Forward through vegetation they tramped. A jack pine appeared before them and Carnes turned to avoid it. Dr. Bird reached out and struck it and Carnes gave a cry of surprise as the tree fell and crumbled into powder as it struck the ground. The tufts of lifeless bunchgrass crumbled into dust beneath their feet. Nothing seemed to grow in this devastated area except the evil-smelling cancerous grass and a variety of giant moss which coated the lava rock, a deep purple in color. As they moved forward, the vegetation grew more and more rank and soon they were forcing their way through a six foot tangle of jungle-like thickness. Carnes stopped in weariness.

"Are we going much farther, Doctor?" he gasped. "The weight of this suit and the heat and odor have about finished me."

"We're about half way there, I should judge. Stop here and I'll go ahead and break a way. Sit down and rest for a few minutes."

Carnes sank on a block of lava and Dr. Bird crashed his way forward through the lush vegetation. A few yards made him invisible to Carnes but the detective could trace his route by the movement of the grass which hid him. Carnes was sorely tempted to remove his helmet to mop the sweat from his brow but the warning of Dr. Bird came back to him and he resisted the impulse.

Suddenly a wild aerie shriek brought him to his feet with a jerk. The scream came from the direction in which the Doctor had gone and Carnes listened intently for a repetition. It came in a moment, followed by the sound of a blow and a scuffle. Carnes ran in the direction which Dr. Bird had taken, drawing his pistol as he did so. The sharp bark of an automatic from the grass ahead of him lent wings to his feet and he hurried forward at a shambling run. Again, again and again came the bark of a gun mingled with more of the wild shrieks which he had first beard. Suddenly the grass thinned before him and Carnes stopped aghast at the sight which met his gaze. Pinioned on the ground by four men was Dr. Bird while three prone figures testified to the accuracy with which he had fired. About the group on the ground a score of wild, almost naked figures danced in a frenzy of excitement, frothing at the mouth and howling weirdly. The most horrible thing about the spectacle was the fact that every one of the figures was covered from head to foot with disfiguring skin eruptions. Carnes rapidly weighed the chances and then raised his pistol. As he did so, fresh howls came from the jungle beyond the clearing and another band of thirty or forty figures burst into the clearing and threw themselves into the dancing circle. Carnes slowly lowered his gun and unobserved, slunk back into the covering grass.

WHEN Dr. Bird left his companion seated, he strode into the thick growth for a few feet and then turned and followed a depression in the ground leading in the general direction in which he wished to go. The footing was better and the grass less dense in the depression and he followed it for a hundred and fifty yards. Suddenly the grass thinned before him and he found himself looking out into an opening about an acre in extent where no vegetation grew except the purple moss which carpeted it thickly. His attention was drawn by a pile of rock in the center whose form reminded him of a crude altar, and toward it he bent his footsteps. It was evidently made by hands and quite recently. The gleam of a bar of metal in the heart of the pile attracted his attention and he grasped it and strove to free it from the rock. So engrossed was he in his task that he did not hear bare feet stealing up behind him and the helmet he wore prevented the odor which suddenly pervaded the glade from intruding itself on his consciousness. His first intimation of danger came when a wild piercing scream smote on his ears.

Dr. Bird whirled about, his hand automatically drop-

ping to his pistol butt as he did so. Before him stood half a dozen figures, clothed in tattered rags where they were clothed at all, with a year's growth of beard on their faces.

One of them reached forward a swollen scabby paw to touch him and Dr. Bird involuntarily stepped back. He forgot the pile of stones behind him and as his foot struck it, he stumbled. His slip was the signal for the group to rush him, one of them giving voice to another unearthly howl. The Doctor's fist shot out and the first of his assailants fell as though struck by lightning, but before he could strike again, handicapped as he was by fatigue and the weight of his lead garments, his arm was seized by another of the group who tried with howls to sink his teeth into the Doctor's hand. Others seized him about the waist and wrestled with him. The sight and smell of their disease-stricken bodies filled the Doctor with loathing and as he slipped again and nearly fell, he reluctantly drew his pistol.

Four times he fired with deadly effect, but as he leveled his weapon for a fifth shot his arms were seized from behind and he was borne to the ground and almost buried under a group of fresh attackers who had approached him from the rear. The Doctor's first impulse was to shout to warn Carnes of the predicament into which he had fallen, but before he did so a second thought sealed his lips. He had no assurance that the maniacs knew of Carnes' presence in their sanctuary and a warning shout might be the means of setting them on the detective's trail.

The Doctor was dragged out from the pile of stones against which he had fallen and was pinioned on the ground by four men while the rest howled and began a wild dance of triumph around him. More and more of the cancer victims came from the lush vegetation to join in the dance and for half an hour the orgy went on. Fully two hundred had gathered before a sudden silence fell on the throng and the dancing circle paused and opened to admit the weirdest figure of them all. It was a man, far gone with the disease as could be seen by the frightful condition of such of his body as was exposed. His head was free from the infection and heavy white hair hung down his shoulders, leaving clear a face that was so swollen that his black eyes peered out as though from caves. He was dressed in a single white garment which extended from his waist to his ankles, on the front of which was crudely daubed in green what Dr. Bird took to be a representation of the sun, with curling rays extending out from it. The figure was armed with a long knife in his right hand and in his left he carried a spear of grass to which were bound at intervals fragments of purple moss.

At the signal of this leader the dancers drew back in a group, leaving the weird figure face to face with the pinioned prisoner. The figure essayed to speak but no intelligible words could come from his lips and another man stepped out from the crowd and stood by his side. The newcomer was a young man with a far less developed case of the disease and Dr. Bird shuddered as he saw that he was attired in the tattered fragments of a Public Health Service uniform. The newcomer could talk in an intelligible manner, although his speech was coarse and thick as though he enunciated with difficulty.

"Adam, the First Chosen, the High Priest of the Chosen Ones, the Brother of the Fire which ennobles, the Servant of the God of Destruction, demands to know why you have penetrated to the holy places and slain the servants of the God," he said thickly. "If you have come as a neophyte to the Chosen Ones, you are trebly welcome, welcome in life, welcome in death, and welcome in final destruction, but the mark of the god is not on you. Speak, why came you here?"

The light of madness glittered in the speaker's eye and although Dr. Bird instinctively cringed at the sight of the knife in the High Priest's hand, he endeavored to smile as he answered.

"I have come to worship your god and to lay offerings before him," he said.

The High Priest threw up his arms at the Doctor's words and uttered a long drawn out wail. The madmen fell on their knees and bowed toward the altar and the High Priest uttered some sounds which were evidently intelligible to the man who had spoken to the Doctor.

"One come to worship and to lay gifts before the god who is not marked with the sign of the god. These be the words of Adam, the First Chosen, 'Let him be sealed to the god forthwith.' Bring now the seals."

Three figures from the outskirts of the crowd darted off into the vegetation at a run to return in a few minutes, each bearing in his hand a spherical piece of silvery metal about which colored lights, red, green, blue and purple hovered. At a signal from the High Priest they came forward and applied the bits of metal to the Doctor's form, one to his forehead, or as close to it as the helmet which the Doctor still wore allowed, one to his breast and the third to his left arm. Dr. Bird could feel a tingle like a mild electrical shock as they touched his garments. They were left in place for a moment and then withdrawn.

"These be now the words of Adam, the First Chosen, the High Priest of the Chosen Ones," cried the spokesman again, " 'The one newly sealed to the god shall be taken into the presence of the god that he may look on naked radiant beauty. If the god claims him not for sacrifice and immediate destruction, he shall be kept bound until the mark of the god shows and then shall be admitted to the ranks of the Chosen Ones. To the temple of the god!"

The assemblage, which had been silent while the ceremony of sealing the Doctor had gone on, suddenly began to howl in wild chorus and to throw themselves about in a frenzied dance. The Doctor was jerked to his feet by his captors and led into the vegetation behind the High Priest and his spokesman, the balance of the madmen straggling along behind. The path through the tall grass was well marked and Dr. Bird found the way easy to traverse. He gave a fleeting thought of regret to the automatic he had been forced to leave behind and was temped to try to shake off his guards and flee, but handicapped as he was by his leaden armor he knew that he would be promptly recaptured. Besides, the direction of the march was toward the very spot he had meant to explore, so he shrugged his shoulders and grinned as cheerfully as he could and went ahead.

"Thank goodness, Carnes didn't get caught," he muttered to himself. "I hope the fool found his way back to the car all right. He should have no difficulty, we tramped down a pretty good path. If he gets back, they'll have some idea what became of me."

FOR half a mile the trail led almost straight, the vegetation getting taller and taller until Dr. Bird estimated it as fully twenty feet high. Suddenly the

grass gave way to an ankle deep carpet of purple moss as they entered another glade. Before he could look around the Doctor was whirled about and was forced backward, step by step, into the clearing. Along the trail he had come trooped the rest of the madmen, curiously silent and furtive now, and ranged themselves in a rough semicircle about the edge of the glade. As the Doctor walked backward these advanced, keeping about twenty-five feet from him. Presently the movement ceased and the voice of the spokesman was heard again.

"These be the words of Adam, the First Chosen," he cried. " 'Let the one new sealed turn unabashed on the radiant glory of the God of Destruction and let the god say whether he takes his sacrifice for immediate destruction or as one of his servants.' Turn, newcomer, and look on the glory!"

The arms holding the Doctor fell away and he turned to see what lay before him. He was stricken dumb and motionless at the beauty of the scene. Before him was a hole in the lava about ten yards across and in the depression, just below the surface of the ground, was a silver lake. It was of gleaming silvery metal in constant movement as though it were endowed with life and from its surface rose long brilliant corruscating streamers of color. Red they were and green and every color of the spectrum and other weird colors which were unknown to the scientist and he suddenly knew that they were the invisible rays of the spectrum suddenly made visible by some unknown agency.

Up through the swirling silver came huge bubbles which burst, throwing globules of the gleaming silver into the air to burst into tiny droplets, each with its halo of wonderful colors. As Dr. Bird stared into the lake, he became aware of an intoxicating winelike quality in the air which made him feel of tremendous strength and vitality, as though the very essence of life itself were flowing through his veins He laughed aloud in sheer joy of living and reached up to his helmet to remove it that he might breathe the wonderful air more freely. An uncontrollable impulse seized him to dive into that cool looking silver lake and to become a part of that wondrous and unearthly beauty. He took a step nearer and poised on the edge of the pool, his hands fumbling with his helmet. He found the tie string and started to unfasten it when a sudden cry rang out on the still air.

"Doctor Bird! For God's sake!"

The spell was broken and Dr. Bird whirled about. The madmen had been intently watching his every move and when he turned, a wild howl went up which was stilled by a gesture from the High Priest. The spokesman came forward again and addressed the crowd.

"These be the words of Adam, the First Chosen," he declared. " 'The newcomer has turned his back on the radiance and glory of the God of Destruction who has thus rejected him as a servant. Therefore, let him be a sacrifice to the god he has scorned and become one with the glory of the god.' "

At the words a half dozen of the men detached themselves from the crowd and closed in on the Doctor. He looked around hastily for a weapon but could find none and faced his new assailants with raised fists. As the group charged, the crowd kept up its weird howling. The first three went down before well directed blows of the Doctor's lead-covered fist, but no man can fight a hundred and gradually he was borne backward toward the edge of the pool. At the edge he made a desperate stand, but two of the madmen grasped him about the waist and strove to hurl themselves with him into the pool. The Doctor's foot slipped and he sobbed in apprehension, but he recovered himself and for a moment shook himself free. As he did so the clamor stilled for a moment and a clear voice penetrated to the Doctor's ears.

"Down, Doctor!" it cried.

Dr. Bird instinctively dropped to one knee and to his ear came the welcome bark of an automatic and the nearest of his assailants crumpled to the ground. Again and again the gun barked and a path was clear to his left. He leaped to his feet and ran around the edge of the pool. Carnes rose from behind a block of lava and the Doctor joined him.

"Thanks, Carnes!" he gasped. "Any more ammunition?"

"Two shots," replied Carnes, "but I still have those grenades."

"The devil! I had forgotten all about them!"

Dr. Bird hastily felt in his pouch and brought out a grenade. The madmen had been stunned for a moment by the suddenness and unexpectedness of the attack but now they gathered and with howls of rage came forward in a compact body. Dr. Bird drew the pin from the grenade and hurled it. Just in front of the leaders of the rush it fell and as they swept over it a terrific crash resounded in the air. A huge hole was torn in the ground and the leaders of the rush were torn into fragments. The rush paused for a moment and then came foward again. Dr. Bird hurled a second grenade and again the rush was checked but the third time it came on again. Carnes stood up and swung his arm in imitation of the Doctor but his foot slipped on the purple moss and his grenade fell short of its mark. Full in the center of the silver pool it fell and after a moment's pause, a crash like all the thunder of the universe rent the air. From the pool rose a blinding searing flash of light and the earth rocked in throes of agony. Carnes and the Doctor were hurled thirty feet through the air to fall unconscious to the ground.

An hour later, Dr. Bird opened his eyes and blinked unsteadily. He struggled to a sitting position and gazed at the destruction which Carnes' ill-directed grenade had wrought. Only a gaping hole marked the location of the silver pool but where it had been thirty feet across, now the hole yawned a hundred yards wide and deep into the earth. All trace of the maniacs had vanished; the hole was where they had been and there was little doubt of what had happened. The terrible cataclysm the grenade had started had wiped them from the face of the earth. Dr. Bird rubbed his hands and arms to restore the circulation and staggered to his feet to look for Carnes.

The detective lay a few feet from him with his left leg doubled back under his body. Dr. Bird straightened the leg out and Carnes opened his eyes with a groan. He recognized the Doctor and strove to rise to a sitting position, but a groan of agony broke from his lips.

"What happened, Doctor?" he muttered feebly.

"You saved us both with your grenade, old dear," replied the Doctor, "but I'm afraid you have a broken leg. I'll have to carry you out. It'll be a rather painful process but it's all that I can do. Can you stand it?"

"Go ahead, Doctor, I'll do my best."

(*Continued on page* 1138)

The Thing That Walked

NOT so long ago it was a common thing to hear lengthy discussions about glands—all kinds of glands—anywhere at all. But though the subject of ductless glands has gone beyond the "fad" stage, gland experts continue their serious and intensive experiments. Much has recently been established as fact in the field of possibilities, but the science of glands is still in its infancy. It is hard to say what strides it will make in the near future. Our well-known author needs no introduction to our readers. Obviously, though, he has made a study of the subject of glands, and he gives us his findings in a most absorbing bit of scientific fiction. We know this tale will gain Mr. Kline many new readers.

By Otis Adelbert Kline

Author of "The Malignant Entity," "The Man from the Moon," etc.

Foreword

IT all comes back to me as I take up my pen—a horrid shriek of pain and terror from high in the air, an enormous thing, taller than a tree, silhouetted against a background of lightning-illuminated storm clouds, like some gigantic tumble-weed, striding over the jungle, walking on its branches. And waving high above the tree tops in the grip of those branches, a limp and helpless human being.

Again I feel a great, green snaky think strike me—knock me down. A band of stinging, burning agony encircles my body. I hammer it ineffectually with my empty gun.

Once more I see Anita, hopeless terror in her eyes, a green arm around her slender waist, dragged away with incredible swiftness.

But I must begin at the beginning.

CHAPTER I

The Mountain of Mystery

CERRO VERDINEGRO is only one of the lesser volcanic peaks that clutter up the Nicaraguan landscape in such generous numbers. But to the members of our party, trudging doggedly toward it through the dense tropical jungle, it had an importance out of all proportion to its diminutive size.

Pedro Ortiz, our guide, a swarthy *mestizo* with a thin, carefully trained black moustache, an admirable tenor voice and a penchant for flamboyant raiment, usually avoided speaking its name, when he had occasion to refer to our destination, but merely mentioned it as "that mountain," or "that place." When its name was spoken in his presence he invariably crossed himself piously with a fervent: "*Maria Madre* preserve us!"

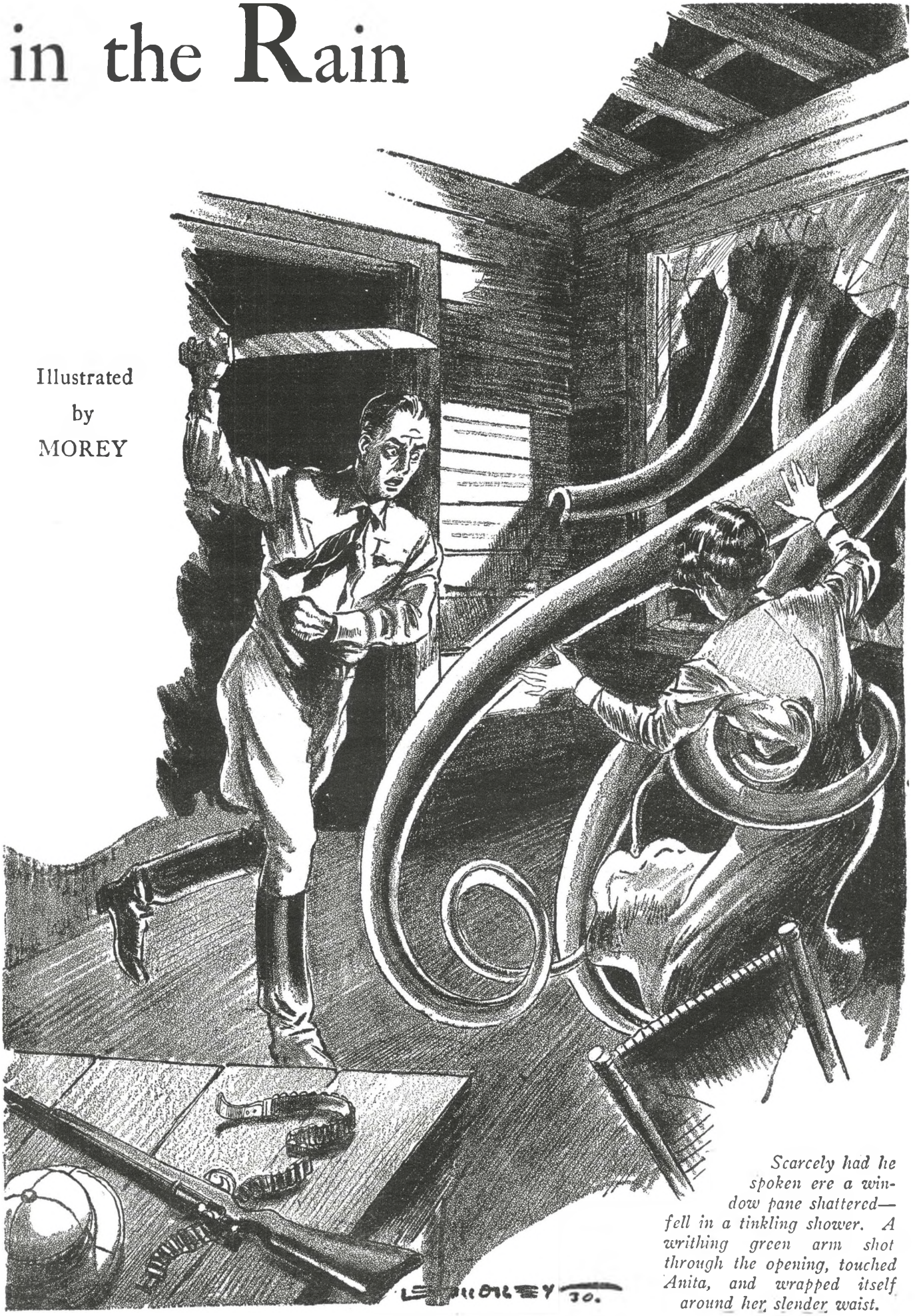
The two Misskito Indians whose keen *machetes* were carving the way for us, and the eighteen others who trudged behind in single file, bearing our supplies, had grown more fearful day by day as we drew nearer our destination, so we were kept in constant trepidation lest they bolt and leave us stranded.

Tall, gaunt, bespectacled and bewhiskered, Professor Charles Mabrey, explorer and naturalist, had undertaken the leadership of the expedition for the purpose of clearing up the mystery surrounding the strange disappearance of his friend and colleague, Dr. Fernando de Orellana. And he made it plain that he did not, for one moment, countenance the weird, incredible story which linked that disappearance with the traditional mystery of the extinct volcano. It was his frank and unalterable opinion that the doctor had been murdered by the natives, and that they had invented the *outre* story of a man-eating monster inhabiting the crater lake purely to shield themselves from punishment. Although I had called his attention to the fact that as soon as the doctor had disappeared the natives had sent a runner to Managua to announce the fact, and that it did not seem likely they would do such a thing, if they had killed him, his only retort was that it was obvious I was not conversant with the complex ramifications of native cunning.

But to one member of our party, Verdinegro was a mountain of tragedy—a tomb, perhaps, that concealed the remains of a beloved parent. Anita de Orellana, motherless for many years, and now a full orphan if the native report of her father's death were true, bravely bore the rigors and hardships of our expedition despite the fact that she had been gently raised—had, in fact, been called from a young ladies' school in New York by the news of her father's strange disappearance. She appeared so small, so slight, so fragile, that often on the trail I felt like picking up the slender, khaki-clad form, as one might pick up and carry a tired child. In her big brown eyes, which she endeavored to keep cheerful, I frequently detected the hint of tears which she bravely but vainly tried to suppress.

in the Rain

Illustrated
by
MOREY



Scarcely had he spoken ere a window pane shattered—fell in a tinkling shower. A writhing green arm shot through the opening, touched Anita, and wrapped itself around her slender waist.

As for me, Jimmie Brown, the least important member of the party, I had joined the expedition at the invitation of Professor Mabrey, my friend and companion of many a jaunt into strange places and dangerous situations. I may as well confess that my hobby is exploration, and my means of livelihood a portable typewriter and a camera. There is a strain of the Celt in me, which perhaps accounts for my penchant for adventure, as well as for my red hair, blue eyes, and scant sprinkling of freckles. To me, the peak of Verdinegro was, at first, merely another adventure. But after I came to know Anita, it was something more. A mystery that must be solved. Perhaps a death to be avenged. The professor had introduced us at the dock and we had become acquainted on the voyage to Nicaragua.

As we suddenly emerged from the humid jungle into the clearing where the native huts were clustered, Cerro Verdinegro loomed up, sinister, menacing gigantic in its nearness. Our last view of the mountain, previous to our plunge into the jungle, had been from a distance of more than ten miles, from which it appeared in a blue haze. On close observation the reason for its name was manifest, for the vegetation that covered its sloping sides was a darker green than that of the surrounding country—probably, the professor told us, because its soil was more fertile.

On entering the village we were greeted by barking dogs, pot-bellied brown-skinned children, slouching, greasy looking squaws in various states of undress, and their no more attractive appearing lords and masters.

Pedro addressed a few words to a white-haired and exceedingly wrinkled old fellow, who pointed toward a path which led up the mountainside, and beside which a little stream trickled. Leaving the natives still gaping and chattering, we filed away between the small gardens of squash and beans, and on up the slope, following a path which cut through the riotous tangle of dark green vegetation.

After about a half hour of climbing, we came to a small clearing, in the center of which was a cottage with a screened porch. Near the cottage was the source of the little stream we had been following—a clear spring that gushed from the mountain side. Opposite this, was a native hut. A neglected, weed-choked garden mutely attested the recent cessation of human care. The dark green rim of the crater loomed not more than a quarter of a mile above us.

Dropping their burdens, our carriers grouped themselves around Pedro and began chattering vociferously. The professor led the way into the cottage. Anita and I followed.

Although the doors were unlocked, it was apparent that nothing had been disturbed. The professor poohpoohed the idea of native honesty, but believed this singular phenomenon might be due to superstitious fear.

WE found ourselves in a large and roughly but comfortably furnished room, the walls of which were lined with books. A homemade desk, table and filing cabinet occupied one corner. Three doors other than that which led from the porch were cut into the walls. One led to a small bedroom in which there was a cot surrounded by mosquito netting. Another led to a larger room, evidently the doctor's laboratory, the shelves of which were filled with bottles, jars and boxes. It was equipped with a number of small tanks, a large table on which were a compound microscope, numerous retorts and test tubes, and other paraphernalia of the biologist, bacteriologist and biochemist.

The third door led into a small kitchen, equipped with an oil stove, a small sink, table and chairs. It contained a considerable quantity of tinned supplies, neatly arranged on the shelves. The table had been set for one, and the dishes held the dried remains of a meal which apparently had not been touched.

"It is evident, Anita," said the professor, gently, "that whatever took your father away did so quite unexpectedly. There are no signs of violence, so a ruse of some sort must have been used. He was about to sit down to this meal, no doubt, when called outside on some pretext. But he never returned to finish the meal."

The girl's eyes filled with tears.

"Poor, dear Dad," she said. "He was always so good to me, and I need him so."

"There, there, my dear. I know just how you feel." The professor spoke soothingly, and put his arm around her shoulders. In a moment she was sobbing in the hollow of his khaki-clad arm.

I felt a queer lump rising in my throat. It was the first time I had heard her cry.

At this moment, Pedro came in.

"Pardon, *señor*," he said to the professor, "but those damn' Misskitos raise too mooch hal outside."

"What's wrong, Pedro?" asked the professor, patting the girl's head consolingly.

"They say mus' go long way by dark. They would like to 'ave the pay, now."

"Go a long way? Why?"

"They 'fraid thees mountain." Here Pedro rolled his eyes and crossed himself.

"To be sure. I had forgotten." The professor released Anita, who had stilled her sobbing and was gazing at Pedro, tears trembling on her long, curved lashes. "Tell them I'll come out and pay them right away."

Pedro returned the questioning look of Anita with an expression of dog-like devotion. Fearful as he was of the mysterious mountain, I believe it was this devotion to Anita, more than the money we paid him, that kept him from leaving us.

He bowed politely to Mabrey:

"*Si, señor.* I tal them."

We followed him outside a moment later, and the professor opened a pocket of his money belt. One by one, he handed each Indian his wages. When he had paid the last man, he addressed Pedro.

"Ask them," he said, "if there are any brave men among them."

Our guide spoke to the group collectively, and a vociferous chattering began, which lasted for some time.

Presently it quieted down, and Pedro said:

"They say, *señor,* that they are all brave men. But they say, also, that they cannot fight a monster taller than a tree, weeth a thousan' legs, and eet foolish to try."

"Tell them that we are going to try, and ask if there are two of them willing to stay if their daily wages are doubled."

More chattering, and presently two men wearing the air of martyrs stepped out of the ranks, while the others filed away, traveling with far greater speed than they had ever attained during our journey.

"Quarter them in the hut," ordered the professor.

"And now," he said, turning to Anita and me, "we'll get settled, and then down to business."

CHAPTER II

The Diary

THAT afternoon, when our luggage had been stowed away and we had partaken of a very satisfactory meal prepared by Anita in her father's kitchen, the three of us, Anita, Mabrey and I, started to follow the well-worn path which led over the crater rim. Pedro and the two Misskitos, squatting around their cook-fire before the hut, watched us depart with ominous glances, much as if we were being led before a firing squad.

When we reached the rim, we looked down upon a lake of glassy smoothness, which faithfully mirrored the sky and the encircling crater. So peaceful and beautiful did it appear, that the idea of a man-destroying monster inhabiting its pellucid depths seemed ridiculous.

"This lake, according to an old tradition," said the professor, "is bottomless, and inhabited by a terrible monster, which emerges from the water on rainy nights, searches until it has found a human victim, and returns to its watery lair deep in the bowels of the earth. Natives who profess to have seen this awful creature say it is taller and bigger than a tree and has a thousand snaky heads. Many years ago, the story goes, beautiful maidens with stones tied to their feet were thrown into the lake at regular intervals decided by the priests. These sacrifices, it is said, prevented the monster from leaving its lair and raiding the villages.

'With the advent of Christianity, the priests of the new religion abolished the custom, and it is said that for many years the monster again committed its terrible depredations. Then, so the story goes, it slept for three hundred years. But of late, it is said, the monster has awakened, and recommenced its raids on the populace. And now, when any man, woman or child disappears during a rainstorm, the monster is blamed and the new priests are cursed. There are, of course, boas, anacondas, jaguars and pumas in these jungles, but their depredations are never taken into account. I am inclined to think that the entire myth may have been started by the raids of an enormous boa, which is a water-loving snake, and often reaches a size that renders it fullly capable of crushing and devouring a human being.

"So much for the legend. Now for the facts."

We descended the path which led down to the margin of the lake. It wound through a thick growth of trees and shrubs, the size of which attested their great age and the tremendous length of time which had elapsed since the volcano had last erupted. At the rim of the lake, the path turned to the right, following the water's edge.

The professor, who was in the lead, suddenly uttered an exclamation of surprise and increased his pace. Hurrying after him, I too gasped in amazement at what I saw. For there in that setting of jungle growth was a weather-worn stone structure so skillfully wrought that it might have been the product of an advanced civilization. Rising to a height of about twenty-five feet above the surface of the lake, and with half of its base jutting out into the water, was a stone structure which supported on its top, a huge rock slab, one end of which projected out over the lake like a diving board. A flight of steps led up to the top from the rear.

Just behind this, sunk into the stone paving in the shape of a crescent moon was a stone reservoir filled with water. Each point of the crescent brought up almost at the margin of the lake, where a slab of pumice permitted the lake water to filter through, thus keeping it perpetually filled. Back of this reservoir rose, tier upon tier of semicircular steps, to a height of about fifty feet, like the seats of an amphitheatre. A stone bridge spanned the center of the crescent, and at the top and center of the amphitheatre a great, elaborately carved slab of rock was set into the mountainside. Surrounded by hieroglyphics, the main figure on this slab was a huge multi-headed serpent. The sides of the altar were also decorated with this figure in bold relief, surrounded by pictographs and hieroglyphics.

"Without a doubt," said the professor, "this is the place of sacrifice mentioned in the legends. And that figure, the many-headed serpent, is no doubt an idealized conception of the monster—probably a huge anaconda—to which the victims were fed."

We circled the reservoir, crossed the little bridge, and mounted to the top of the altar. Walking out on the stone slab, I looked straight down into the clear depths below. The reason for the Indian belief that the lake was bottomless was instantly apparent, for although I could see downward for a great distance—could even detect fish swimming far below—I could not see the bottom.

We descended the steps once more, and the professor, with notebook and pencil began jotting down the writing on the side of the altar, for future comparison with the various Central American codices he had brought with him.

Anita, in the meantime, bent over and examined the water in the reservoir.

"What a pretty green water plant," she said. Then she reached beneath the water, but withdrew her hand with a jerk and a little exclamation of fear. "Why, it moved! It's crawling away!"

The professor and I both reached her side at the same time. A small, green, bushy-looking thing about an inch in diameter was creeping toward the center of the pool, using its branches as legs. The bottom of the pool was dotted with many others, growing with their branches extended upward like shrubs.

"What is it?" I asked.

"A hydropolyp," said the professor, "but of a kind I have never seen or heard of before. Although there are many varieties of salt water hydropolyps only three fresh water varieties are known in the Americas, the hydra, the cordylophora and the microhydra. There is a green variety called *hydra viridise*, but it is purely a salt water animal. This is interesting! We must take a specimen back to the doctor's laboratory for examination."

He reached into the water and grasped one of the bush-like forms, but instantly let go and jerked his hand up out of the water, while the creature turned over and crawled away.

"My word!" he said. "My word! I'd forgotten that some of these creatures have nematocysts—stinging nettle cells! Anyway, we'll have to bring a specimen jar with us. The things would shrivel up if exposed to the air for a short time."

So engrossed had we been in our amazing discoveries that we had failed to notice the approach of a very black rain cloud. My first intimation of its presence was the

splash of a huge raindrop on my shoulder. This was followed by a swift patter, and then a veritable deluge.

"Come," said the professor, "we must get back to the cottage. This may last for hours."

I was about to turn away with the others when I noticed through the sheets of rain, a disturbance in the water just in front of the stone diving platform that evidently was not caused by the torrential downpour. Then I distinctly saw a green serpentine thing reach up out of the water. It was followed by several more, groping and lashing about blindly, like earthworms, exploring the ground around their lairs.

"Look!" I cried excitedly.

THE professor looked with a gasping: "Good God!" and Anita with a scream of fear. One of the lashing arms reached toward us, and we scrambled, slipping and stumbling, up the winding path with a speed of which I had not thought any of us capable.

The rain pelted us unmercifully until we reached the cottage, but with the usual perversity of rainstorms, ceased almost as soon as we had attained shelter.

"What was it?" I asked, as we stood there, making little pools on the floor of the screened porch.

Mabrey mopped his wet face with his handkerchief.

"God only knows!" he replied. "I'm willing to concede, however, that it *wasn't* an anaconda. Let's get into some dry things."

Anita retired to her father's bedroom to change, while the professor and I went into the kitchen to discard our wringing wet garments, rub down, and put on dry ones.

When we emerged into the living room once more we found Anita seated at her father's desk. She had rumpled her dark-brown shingle-bobbed hair to dry it, and I thought she looked more beautiful than ever.

"I've found something interesting," she announced, "perhaps a key to the mystery. It's father's diary."

"A diary," said the professor, "is a personal and sacred thing."

"But it says: 'For my daughter, Anita, when I am gone,'" replied the girl, "and instructs me to communicate the contents to you, Uncle Charley."

"That's different," said the professor, settling himself comfortably and loading his pipe. "Suppose you read it to me."

"I'll go out on the porch," I said.

"No, stay, Jimmie," begged Anita. "There's nothing secret about it. After all, even if there were, you are in this adventure with us—one of us. Sit down and smoke your pipe. I'll read it to both of you.

"The first part," continued Anita, "tells Dad's reason for coming here—to investigate the persistent legend of a terrible monster living in the crater lake. We all know that. He soon found the place of sacrifice and brought away some of the hydropolyps for examination in a temporary laboratory he had set up in a hut, while native workmen, under his direction, were building this house for him. Then he——"

She was interrupted by the slam of the screen door and the sound of footsteps on the porch. Pedro stood, bowing in the doorway.

"Pardon *senorita y senores,*" he said, "but three *Indios* come in strange dress. Almost they are 'ere. I await instructions."

"Find out who they are and what they want," said Mabrey.

Pedro bowed and departed, and we all went to the window to watch him meet the newcomers. Our two Misskitos, we noticed, arose at their approach and bowed very low. The strangers were attired in garments unlike anything worn today, except perhaps on feast days or at masquerades or pageants. One Indian, much taller than the other two, was more richly and gaudily attired. And into his feather-crown were woven the red plumes of the *quetzal,* the sacred bird whose plumage might be worn only by an emperor under the old *régime.*

The tall red man spoke a few words to Pedro in an authoritative manner, and the latter, after making obeisance, turned and hurried back to us.

"He ees the great Bahna, the holy one!" said Pedro. "He would 'ave speech weeth the *señores.*"

"All right. We'll see him," replied Mabrey. "Send him in."

A few moments later Pedro bowed the tall Indian and his two companions into the room. The two shorter men stood with arms folded, one at each side of the doorway, but the tall man advanced to meet us.

"I have come," he said in English as good as our own, "to warn you to leave. You are in great danger."

"From whom do you bring the warning, and what is the danger?" asked the professor.

The Indian's face remained expressionless—immobile.

"The great god, Nayana Idra, speaks through me. I am his prophet. Not so long ago I warned the man whom you came to seek. He would not heed my warning, and he is gone. So you seek fruitlessly. You dare the wrath of the Divine One in vain. Go now, before it is too late, or on your own heads let the blame rest for that which will follow."

"Am I to understand that you are theatening us with the vengeance of this fabulous monster living in your alleged bottomless lake?" asked the professor, a trace of anger in his voice. "You seem well educated, and I confess that I am puzzled by a man of your apparent learning professing such superstitions."

"I have studied the learning of your people," replied Bahna, evenly, "but I have studied many things besides. You overreach yourself in calling them superstitions. They are the religion of my race, of which I am the hereditary leader. They are truths which you would neither appreciate nor understand. I have come to warn you, neither as a friend nor as an enemy, but solely as the mouthpiece of Nayana Idra, whom I serve."

"And who, pray tell, is Nayana Ira?"

"Nayana," said Bahna, with the air of a teacher lecturing a class, "is the Divine One, Creator of All Things. When he chooses to assume physical form he is Nayana Idra, the Terrible One, wreaking vengeance on those who have ignored or defied him."

"In his physical form," said the professor, "what does he look like?"

Bahna pointed to one of two great golden discs suspended in the pierced and stretched lobes of his ears. On it was graven a multi-headed serpent like that cut in the rock at the place of sacrifice.

"This," he said, "is man's crude conception of his appearance."

"May I ask," said Mabrey, "in what manner you received the message which you have conveyed to us from this alleged deity?"

His features as inscrutable as ever, the Indian drew a roll of hand-woven cloth from beneath his garments. Then, glancing about him, as if looking for a place to

spread it, he walked to the desk, behind which Anita was sitting, unrolled it, and laid it down before us.

"There," he said, "is the message. Heed it and you will live. Disregard it, and you will meet with a fate more terrible than you can imagine."

We looked at the cloth curiously. It was embroidered with hieroglyphic symbols resembling those cut in the face of the sacrificial altar.

"When I awoke this morning," said Bahna, "this magic cloth was spread over me. The message says: 'Today there will come to the mountain three white strangers with their servants, to seek him on whom our vengeance had fallen. They are not of our people, and cannot understand our truths. Neither can they become our servants. You will warn them to leave, lest our wrath fall upon them.'"

"You seem," said the professor, "to have cooked up a most interesting, if unconvincing cock-and-bull story. If you are able to make yourself understood to Nayana, you may tell him for us that we will come and go as we please. And now, Bahna, I bid you good afternoon."

By not so much as the flicker of an eyelash did Bahna betray the slightest emotion. Folding his cloth, he replaced it under his clothing and marched majestically through the doorway, followed by the two men who had accompanied him. We watched the three until they disappeared in the jungle. Then the professor reloaded his pipe, lighted it, and sat down in his chair.

"Now," he said, "we can go on with the diary."

Anita sat down at the desk, reached for the diary, looked surprised, then alarmed, and searched fearfully, frantically through the books and papers on the desk. Then she sank back with a look of despair.

"I'm afraid we can't," she said, weakly. "The diary is gone!"

CHAPTER III

The Thing That Walked in the Rain

AFTER our evening meal, Professor Mabrey and I sat on the porch smoking our pipes and listening to the patter of the rain and to the almost incessant rumbling of thunder that had commenced with the advent of darkness. Anita was inside, looking through her father's papers. The cook-fire of Pedro and the two Misskitos had sputtered and gone out, and I guessed that they were, by now, comfortably installed in the mosquito-bar draped hammocks they had swung in the hut.

"This chap Bahna sure slipped one over on us," I remarked, thinking of the episode of the afternoon. "Seems to me there must have been something important in that diary—something he was afraid to have us see."

"Undoubtedly," replied the professor. "It was careless of me not to watch. These natives are deucedly tricky."

"Speaking of natives," I said, "I've been wondering if Bahna really is a native. He certainly doesn't look like the other Indians here. And he's educated."

"I've been wondering the same thing, myself," replied Mabrey. "Bahna is not a native name. I doubt if it is a proper name at all. Sounds more like a title. And his features were more Aryan than Mongoloid. With a turban instead of a feather crown he'd pass for a Hindu."

"Hasn't it been determined that there is some connection between the religions and traditions of the Far East and those of the early American civilizations?" I asked. "Seems to me I've heard or read something of the sort."

"It is a subject," he replied, "on which ethnologists have never agreed. It's pretty generally conceded, I believe, that all American Indians are members of the Mongolian race—blood brothers of the Chinese, Japanese, Tibetians, Tartars, and other related peoples of the Old World. Students of symbology have found evidence which seems to link all the great civilizations of antiquity. And Colonel James Churchward has correlated them all as evidence that the first civilization developed in a huge continent called Mu, situated in the Pacific Ocean, and, like the fabulous continent of Atlantis, sinking beneath the waves after its mystic teachings, had prevailed in the Americas, the then still flourishing Atlantis, Greece, Egypt, Babylonia, Assyria, India and other coexistent civilizations.

"The royal race of Incas, it is said, more nearly resembled Aryans than Mongols, while many of the Aztecs had a strongly Semitic cast of countenance. It's a pity that the destructive fanaticism of the conquering Spaniards made it impossible for us to learn more than a very small part of the religions and traditions of these peoples. According to our recent tricky visitor, as well as our own observations, there must have existed here at one time a cult worshipping Nayana, or Nayana Idra, a many-headed serpent."

"Which brings us," I replied, "to the consideration of what we saw in the lake during the shower this afternoon. I'm positive that I saw several green, snake-like things of immense size, waving above the water. You saw it, too, as did Anita."

"The whole thing," said the professor, "smacks of the magic of India. Standing in the midst of a crowd, a Hindu fakir throws a rope up in the air. To every member of that crowd it appears to stand stiffly erect while he climbs to its top. But to the eye of a camera, it is lying stretched out on the ground while the fakir creeps its length on all fours. Mass hypnotism. The same thing is true of the trick of growing a rose from a seed in a few minutes, while playing a hautboy. The rose simply does not exist, except in the minds of the audience. And neither, I am convinced, does the monster we saw this afternoon have any existence, except, perhaps in the minds of the credulous natives who have been taught to believe in it. We have been hoaxed, and I, for one, don't propose to give any credit to the reality of the thing."

"It certainly looked real enough to me," I said, "and there wasn't any fakir in sight to hypnotize us."

"He wouldn't need be in sight," replied the professor. "Our minds were all prepared for the thing before it happened—our imaginations keyed to the highest pitch. A fertile field for the mass hypnotist."

AT this moment, Anita, who had been standing in the doorway for some time listening to our discussion, came out on the porch.

"I've just found something," she said, "which proves that my father believed in the reality of the Nayana Idra."

"What is it?" asked the professor.

"A short time ago I went into the bedroom for a handkerchief. Dad's khaki jacket was hanging there, and

I noticed a book protruding from the pocket. It was his notebook, done in pencil, and very sketchy and incomplete. But I'm sure that if we can guess some of the things that are implied by these notes we can find the key to the mystery, which Bahna stole when he took the diary. Evidently the notations in the diary were mostly elaborations of these notes, written in ink in order that a complete and permanent record might be preserved."

"And you say he believed in the existence of the monster?"

"Without a doubt. Listen to this:

" 'Another native stolen from village last night during rain. Went to see tracks. Like those of enormous serpents—many of them.'

"And here's a note made some days later:

" 'Saw it for first time today, during shower. Great green arms writhing above water. Heard sound. Turned and strange Indian was standing behind me. Seemed to materialize from nowhere. Must be secret entrance in rock. Dressed like ancient high priest. Name Bahna. Called thing "Nayana Idra." Warned me away. I laughed. Went on fishing my specimens from the reservoir to take back for observation. When I looked again he had disappeared.' "

"Which goes to prove my hypnotic theory," said the professor. "Bahna was standing behind him, influencing his imagination with his subtle art when he thought he saw the monster."

"Here's a note made a week later," said Anita.

" 'Some trouble to decipher characters. Mystic symbols to be read only by adepts of inner circle. Will figure out formula yet. Tried the ipecacuanha. Hydras all dead. Must have been too strong. Ancient high priests clever biologists and chemists. Created and destroyed own gods at will. Must try weaker solution. May have been modified by something else.' "

"What do you make of that, professor?" I asked.

"It seems that my friend, the doctor, was on the wrong track," said the professor. "He thought the things real instead of phantasies. He should have called the ancient priests clever psychologists instead of biologists."

"But what of the ancient formula? And what was he doing to the hydras with the ipecacuanha?" I asked.

"The formula was probably a lot of mummery," he replied, "like burning incense in a temple, or like the magic philters which still persist in our time and are efficient only to the extent that they inspire faith or wield the power of suggestion. The fact that they used ipecacuanha in this formula it not significant, as I see it. It contains emetine, a powerful emetic or an active poison, according to the dosage. I can understand that the hydras would be killed by a strong solution, as it is known to be particularly destructive to amoeboid life."

"But where do these strange hydras fit in?"

"Accessories to the mummery, somehow," he replied. "Possibly living miniature replicas of the fabulous monster, to assist in establishing belief in the creature. Giving color and mystery to the thing, like the doves of Isis, or the white dove that supposedly whispered heavenly secrets in the ear of Mohammed, while extracting a pea therefrom."

"Here is a later note about the hydras," said Anita.

" 'Weaker solution killed all but one. Put this under glass. Gonads seem to have atrophied. Died shortly after return to solution. Something wrong.' "

"It seems to me," I said, "that the doctor was convinced there was some connection between the hydras and this mystery, and that he was experimenting to find out what it was. Evidently he had some ancient documentary evidence of the mystical nature to go on."

"And being mystical in nature," retorted Mabrey, "it was probably as unreliable as it was unscientific."

At this moment our discussion was broken into by a loud shriek of fear and agony from the direction of the hut. Peering out through the screen, I made out, by the almost constantly recurring flashes of lightning, two figures running as if the very devil were after them. One plunged into the jungle and the other came dashing toward the cottage.

Then I heard a final, despairing shriek, which seemed to come from high in the air. Looking upward I beheld, silhouetted against the background of lightning-illuminated clouds, an enormous thing taller than a tree, with hundreds of branches, or legs. It appeared like some gigantic tumble-weed walking on its branches through the jungle with terrific, Brobdingnagian strides. And waving helplessly above the tree-tops in the grip of one of these branches was the limp and helpless figure of one of our Misskitos.

Meanwhile, the man who had been running toward the cottage arrived—bolted up the steps and through the door. It was Pedro.

"*Maria Madre* save us all!" he panted, his eyes rolling with terror. "Eet's come! Eet took José! Reached through the door and jerked heem out of his hammock! Hide! Hide queeck, or eet weel get you all!"

Without stopping to think I dashed out of the house, unholstering my colt forty-five. Then I emptied its six chambers at the great trunk, swaying there above the tree-tops. Whether or not I hit it I do not know. There was no apparent effect. But an enormous tentacle came slithering down toward me, then another and another, blindly searching the clearing like exploring earthworms.

"Come in here, you fool!" shouted Mabrey. "Come in, I tell you!"

As if in a daze, I stood there, unheeding, watching the mostrosity that towered above me. Then a great, green, snaky thing struck me, knocked me down. Stinging, numbing pains shot through me. I was up in an instant, but it found me again—wrapped around my body, pinioning one arm—a band of stinging, burning agony. I pounded it ineffectually with my empty gun.

Mabrey leaped out a *machete** gleaming in his hand. I was swung swiftly upward. The *machete* flashed, and I was dropped flat on my back in the mud. Big as I am, Mabrey caught me up and half carried half dragged me into the house, that severed, stinging, snakey think still wrapped around me. He flung me savagely on the floor of the living room, and hurriedly closed all the doors and windows. The snakey arm relaxed, and I got up, still in excruciating agony from that stinging, nettle-like embrace.

Immense slimy tentacles were sliding over the roof, exploring the walls, pressing on the window panes. The arm that held me was writhing on the floor, a viscous green fluid oozing from the severed stump. It filled the room with a musty, unclean smell—a sickening charnel odor, as if an ancient tomb had been desecrated.

*A large, sword-like knife used to cut wood, clear paths in the jungle and do other things.

"Your *machetes!*" shouted Mabrey. "Watch the window! It may break the glass!"

Scarcely had he spoken ere a window pane shattered —fell in a tinkling shower. A writhing green arm shot through the opening, touched Anita, and wrapped around her slender waist.

As she screamed in deadly terror and pain I sprang to her assistance. But she was jerked toward the window with incredible swiftness.

CHAPTER IV

In the Power of the Adept

I SWUNG my *machete* at the writhing thing that was dragging Anita toward the window. It moved downward as I struck, and consequently was only cut half through—green liquid oozing from the wound. Goaded to a frenzy by the cries of the tortured girl, I slashed again and again at the great green arm, not realizing that my second blow had bitten clear through, and that I was merely cutting the severed end to pieces.

The oozing stump was withdrawn through the broken window. Brought to a realization of what I was doing, I turned and found Anita swaying—about to fall. The relaxed tentacles had slipped from her, but I knew from experience the stinging wounds it had left. She was biting her lips—attempting to suppress her moans of agony. I caught her in my arms—spoke to her soothingly. And she sobbed hysterically, her head on my shoulder.

Suddenly I was aware of a change outside. The patter of the rain had ceased. The muttering of the thunder was dying in the distance. And the mighty tentacles no longer slithered and groped outside the cottage. Suddenly the moon appeared from behind a cloud, flooding the drenched mountainside with its soft light. A gigantic figure like a huge upturned, uprooted tree appeared on the rim of the crater, wobbled unsteadily for a moment, and then disappeared.

"It's gone, Anita!" I said. "The thing has gone back to its lair! We're saved!"

"I'm so glad," she whispered, "but I am hurt—terribly."

The professor had gone into the laboratory. In a moment he returned with bottles, gauze and cotton. After washing our smarting, itching wounds with alcohol, he swabbed them with mercurochrome. Presently I felt some relief, and Anita, plucky little thing that she was, declared that her pains were gone.

Pedro made coffee, which he served piping hot to all of us. Nobody cared to sleep, so we sat and smoked, sipping our coffee and discussing our terrible visitor.

The professor, of course, said nothing more about his theory of mass hypnotism. Nor did I have the heart to twit him about it. He had saved my life. No doubt his presence of mind in closing the doors and windows had saved all of us.

He examined the two green things that had ceased to writhe on the floor, except when touched. Then they showed startling reactions.

"They are hollow," he said, "with terminal orifices much like the mouths of anemones. The tubes are lined with cells that digest the creature's food, taken in through the orifices. The ectoderm—the outer skin—is dotted with the stinging nettle cells which can be employed either for defense or aggression. Without a doubt the thing is an ambulatory hydra—a gigantic individual belonging to the strange species we saw in the reservoir. Throw the filthy things out, Pedro. The stench is nauseating."

Impaling one of the green things on his *machete,* Pedro held it at arms' length, dragged it to the screen door and flung it outside. He returned for the other and handled it in a like manner, then closed the door softly and tiptoed back into the room.

"Seex men come!" he said excitedly, "over the hut. They get here een a minute!"

The professor, Anita and I hurried to the window. Clearly visible in the moonlight were six figures, poking about the ruins of the native hut. One, taller than the others and wearing a large feather crown, was familiar to all of us.

"It's Bahna," said Mabrey, "with five of his followers. No doubt he means trouble, or he wouldn't have brought all those men with him. See to your side arms, everybody. Don't start anything, but he ready to finish anything they may start."

I loaded my emptied forty-five. Pedro and the professor were similarly armed with forty-fives and heavy *machetes.* Anita carried a thirty-eight and a lighter *machete.* Our shotguns and rifles stood in a corner.

"You stand guard over those guns, Pedro," ordered Mabrey. "We'll use our side arms if attacked, and make a dash for the other weapons, but we don't want to appear hostile unnecessarily. It may provoke an attack."

We took seats and waited, tensely alert. The professor and I smoked our pipes. Pedro puffed at his inevitable cigarette.

The splashing of footsteps sounded on the rain-soaked ground outside. The screen door opened. There was the tramp of feet on the porch. Then Bahna stalked into the room, his features as expressionless and inscrutable as before. Behind him walked five Indians. Two took positions on each side of the door. The other remained standing in the doorway with arms folded.

The professor nodded pleasantly, as if such visits in the dead of night were of ordinary occurrence. He was an admirable actor.

"Evening, Bahna," he said. "Beautiful night after the rain. Won't you sit down and have some coffee?"

Bahna stared straight at the professor, his face expressionless as a moulded death mask.

"I warned you," he said, "of the wrath of Nayana Idra. You did not heed my warning. Had I not risked my own life to beseech him to leave, your lives would have been forfeit."

"And who," asked the professor evenly, "is Nayana Idra? I saw no such person."

"If you saw him not, then are you blind indeed," replied Bahna, "for he has carried one of your servants away with him, and another lies at the edge of the clearing, dead from fright. *He* looked upon the Divine One, and died."

"Perhaps you refer to the giant ambulatory hydra as Nayana Idra," said the professor. "We saw that, to be sure. If you prevailed upon it to leave, we are much obliged, as it is a disagreeable beast. But I was of the opinion that it had left because the rainstorm had ceased. Couldn't stay in the open air long, you know, unless the rain was falling. It would be dehydrated."

"I was about to warn you to leave, for the second and

last time," said Bahna, "but it seems that you have been prying into secrets that do not concern you. Under the circumstances, I can no longer permit you to go."

"Indeed!" The professor stood up. "Get this, Bahna. We'll come and go as we damn please."

"Fool!"

The Indian suddenly whipped something from beneath his clothing. It looked like a glass ampulla. With his other hand he drew a handkerchief from his pocket, held it over his nostrils. Then he shattered the ampulla on the floor. Instantly the air was filled with an acrid odor. Through a dim haze I saw the other Indians holding cloths to their noses. I tried to reach for my forty-five, but couldn't raise my arm. My senses whirled. The room, its figures distorted, seemed to revolve about me. Then I lost consciousness.

WHEN I came to my senses once more I was in total darkness, lying, bound hand and foot, on a cold, damp stone floor. My head felt as big as a balloon. Every muscle of my body ached as if it had been pounded. And recurrent waves of nausea added to my general feeling of unpleasantness. Someone was speaking in the darkness quite near me. I recognized the voice of the professor.

"Must have been a concentrated, highly volatile solution of some member of the hemp family in that ampulla," he was saying. "Possibly *cannabis indica* the stuff your people call *mirijuana,* Pedro."

"Ees damn' bad stoff, I tal you," said Pedro. "I feel lak I been dronk for whole year and the wild horse, she's jom all over me."

Then I heard the voice of Anita.

"Isn't that something like hashish, Uncle Charley?" she asked.

"It is hashish, or *bhang,* so called in the Orient."

Evidently I had been the last to recover from the torpor induced by the drug.

"A clever chemist, that Bahna," the professor was saying, when we were suddenly half blinded by an unexpected glare of light.

A door had been silently opened by an Indian. Just behind it was a room flooded with sunlight shining in through a large, iron-barred window. The Indian came in, followed by three companions. Each carried a *machete* with which he cut the ropes from our ankles. Then we were helped to our feet.

"Holy One send for you," was the curt remark of the leader. They led us away through the sunny room, and along a narrow hallway which presently opened into another room lighted by sputtering candles set at intervals in holders in the wall, and giving off a heavy perfume of cloying sweetness.

Seated on a glittering, jewel-encrusted golden throne on a dais at one end of the room, was Bahna, staring straight ahead of him, his features as inscrutable and expressionless as if they had been of graven bronze.

Our four conductors stood us in a row before the throne. Then they departed noiselessly, leaving us alone with Bahna. He addressed us collectively, his expression changeless.

"Twice," he said, "have you earned death, and twice has the great god, Nayana Idra, spared you. Nayana Idra seeks votaries, not corpses, therefore I, his mouthpiece, offer you a final opportunity to live. The Divine One can use all of you, alive and well—can bring happiness and greatness to all. Your scientific knowledge, Professor Mabrey, can be employed in his service. You might in time, become one of his adepts—help to spread his religion as it was spread before, and will be again, to the four corners of the earth. He could use your strong arm, Jimmie Brown, and yours, Pedro, to fight in his service. He requires a High Priestess Consort for his earthly vicar, such a one as Señorita de Orellana, with youth, culture and beauty. Make oath, all of you, that you will observe his commands as administered through me, that you will make no attempts to escape, and you will be admitted as honored members of our cult. I await your answers."

"You won't have to wait long for mine," replied Mabrey. "It's 'No.'"

"That goes for me, too," I said.

"And for me," said Anita.

"An' for me," said Pedro defiantly, "you can pliz go to hal."

"Perhaps," said Bahna, apparently unperturbed, "you will all be glad to decide otherwise when you have seen what you shall shortly see. For I swear to you all, that your fate shall be as the fate of the one who is about to die, if you persist in your folly."

He clapped his hands, and four Indians came in to take us away.

CHAPTER V

The Sacrifice

WE were conducted from the throne room to another smaller one, where our hands were unbound and we were given breakfast, while a guard, armed with a *machete,* stood over each of us. After breakfast our hands were bound behind our backs once more, and we were all very effectually gagged. Then we were taken to the sunny room through which we had passed some time before, and led up to the barred window. Looking down from this I saw that we were just above the place of sacrifice which we had observed the day before. The window through which we were looking had been concealed from below by the jungle growth.

Evidently a ceremony was about to take place, for the terraces were lined with what appeared to be four orders of priests, from neophites to acolytes. Bahna, the adept, was nowhere in sight. Just as the sun reached the meridian, the priests began chanting a somber, dirge-like melody in a minor key, to the weird accompaniment of drums and reed instruments. This chant kept up for perhaps five minutes. Looking around, I saw that the shores of the lake were lined with thousands of spectators, who must have been drawn from a large part of the surrounding territory.

The chanting suddenly ceased, and eight acolytes stepped forward, blowing conch shells. The din was terrific. The other priests were shouting something in which I could catch, from time to time, the word "Nayana Idra." I judged from their manner that they were crying a summons to their snakey god. Suddenly I saw, waving above the water, writhing and twisting in their green and menacing ugliness, the tentacles of the gigantic hydra.

All noise ceased as if at some secret sign, and standing in a wisp of curling smoke on the top terrace below me, apparently materialized from nowhere to this spot directly in front of the great engraved stone, I recognized the tall form of Bahna, attired in brilliant ceremonial

robes and wearing a hideous mask. Beside him stood an Indian maiden, naked save for an extremely short apron of plaited sisal, and some jeweled breast ornaments. Her head was covered by a black cloth hood, and to her hands, which were bound behind her, was tied a heavy, grooved stone that must have weighed at least twenty-five pounds.

As Bahna advanced with slow, measured steps, the priests began a soft, weird chant. Descending the terraces, he guided the girl, who was not only unable to see because of her black mask, but from her automaton-like movements, was either under the influence of some drug or hypnotism.

When the High Priest and his victim crossed the bridge and neared the altar steps, the chanting increased in volume. Drums, reed instruments and conches once more added to the din. The volume of sound was terrific—almost ear-splitting when, after mounting the steps, priest and sacrifice reached the top of the altar.

Bahna led the girl out on the stone which projected over the water. For a moment he stood there looking down at the writhing green arms below. Then there was a quick, outward thrust of his arm, the flash of a brown body in the air, and a boiling and seething of the water for a moment after it disappeared.

Scarcely had the boiling subsided, ere the high-priest himself, holding his hands for a moment above his head, dived straight down into the water.

I was astounded—mystified. It seemed to me that this was nothing short of suicidal. But then I was not, as Professor Mabrey had previously remarked, conversant with the complex ramifications of savage cunning. It was an act which was capable of producing a powerful effect on the minds of the watchers—would prove to them that Bahna was really friendly with this terrible god—if Bahna should later reappear before them alive.

The din continued. Suddenly I was aware that Bahna was again standing in a cloud of smoke on the center of the top terrace before the graven stone plate. His costume and mask were as dry as they had been before he took the plunge into the water.

The weird music ceased. But there went up from the throats of the watchers a great cry of applause.

Bahna removed his mask. Then holding his hands aloft, he stilled the shouting of the multitude and addressed them in a language which I was unable to understand. They listened silently—raptly. It was plain that he had tremendous power over these simple people.

Then our Indian guards led us away from the window, removed our gags, and confined us once more in our lightless prison.

For many hours, during which time we slept once and were fed twice, we were left to discuss and meditate on the threats of Bahna, there in the darkness. Then the door opened once more and four Indian guards came in to escort us away, our hands still bound behind our backs. They led us along the familiar route to the throne room. After conducting us before the throne, they left silently.

His features inscrutable as ever, Bahna surveyed us all. Then he clapped his hands.

From a doorway at the right of the throne, a door opened, and marching stiffly erect between two Indians, his hands, like ours bound behind his back, there entered a short, black-bearded, brown-eyed man of professional aspect, with thick-lense glasses.

"Dad!" cried Anita.

"Anita, mia!" he answered, "and Charlee, *amigo!* I feared you would come, but could not warn you."

"It's all right, old pal," said the professor. "We'd have come anyway, warning or no warning."

And so I knew that this man was Anita's father, Dr. Fernando de Orellana.

Bahna raised his hand. The two men who were leading the doctor, whirled him about and marched him out of the room. When the door had closed behind him the man on the throne spoke.

"Señorita de Orellana," he said, "I have permitted you to look upon your father, alive and well. If, by high noon today you have willingly become High Priestess of Nayana Idra, which is the greatest honor I can bestow upon you, your father will still be living and unharmed. If not, then will he suffer the fate meted out to the girl in the black mask at high noon yesterday, and you, willing or unwilling, will have become my slave and handmaiden.

"My people have demanded your death—have said that by raiding your camp Nayana Idra signified his desire for a white girl. But I, the mouthpiece of the great god, can tell them it was a white man they wanted. It is thus that I can save you. And as I have four white prisoners, any one will do for the sacrifice. I will permit you to choose which of these men shall live, and which man will die. One must be sacrificed at high noon, today.

"You have had sufficient time since yesterday to think this offer over. Now let me have your answer."

"My father! You would sacrifice him if I should refuse to become your High Priestess?"

"If you do other than consent now, there will be no hope for him."

"And if I do consent, only one of the others will die? You promise me that?"

"I promise that."

"They are all my very dear friends. They have risked their lives to come here with me, to search for my father. Spare me all their lives, and I consent."

"You ask too much, *señorita.* I cannot disappoint my people."

"Then I refuse."

"Think of your father."

"I refuse."

"Very well. Your refusal is his death warrant, and you are my slave. When my flock has grown I will have many beautiful white slaves, though none, I swear, so beautiful as you."

He stood up and slowly drew a jeweled dagger—the only weapon that he carried—from its hilt in his sash. Then he descended the dais, while we watched him tensely, wondering what he was going to do.

My heart leaped to my throat, and I stood tensely, ready to hurl myself at him, bound hands and all, as he stepped up before Anita. He looked down at her for a moment. Then he spun her around, and cut her bonds.

"You are one slave I will not find it necessary to bind, little dove," he said, "although I shall probably have to cage you."

He replaced the dagger in the sheath, took both her little hands in one of his, and with the other chafed her wrists.

"You will not find me an ungentle master," he said. "When you have learned obedience."

Anita suddenly withdrew her hands, held one to her eyes, and swayed slightly, about to fall. Bahna quickly caught her in his arms.

"Let me go!" she cried weakly. "Let me go! I can stand!"

He released her, his mask-like features as inscrutable as ever.

"Very well," he replied. "You are coming with me now, willingly or unwillingly, as I decreed. I hope it will not be necessary for me to use force."

"It will not be necessary," she replied, "if you will first permit me to bid my good friends farewell."

"Do so," he said, "and quickly."

She came and stood before me, looked up into my eyes and put her arms around me.

"Good-bye, Jimmie," she said. "You have been a good and true friend."

"And you have been a brave and wonderful little pal," I replied, feeling, at the same time, something cold and sharp against my wrists. A slash, and they were free.

"Stand thus for a minute," she whispered. Aloud she said: "I'm glad, so glad to have known you, Jimmie, and to have been a wonderful pal. I'll always remember. *Adios!*"

"Adios!" I replied, still holding my hands behind me. I saw that during her apparent fainting spell she had secured Bahna's keen dagger and slipped it up her sleeve.

The High Priest evidently did not suspect her.

She went to Mabrey next, repeated her farewells, and with her arms around his lanky form, cut his bonds.

Then she stepped before Pedro.

"What!" said Bahna, losing his inscrutability for a moment, "Do you embrace a servant?"

"A faithful servant, yes."

It was then that he suspected, missed his dagger, and saw through the trick. With a snarl like that of an enraged animal, he leaped toward her. Whereupon I sprang in front of him to bar his progress.

"Fool!" he mouthed, and clapped his hands. But this action left his jaw exposed, and I swung in a right hook with all my weight behind it.

It floored him, but he was up in an instant, and I found him no mean antagonist. He was not only a boxer, but was evidently familiar with wrestling and jiu jutsu as well. Before I had any intimation of what he was about he had seized my wrist, dragged it across his shoulder, and heaved me over his head with all his enraged strength.

As I thudded to the floor, he leaped toward me. At the same time four Indians brandishing *machetes* rushed into the room.

"Surrender, fools," called Bahna.

Anita had just cut Pedro's bonds. He had the dagger. It flashed outward from his hand, and the foremost *machete* wielder went down, coughing bloody bubbles—his throat transfixed.

With a single bound the professor secured the *machete* of the fallen man. And Pedro, at his heels, retrived the dagger. I leaped to my feet, but was met by Bahna. His strong, wiry fingers seized my throat, pressed down on my windpipe. Black specks danced before my eyes. I tried to shake myself free, lashing out blindly with short rights and lefts to the body of my foe.

But the fingers closed relentlessly. I felt my senses leaving me.

CHAPTER VI

The Last Sacrifice

IT was the voice of Anita that recalled me to my senses. Otherwise I would have gone down beneath the choking, vise-like fingers of Bahna, never to rise again. My short-arm body blows, it seemed, had begun to take effect. I felt my opponent weakening—his fingers slipping from my throat.

Shaking myself free, I mechanically applied a hold, which had always been one of my favorites in wrestling—the crotch and half-nelson. With the tremendous leverage which it gave me, I easily swung the High Priest aloft, then crashed him to the floor, falling upon him in order that the breath might be knocked from his body.

Still able to see only my antagonist, and without heed to my surroundings, I was surprised when, as we struck the floor together and I slid forward, my head encountered the body of another man. Bahna went limp, and I lay there panting for breath, waiting for my vision to clear.

My sight came back to me presently, and I was able to breathe without rattling my palate against the roof of my mouth. Then I saw that Bahna had fallen upon the outstretched arm of the Indian whose throat had been transfixed by Pedro's dagger. Anita was bending over me, pulling ineffectually at my shoulders in an effort to help me up.

"Come," she said, "his back is broken. Bahna is dead."

And so there passed the brilliant mind of the High Priest into the knowledge of that eternity of which he and his kind professed to teach, his back broken by the outstretched arm of his fallen servant.

I stood up, swaying like a drunken man, while Anita steadied me, her arm around my waist. Pedro and the professor, their *machetes* dripping, were reconnoitering at the door through which the doctor had been taken. The three remaining Indians lay on the floor in pools of their own blood. A *machete* is a messy weapon.

"Can you walk, Jimmie?" asked Anita. "We want to look for Dad."

"Sure can. Give me one of those meat axes."

She pressed a blood-stained *machete* into my hand. We were all armed, now, Pedro, in addition to a *machete*, carrying the dagger with which he could do such deadly execution.

With Mabrey leading the way, we crept off down the unexplored passageway along which Dr. de Orellana had been taken. Upon rounding a bend, we came suddenly upon an Indian guard. The professor leaped forward to attack, but Pedro's dagger flashed, its deadly work completed before the guard could even cry out or draw his weapon.

He slumped in front of a doorway before which he was evidently doing sentinel duty. We entered, and found ourselves in an immense, splendidly equipped laboratory. Chained to a table before which he was working with test tubes and retort, was the doctor. And near him, *machete* in hand, stood the other guard.

The doctor and Indian both saw us coming at the same time. The guard opened his mouth, about to cry out, when the little man at the table hurled the contents of his test tube into it. Strangling and coughing, the Indian raised his weapon to put an end to his prisoner,

but before it descended, the professor's blade split his head open and he fell to the floor, dead.

We found the keys to the doctor's chains in his pocket and quickly released him. In turn the doctor embraced his daughter and his friend. Then Pedro and I were presented.

The doctor greeted us cordially, with all the courtly dignity of the Spanish gentleman. Then his leisurely manner vanished.

"We 'ave moch work to do, *amigos*," he said. "Two things there are, which must be accomplished. Thees monster must be keeled, and then we must escape the superstitious natives who are assembling to see the sacrifice. Weeth the help of my frien', Charlee, eet can be accomplished, but I must be in command.

"You, Jeemie, weel take Anita up to the observation room where you weel see the last sacrifice. Charlee and Pedro weel be my assistants."

I took Anita up to the room from which we had watched the last ceremony, after the doctor had insisted that I would only be in his way, and that it would be necessary to do some things which it would not be pleasant or seemly for Anita to witness.

As the sun reached the zenith there was a repetition of the ceremony we had witnessed the day before. The waving green arms of the hydra appeared again, amid the din of conches and the shouting for Nayana Idra. Then the noise ceased, and I was startled to see, standing in the thinning smoke screen where Bahna had stood the day before, someone of his precise height and build, garbed and masked in his ceremonial accoutrements. This time, instead of leading a native girl, the High Priest appeared to be half dragging, half carrying the body of a white man, dressed in the clothing of the professor and wearing the black hood over his head.

It was only because I knew that Bahna was dead, that I was able to discern that the professor was dragging the body of the High Priest. Make-up and acting were so clever, however, that Anita was deceived into thinking that Bahna had come to life. With a cry of horror she clutched my arm.

"Quick! We must save him!"

I reassured her, whereupon she relaxed in the hollow of my arm, and, in the pleasure of her sudden nearness, I almost forgot to watch the ceremony.

Exactly duplicating the exhibition of the day before, the professor hurled the limp body to the monster that waited to receive it in the water below. For a moment he watched it disappear in the pellucid depths—then dived exactly as the priest had dived. A short time later he reappeared in a puff of smoke, dry-clad, on the rock below us, spoke a few words to the multitude, and dismissed them. Then the smoke arose around him once more, and when it floated away he had disappeared.

Anita and I hurried through the throne room into the laboratory. There we found the professor, the doctor, and Pedro.

"How did you do it, professor?" I asked.

"My part was easy," replied Mabrey. "After we had prepared the body and dressed it in my clothing, I put on the make-up and stood with it in the revolving door—the one that looks like a carved slab cut into the crater wall. A puff of smoke, a quick turn, and I stood outside at the correct moment. After feeding the hydra, I waited for it to sink out of sight, then dived and swam back through the opening which leads back under the altar and into the laboratory. Here I made a quick change, putting on dry raiment that duplicated what I was wearing, and once more reappeared. I spoke a few words and made a few passes that the doctor had taught me, then disappeared by means of the smoke and the revolving door.

"You may be surprised to know that the monster was not called by the conches nor the yowling of the priests, but by tapping two stones together under water in the underground stream that communicated with the lake from the laboratory. It had been trained to respond to this signal by using it each time it was fed.

"But it was the doctor who was the brains of the whole thing and who made everything possible. He can explain the facts of our coup better than I."

"Knowing what I know it was ver' simple," said the doctor. "First I tal you about thees Bahna. He ees well educated and ees really a descendant of an ancient race of priests—a cult that existed all over the world in olden times. In India it worshiped Narayana, the divine one, creator of all things. Narayana is pictured as a seven-headed serpent.

"In Greece it worshiped the Hydra. Nayana Idra is evidently a corrupted combination of the two words, Narayana and Hydra, used on this continent by the old adepts whose game was stopped at this place by the advent of the Spaniards. Bahna is a contraction of Bab Narayana, or the gate, or door to Narayana—in other words, the way to God.

"Thees Bahna was perhaps the only one in the world who knew the inner secrets of the old cult. How he learned them, I know not. Perhaps he succeeded in doing what I tried to do—deciphering the old rock inscriptions, so cleverly conceived and executed that they have one set of meanings for a neophite, a second more secret meaning for an acolyte, and a more secret symbolical meaning for an adept—a man of the inner circle.

"They were clever biologists and chemists, those old adepts, although weeth the cleverness was meexed a certain amount of superstition.

"They learned, somehow, that eef a certain ambulatory hydra were immersed in a solution of ipecacuanha and other herbs in just the right proportion, and later removed to pure water and well fed, its growth limitations would be removed, that ees, it would continue to grow as long as it continued to live and feed, like a reptile. Of course many of the hydras immersed in the solution died, but they believed that when one survived and began to grow, the soul of Nayana had entered into it, and that the great god was thus assuming physical shape.

"I was learning these things by experimenting with the hydras from the reservoir, and by deciphering the inscriptions. Bahna discovered this, and as I knew too much for his safety, captured my servant and me one evening, as he was putting my meal on the table, by putting us to sleep with a glass bomb. My servant was fed to the hydra, but because of my scientific knowledge I was kept a prisoner to help the adept in his work."

"How did the solution remove the growth limitations of the hydras, doctor?" I asked.

"It seems to 'ave operated by atrophying the gonads, which are situated in the ectoderm, either destroying or modifying their hormones. This type of hydra is hermaphrodite and does not bud or multiply by fission, so naturally its reproductive functions are stopped by this treatment. Reproduction begins when the limit

of growth has been nearly attained in the normal creature, but by destroying the normal functions of the gonads, reproduction is eliminated, and growth continued indefinitely.

"Having found a way to construct so awful a god, it was necessary for the adepts to find a way to destroy it when it had sufficiently terrified and subdued the populace to give the priests undisputed power. This was done, I found, by filling the body of a victim with a solution of aconite, which was deadly to the monster. Bahna, however, was a modern scientist, and obtained, I found, a large quantity of refined pseud-aconitine, the most deadly poison known to science. It was this poison which he intended to use in one of his victims after the people in this neighborhood had been properly subdued and he was ready to destroy the monster. Weeth the help of Charlee and Pedro, I injected it into the hydra's veins after draining them of blood. My friend Charlee dismissed the people so they would not discover that their terrible god had been killed, or that any deception had been practiced on them, thus paving the way for our escape. Let us go and see if the poison has worked."

We went back to the observation room and looked out. The crater was entirely emptied of human beings. And floating on the surface of the water, moving limply up and down with the waves that rippled across the lake, was an enormous green tangle—the limbs that had once walked in the rain, terrorizing the countryside. Thousands of fish, of many sizes and varieties, were tearing at them with such voracity that it was evident they would soon disappear.

"Mahna ees dead," said the doctor, "and his man-made god died weeth him. So ends the chapter. But you, Jeemie, who are so full of questions, permit me to ask you one. Why ees it that you and Anita stay so closely together, your arms around each others?"

I'm sure my face turned three shades redder than was its normal wont. But Anita snuggled closer, reassuringly.

"You are so good at deciphering mysteries, doctor," I said. "Why not figure this one out?"

Whereupon, reading the consent in her starry eyes, upturned to mine, I kissed her full upon the lips.

"Por Dios!" exclaimed the doctor, his arms around us both, "I geeve up! The man who can explain the mystery of love has not yet been born!"

THE END.

What Do You Know?

READERS of AMAZING STORIES have frequently commented upon the fact that there is more actual knowledge to be gained through reading its pages than from many a text-book. Moreover, most of the stories are written in a popular vein, making it possible for anyone to grasp important facts.

The questions which we give below are all answered on the pages as listed at the end of the questions. Please see if you can answer the questions without looking for the answer, and see how well you check up on your general knowledge of science.

1. Describe a stegosaurian. (See page 1065.)
2. To what geologic time do the stegosaurs, the giant saurian reptiles belong? (See page 1067.)
3. Were stegosaurs carnivores, or did they subsist on the profuse vegetation of geologic eras? (See page 1067.)
4. Describe the gigantisaurus Africanus. (See page 1067.)
5. Describe a triceratops. What was one of its distinguishing features? (See page 1078.)
6. How can premonitions be explained by an appeal to natural mental operations, rejecting the supernatural? (See page 1078.)
7. Is delirium common in cancer cases, and in which kind of such cases may it be looked for? (See page 1116.)
8. Is cancer ordinarily considered contagious? (See page 1118.)
9. How can you test for electric potential with an electroscope? (See page 1118.)
10. What theory has been held by some geologists about radio activity in the earth? (See page 1138.)
11. How many fresh water hydropolyps are known in America? What are their names? (See page 1127.)
12. Are there more than one salt water variety? (See page 1127.)
13. Can you give a theory about the racial origins of the American Indians based on their physical characteristics principally? (See page 1129.)
14. What explanation is sometimes given of the Hindu rope trick and growing rose, the celebrated tricks in magic attributed to the magicians of India? (See page 1129.)
15. What is a machete? (See page 1130.)
16. What may be taken as the indication of death? (See page 1140.)
17. What difference may exist between a death by violence and one by sickness, between the death of a healthy man and of an invalid and why may such difference be inferred? (See page 1140.)
18. What are the functions of the blood? (See page 1141.)
19. What is the principal feature and what is the use of Mariotte bottles, the well-known chemical appliance? (See page 1142.)

The Evolution of an Ace

The First Fancy

A wee lad watched, one summer day,
A brilliant oriole on its way,
A brown bee homing with its loot,
A wasp that flew from fruit to fruit.
"What fun," he cried, "what fun to fly!
Oh, if *I* could! *Sometime I'll try.*"

Discouragement

A youth strolled through a fern-sweet glen and cool,
Beside a limpid brook made dreamy pause.
Splendid in azure and in glistening gauze
Hovered the dragonflies above a pool;
Kingfishers swooped to harvest from a school
Of lively minnows—rose with laden jaws.
"Strange—" mused the stripling, "curious how the laws
Of flight still circumvent us. Man's a fool.
Hundreds of years we've watched and longed. We boast
Ourselves creation's lords. A moth, a gnat
Knows more than we do. See that buzzard coast!
Maddening—his ease—to soar and glide like that!
But has man ever done it? Never once.
The smallest midge outdoes him. Man's a dunce.

Success

Came years of slow experiment,
The constant urge, the smouldering fire
Of purpose. Then—the wonder wrought!
The bright shape of a long desire.

A distant humming in the sky—
A flash of wings upon the blue—
A graceful turn, a dip, a rise—
A speed no condor ever knew.

A miracle too frequent now
To win more than a casual glance,
When two decades ago to fly
Seemed the far goal of rich romance.

Soon common as the swallow's dash,
The linnet's drop from bough to bough,
Will be the soaring plane, nor cause
The bored pedestrian to pause,
The laborer to check his plough.
And man, to his ambition true,
Will turn his mind to conquests new.

Julia Boynton Green

The Earth's Cancer

By Capt. S. P. Meek, U. S. A.

(*Continued from page* 1123)

Dr. Bird strove to lift the detective, but his strength was not equal to the task. He lowered the detective again and a soul-shaking sob of sheer agony broke from the tortured man's lips. With a sigh, Dr. Bird again bent his muscles to the task. Another groan came from Carnes and he relapsed into a dead weight.

"He's fainted," muttered the Doctor after a brief examination. "It's a good thing. I'll have to drag him."

He dropped on all fours and hauled the unconscious detective's body up on his back and started the long crawl back towards the car.

Foot by foot with infinite torture and Herculean efforts, the Doctor won his way forward. The grass had been beaten flat by the force of the explosion but the path showed plainly to guide him. Foot by foot and yard by yard he crawled with rapidly failing strength, now half carrying and now dragging the unconscious Carnes. Night had almost fallen and he sobbed with weakness and despair at the thought of spending the night in the open with his stricken companion. Again and again he stopped to rest and at last after a hundred-yard drag he collapsed in a heap.

"I guess I'm done," he muttered to himself.

After a rest he strove to renew his progress, but his tired muscles refused to obey his will and he sank back in a lethargy of helplessness. A sound, faint and far-off brought his head up with a jerk He listened intently and gave a sob of joy as the sound was repeated. Far-off and faint it was, but it was unmistakable. It was a hail in a human voice.

With fumbling fingers he unbound and raised his helmet and expended his last strength in an answering hail. A reply came back and in a few minutes the sound of footsteps making their way across the leveled vegetation could be heard. An electric flash stabbed its way through the gathering dusk and a searching party headed by Dr. Albright came into view. With a feeble cry, Dr. Bird directed the searchers to him.

"What on earth, Doctor?" exclaimed Albright in dismay. "What happened?"

"Can't tell now," mumbled Dr. Bird. Carnes is hurt, I'm tired—take us home—need——"

His voice trailed off into silence.

FIVE days later, Dr. Bird, to all external appearances none the worse for his adventure, sat by the side of the bed where Carnes lay with his leg in splints.

"This is the first time you've been able to see anyone, old dear," he said. "I'll never forget what you did for me. You saved my life!"

"We're quits, Doctor," replied Carnes with a grin. "You saved mine when you dragged me out."

"Oh, *that!*" exclaimed the Doctor. "That was nothing, but you deliberately gave up your chance of escape and ran your head into a noose——"

"Oh, *that!*" mocked Carnes. "That was nothing."

Their eyes met and then their hands. Dr. Bird coughed suddenly and turned away.

"Doctor," said Carnes after a moment of silence. "What was that pool?"

"To the best of my knowledge and belief, Carnes," replied the Doctor, "that was a pool of molten metallic radium. I suspected something of the sort when I first began to study this case in Washington. There has been a theory advanced by certain physicists for a number of years that the interior of the earth contains a very large amount of radioactive material and I believe that the eruption of Cinder Cone last year threw some of this material to the surface.

"Radium, as you probably know, throws off three distinct kinds of rays; the alpha rays which are atoms of helium gas, the beta rays which are electrons, and the gamma rays which are a true ray, a wave-motion of very short wavelength. When I took samples of the air at various points I was looking for helium gas. I can't make a quantitative analysis until we get back to Washington but my spectroscope shows the gas present in each sample in larger than normal amounts.

"I detected and measured the beta rays by means of the electroscope. The beta rays ionize air and make it an electrical conductor so the charge of the electroscope leaked off in proportion to the concentration of beta rays in the air. They were also the cause of the missing of our motor and the cause of the wreck of the plane. The air became a conductor instead of an insulator as it usually is and the spark failed.

"It was the gamma rays which played havoc with the people and the vegetation. As I told you some time ago, cancer is not a germ disease. It is an abnormal growth of giant cells; growth run wild. It may be caused or induced by several of the shorter rays. X-ray burns have been known to develop into cancerous growths and there a number of instances on record of radium burns having done so. These facts gave me an inkling of the truth of the matter and I had those lead suits and those helmets with lead glass windows prepared before we came. Lead is the material which is most nearly impervious to the gamma rays of radium.

"When I saw those lights, so typical of radioactivity, I was more than ever convinced of the correctness of my theory and so gave up the idea of exploring by plane and decided to try it on foot.

"As to what happened at the pool when the last rush came, I was puzzled for several days but I think that I have the answer. You remember that the explosion was initiated by a grenade which you threw into the pool? Well, that grenade was loaded with a new explosive of mine, radite, which contains a small amount of radium, which, by its atomic disintegration, adds greatly to the effect of the explosion. I am convinced that the detonation wave which the grenade started, set off the entire pool, which would account for the terrific disruptive effect which we witnessed."

"I always thought that a little radium would blow up the world," exclaimed Carnes. "That pool must have contained tons of it."

"I fancy that it was a pretty thick skin which lay on top of some other substance—possibly some form of dense lava," replied Dr. Bird. "Further, I have no

idea that a complete atomic disintegration took place. Radium in its breakdown eventually degenerates into lead and I fancy that that was as far as the breakdown went. Lead is a pretty stable substance. On our way back we passed through the glade where I was captured and I picked up two of those pieces of radium which they applied to my body and brought them with me. They are in a heavy lead box now and I'm going to examine them when I get back to Washington and have the proper apparatus. If they turn out to be radium, we're millionaires, Carnesy, old dear."

"I hope so, Doctor. Much obliged for the explanation. I understood some of it."

"I'm glad you did. Now, if you please, explain something to me. Here the other night, you were immensely attracted by those lights while I kept my head, yet at the pool I succumbed to their influence while you did not. How did you manage it?"

"Why, Doctor," exclaimed Carnes in surprise, "I merely obeyed your orders."

"My orders?"

"Yes. All the time I was near them I kept repeating the multiplication table."

THE END.

On Board the Martian Liner

By Miles J. Breuer, M.D

(*Continued from page* 1089)

Cecilie May was hanging on to Flynn's arm. Mr. Johnson fired a few rapid questions at both of them, and in the twinkle of an eye had all their intimate secrets out of them.

"I need a man to put in charge of the repair station for space-liners on Mars," he said to Flynn. "It is an out-of-the-way place, but it has in the past been a good stepping-stone to better jobs. The position is yours. Bless you two young people."

Kaufman raised his eyebrows.

"So, here's where I'm left without a secretary," he said. "But since it has happened this way, I guess I'll take it cheerfully. Here's a litle wedding present."

He wrote out a check and handed it to the confused and blushing Cecilie May.

A sailor stood in the door, saluted the Captain and announced the following:

"The lookout reports that Syrtis Major is visible through the front port. We ought to land in about four hours!"

THE END.

In the Realm of Books

Mostly Scientific Fiction

Tarzan Again

"Tarzan at the Earth's Core," by Edgar Rice Burroughs. *Published by Metropolitan Books, Inc., New York. $2.00.*

TARZAN, the well-known figure created by Mr. Burroughs, and beloved by thousands of Tarzan fans, embarks, in this story on one of the most barbaric adventures ever told. One Jason Gridley comes to the African jungles, Tarzan's abode, and persuades him to join an expedition to Pellucidar, the land located inside the earth, the land where time, as we measure it, is stationary, the land once dominated by the Mahars, fierce dragons, whose power was broken by Perry, an American adventurer and the discoverer of Pellucidar. Perry, who has made himself Emperor of Pellucidar, is now held captive by the bloodthirsty Korsars, one of the many strange races dwelling there, races engaged in constant warfare with one another and always forgetting the strange monsters overrunning Pellucidar.

Gridley's tale holds a promise of copious adventures, so Tarzan collects his Wazien braves and they finally embark upon a dirigible and head north.

They find the North Polar opening, long known to fantastic fiction as "Simms Hole," and soon they find themselves in strange Pellucidar. Orientation to upper surface senses is impossible and the various exploring parties get lost promptly and thoroughly. Even Tarzan, jungle-bred as he is, cannot find his way about with accustomed surety and he is finally captured, first by Sagok's, a tribe of half apes and makes his escape, only to be recaptured by another tribe, somewhat higher in the Pellucidiarian scale of evolution.

Gridley, who set out in a plane to search for Tarzan is attacked by a Pterodactyl and crashes. His plane is wrecked and he meets with a beautiful girl, Jana, known as the Red flower of her own tribe.

Tarzan in the meantime has made his escape, but is carried off by another Pterodactyl, which he kills with his bare hands.

Jana and Gridley become separated and are finally captured by the Horibs, a tribe of humanlike reptiles, which walk upright and are endowed with speech.

It might be opportune to mention here that this matter of speech is one of the few saving features in an otherwise very unfriendly world. They all talk the same language so that the Horibs, the reptile people, can converse with the Sagota, the ape man.

And so the story moves on, at a terrific pace; there are enough adventures to satisfy even the most greedy. One terrific combat follows another in rapid succession, and so do the various escapes. The story is crowded with continuous thrills, which wind up in the rescue of Perry from the Korsars.

As a fitting climax, Gridley and Jana are united in love and the story comes to a happy end. The story is fascinatingly fantastic, it teems with high speed action, and is a thriller—super-adventure story extraordinary.—*C. A. Brandt.*

The Doctor's Experiment

By Allan Strathglass

GANGLAND feels secure in the knowledge that "dead men tell no tales." That is why the "associate" who gets to "know too much" comes into everlasting and constant danger of his life. But, judging from the reports of recent experiments, even the above truism seems due for a possible change in the future. Our new author uses this possibility very ingeniously to solve an exceedingly baffling problem and gives us an absorbing story of scientific fiction.

PROFESSOR JAMES ANTON ANSTRUTHER was immersed in study when I entered his laboratory. He hardly noticed my entrance, but as the door slammed, motioned me to his side.

"Look!" He pointed dramatically to the operating table.

On the table was the carcass of a rabbit, headless. The whole breast was laid open, exposing the heart and lungs. Although the head of the little animal was two feet away, the heart was beating regularly, and the bloated lungs could be seen rising and falling as if in normal respiration. Attached to the left carotid artery was a tube leading from a large bottle containing a saline solution, which was allowed to dribble into the artery, through the arterial system and out by the other carotid.

"Well, what of it?" I asked. "Every medical student has seen the same thing. It's merely the well-known 'Sherrington' preparation."

"Granted," he answered. "But substitute a man for the rabbit! And take the body from the head, instead of the head from the body!"

"My God! Man, that's *murder!*"

Anstruther merely grinned.

"Do you want the police on our trail again?" I was aghast. "We had enough publicity and trouble the last time."

I referred to a gland transplantation operation that Anstruther had performed some months previously on a millionaire contractor who was on the verge of senility. Of course the old man died a few days after a seemingly wonderful case of rejuvenation; just as Anstruther knew he would! For the professor was an eminent physiologist, and knew from the start that the brittle arteries of the aged patient would never stand the increased blood pressure resultant on the operation. The trouble was that Anstruther admitted just this on the witness stand at the inquest demanded by the contractor's son—who had a holy horror of Anstruther. There were some rather nasty things printed about the eminent physiologist and his assistant. I was the assistant. Hence my reluctance to be implicated in any more of his schemes.

"Don't be so damned squeamish," he replied. "I need some cash right away, and I'm out to get it."

I shuddered as I recalled the man's previous words: "Substitute a man for the rabbit!" Good God, what did he intend to do this time?

"What in the world is the idea?" I almost yelled.

"Now, now, don't get excited," he droned away in his cool, even tone. "This little experiment has given me an idea and I was also wondering how long a man lived after he was dead . . . that is to say, after his heart was stopped and some dumb physician had pronounced him dead. . . . You know true death does not take place until after *rigor mortis* sets in; most cells of the body are alive until the toxicity of their stagnant by-products kills them. Hence death cannot really take place for some time; now a man killed by violence will probably remain alive (that is, his cells will) for a longer time than a man dying of sickness. Because a man dying of sickness will not have got rid of the waste products of cell metabolism as well as the man in health . . ."

I interrupted him.

"Say, Anstruther, what are you driving at, anyway?

Any physician knows that. But here and now, I want to warn you that if your proposed monkey business gets us in a mixup with the police, or even threatens it, you can count me out."

He ignored the interruption.

"As I was trying to say, it ought to be easy to revive a man up to almost the onset of *rigor mortis*. Now if we had a man who had been pronounced 'dead,' say, less than half an hour previously, it ought to be easy to bring him around by using the Sherrington idea. . . . Of course, he might not live very long—that depends—but we could keep him going for a few hours. . . ."

"You're crazy!" But my mind was relieved a little. Apparently he had not any intention of murder, but his scheme, I felt sure, was devilish just the same. I was right as events later proved.

"Bah!" Anstruther was getting annoyed. "You have no imagination whatever. Now if we wanted information from this 'dead' man . . . say, information as to his feelings after death . . . or where he went. . . ."

He grinned sardonically. His mood underwent a sudden change.

"Yes! I need the money, too."

"I fail to see how you can get money out of a scheme like that. Unless perhaps you wrote a book about it, and then no one would believe you. And you know how much financial return text-books bring in."

"Oh, yes, good idea, that of writing a book. May do it after the experiment is over."

"You don't mean to tell me that you intend to pull off any crazy stunt of trying to revive a dead man for his money, do you?"

"Why not? I won't kill him. Let someone else do that."

"I said before I believed you were crazy. Now I *know* it."

"Listen, Stewart. You only *think* you know it. I want to ask you a question; then you'll see my theory is correct at least."

"Fire ahead—your *theory* is always correct."

"What are the functions of the blood?" he demanded.

"Simple enough—three to be exact. The red blood corpuscles carry oxygen to the tissues, allowing the individual cells of the body to breathe; food is carried to these same cells by the blood plasma, which also carries away carbon dioxide and other waste material for elimination."

"Fine—you ought to write a text-book about it," he sneered. "Now what is to prevent us from introducing a saline solution to take the place of the blood, into the arteries of one side of a dead man's head and allowing it out on the other? If we keep up the required pressure and inject a bit of oxygen into the solution, there is no reason on earth why we shouldn't be able to revive a man and keep him, or his brain, anyway, active for a few hours at least!"

I was floored. I had to admit the logic of his statements.

"Even if it *could* work out as you say," I asked, "how would *that* bring you in any money?"

"Aha, my boy, that's the point. But leave it to me to have that figured out."

HE ceased speaking for a few moments. My head was in a dizzy whirl as I contemplated the idea of such an experiment as the doctor had outlined. Such a thing had probably never been tried in the history of the world, although I had in my library a summary of numerous similar attempts made by French surgeons during the reign of the Louis' when they were given the living bodies of criminals for experimental purposes. They often attempted resuscitation after killing their subjects under the torture of the scalpel. The details of these experiments are too horrible to dwell on—no one but a sadist could take any pleasure out of them.

How had this man become so perverted? I looked at him, taking in every detail of his handsome frame. Tall, dignified, immaculately dressed, he seemed the personification of culture and refinement. Why had he sunk so low as to contemplate such an experiment—and for money! I knew he was not very well off; still, his salary as professor of physiology in the State University was $6,000 a year, surely enough to keep a single man alive and fairly well fed. Or was the mention of the money merely a blind to deceive me? Perhaps the fascination of such an idea drove him to so wild an attempt. Perhaps he wanted to make his name even better known to his medical confrères, whether he was successful or not; the medical societies of the world would accept his findings on his word; it opened up a vast field for speculation.

And whether his work was shocking or not, medical men in general were getting used to his gruesome experiments. Why he shocked the whole bunch of us one night by telling how he had waited at the bedside of a dying man, so that he could take out his eye immediately after the heart stopped and before any changes could take place; his slides of that eye are now one of his most cherished possessions. I often shudder when I look at them today, especially in view of his belief that consciousness does not terminate immediately after the heart stops, but may keep on for some seconds thereafter. Professor Anstruther maintains that consciousness cannot cease until the brain cells have used up the oxygen in the blood remaining in contact with the cells; so that the poor victim may have been able to feel Anstruther at work for a few seconds while he was gouging out his eye! But in spite of these things, no one could deny that the scientific world was in debt to Anstruther.

"Will you help me?" he suddenly demanded.

I looked full into his eyes. I wanted to say "no" but his will and the fascination of assisting that man forced out a reluctant "yes." I had barely given my word when I was sorry for it. He smiled and muttered something to the effect that he knew that I would help. The money question he was referring to cropped up in my mind again and I asked him:

"Where are you going to get the money?"

"Mmmm?"

"Where are you going to get money for pulling a stunt such as you suggest? I am sure no one wants to pay anyone to kill him just to see if he can be resuscitated."

"Money? Oh, yes, I was about to explain that. Do you happen to remember that train robbery six months ago, where something like half a million dollars was stolen from the registered mail sacks?"

"The robbery where the mail clerk was killed? That's all over now. They're hanging 'Red' Wilson on Thursday for the murder. Not going to try to bring Wilson to the land of the living are you?" I queried, smiling.

"It's not all over yet. They're going to hang Wilson

all right, but they didn't get the loot. I'm going after that."

"Do you realize that you make yourself an accessory after the fact by putting your hands on that stuff?"

"Perhaps."

"Funny case that Wilson case. He says he didn't fire the shot, although he admits he was there when the robbery took place. Won't tell where the goods are hidden, and won't give away his pals. If he won't tell, how are you going to find out where he hid the stuff?"

"Well, I'm going to experiment on Wilson!"

The significance of his last remark escaped me until later. In spite of myself I was becoming interested—interested in the idea of the half million dollar cache, to say the least. The details of the train robbery were still fresh in my mind. Six months previously three men had held up a C. B. & Z. train near Dover, dynamited the mail coach, killed one of the mail clerks, cowed the other two into submission and escaped a few minutes later in a high-powered car. The train had been stopped by a red flare placed on the track, and by the time the trainmen had returned from their investigation the robbers had done their work and were away.

"Red" Wilson, James Donnelley and William Stinson had been apprehended. The three of them were known to be friendly. The latter two were taken into custody on account of their intimacy with Wilson, who had been traced by fingerprints and some other trifling evidence left behind; later he had been trapped into an admission, and finally confessed to having been a member of the gang. He steadfastly refused to divulge the names of his companions on that night, and the two friends of his were able to develop bomb-proof alibis by means of some of their dubious friends of the underworld. I am not a detective and am not conversant with the complete details of the case other than what appeared in the newspapers, and a casual word or two from Detective Inspector Cowan. Cowan was a great friend of the professor and to my certain knowledge the two of them had worked on several important cases together. The unassailable logic of the professor had been of some help to the detective on different occasions.

THE thoughts of the experiment which we had discussed a few minutes before . . . the robbery . . . were blotted from my memory as I pondered over the fact that the professor and the detective were friends, or had been friends, and if the professor were going after that loot he certainly had to betray his friendship with Cowan. My loathing of Anstruther surged anew. Yet the man seemed to have an almost hypnotic power over me. Perhaps it was because I admired his intellect so greatly; perhaps on the other hand it was his uncanny knowledge of psychology; at any rate I was his willing tool, and would have acquiesced in a scheme to rob the Bank of England if he had suggested it. And I know if he had wanted to rob the Bank of England he would have proposed a perfectly logical method of doing it!

Anstruther answered my question as to how he was going to find the loot in his characteristic way when he wished to keep his own counsel.

"And how will that get you the money?" I was persistent. Whether he wanted it or not I was determined to get some inkling of his method of finding the whereabouts of the hidden loot.

"Say, if you want my help, you can't leave me in the dark this way," I kept on. "Exactly how do you expect to get this information?"

He hesitated a few minutes and then explained:

"Well, Donnelley and Stinson were friends of this Wilson who is going to be hanged. I got in touch with them and told them I could revive the dead man. I insisted that they be present at the ceremony so that they could vouch for me that I was on the level with the crooks. They have an idea that Wilson might relent in his determination not to tell where the cash is; and they fell for my scheme."

"Pretty thin story," I interjected.

"Thin or not—I just gave you the barest outline of my arguments—played on their greed, et cetera, and my well-known tilts with the police."

"Yes, and you'll have another soon, too."

"No matter. Come back Thursday morning and give me some help—or if you can't do that, your moral support, anyway. We'll have Wilson here then."

On my way home I reviewed the conversation. The whole thing seemed fantastic in the broad light of day. I even suspected one of the professor's grim, practical jokes, and yet—yet—. I did not doubt that he would have the body of Wilson on Thursday after the law was through with it. As a university professor he would probably ask for it for dissection. He was always making grim requests of the authorities either for fresh bodies of murderers right after hanging or for viscera of poisoned murder or suicide victims.

Nevertheless, I was pledged to aid him in whatever dastardly scheme he had up his sleeve!

The morning of Thursday dawned. After a sleepless night, I hurried over to the professor's, arriving there some time after half past six in the morning. As I drove by the prison they were raising the black flag over the walls, a grim reminder that Wilson had gone to meet his maker. Three or four minutes later I was ushered into the professor's laboratory.

But what a change had taken place! In the middle of the room an operating table was placed, ready for the victim. Blinds were drawn, and the room was lighted by electricity. The room was hung all around with heavy velour hangings of a deep purple hue, and it seemed to me that it was smaller than usual. Perhaps it was the effect of the curtains; then I noticed that the small D-shaped alcove, used generally as a photographic darkroom, had been curtained off. The head of the operating table was almost touching the curtain hiding this alcove.

On each side of the operating table were two five-gallon Mariotte bottles, full of saline solution. These bottles are receptacles with openings on the sides near the bottom, to which tubes are attached. These tubes would convey the fluid through the arteries. On the tables which held the bottles were a number of surgical instruments—scalpels, forceps, spring clips, etc. To one side was a pulmotor.

At the foot of the table were two of the meanest specimens of humanity I ever laid my eyes on. The professor was also in the room, and introduced me to the two articles sitting at the foot of the table—Donnelley and Stinson. Both of them seemed to be awed by the setting of the room, and remained silent.

AS we waited, the door-bell rang. The professor almost ran to the door, and in less than a minute a couple of prison attendants carried in the lifeless body

of Wilson. At the professor's direction they placed the body on the table, and immediately withdrew. I heard the door clang as they left the house and the noise made me start. The two convicts at the foot of the table drew in their breaths with a sucking sound; no other word or sound came from them.

"Quick, Stewart!" bade Anstruther.

He jumped to one side, picked up a scalpel and forceps and in about two seconds, so it seemed to me, had the carotid and vertebral arteries exposed and clamped with the forceps. My hands trembled—I could hardly go on; before I could move he had pushed me aside and performed the same operation on the left side of the man's neck. Quickly picking up a pippette attached to one of the bottles, he inserted it into one of the arteries on the left side: taking up the pippette from the other bottle, he inserted it into the other artery: opening up the clamps to allow the Ringer solution to flow, he stepped back and surveyed his work.

"Now!" he cried.

I watched, horrified. The convicts had hidden their faces in their hands and were breathing hard. One of them seemed pretty white. Slowly the solution trickled through the arteries and pushed the blood ahead of it. What little blood was left in the arteries slowly dripped from the other side, to be followed by the clear Ringer's solution.

Anstruther jumped for the cylinder of oxygen on the floor, (which I had not noticed at first, so great was my mental perturbation), and admitted oxygen into the Mariotte bottle. The gas bubbled up like bubbles in a champagne glass. I held my breath—dreading God knows what.

I almost screamed as I watched, fascinated. For the dead man slowly opened his eyes and rolled the eyeballs around, striving to see where he was.

"But how can you make him speak?" I gasped. His larynx must be paralyzed if his neck is broken!"

"Fool," spat the professor, now in a highly nervous state, "don't you see the pulmotor? I've got a stream of air rushing through his throat. His tongue is controlled by a cranial nerve and he'll be able to whisper!"

I gazed again at the victim on the table. A look of surprised horror crossed his face, and he opened his mouth to speak.

"Garn. Ain't they finished yet?"

Funny thing for a dead man to say. Funny thing for a man supposed to have been hurled into eternity to come out with. I looked at Anstruther. He grinned back and muttered something about it having worked. Even he was impressed with the horror of the experiment, or perhaps he was incoherent from excitement. Pulling himself together he addressed the recently hanged man:

"Listen, Wilson. You *were* dead, and I brought you back! You can't move. You can't do anything. But I'll keep you alive for years until you come across with the information I want! Do you understand me?"

"I was dead, and you brought me back?" he whispered tonelessly.'

"Yes. Where did you hide that loot? You know Donnelley tipped you off to the police!" Anstruther was adding an artistic touch to his experiment.

HATE gleamed from Wilson's eyes, followed by uncertainty and indecision. In the meantime Donnelley and Stinson had stood up and were looking at the man on the table in horrified fascination. Stinson's tongue clicked against the roof of his mouth as he tried to speak. But no words came. The air seemed charged with the tenseness felt preceding an electric storm.

Wilson's face muscles moved spasmodically, and he was evidently making an effort to move, if only his head. It was a futile effort—the spinal connection with the brain was broken. The stillness of the room was only interrupted by the steady drip, drip, drip, of the Ringer's saline solution into the bottle on the floor from the tube in his left carotid artery. I shuddered and jumped nervously as he opened his mouth and spoke:

"Yes, I'll tell—and tell everything!" Mumbled curses defiled his lips. "I'll tell, but I'll not suffer alone. The loot—the swag—is hidden in the flower bed in Donnelley's yard."

"You're a liar," screamed the two crooks in unison.

"Liar or not—send the dicks to look for it—I wanted it all for myself—all—go to his house, his house on 42nd street and see for yourself——"

"You dirty double-crosser," yelled Donnelley.

The dead man continued.

"Donnelley engineered the whole trick. He pulled the trigger that bumped off that damn mail clerk. He was the bird who should've——"

"What if I did?" screamed Donnelley again, now in a frenzy of rage and unheedful of what he said. "Who in hell will take your word—you're dead—you're dead—ahhh——"

He almost jumped over the table and before any of us had the least idea of what he intended to do brought his huge ham-like fist down on the mouth of the helpless Wilson. As he did, we jumped for him. Meantime Stinson, his fellow thief, made for the door screaming and blubbering like some demented being from the pit of darkness. As we struggled with the larger man—Donnelley—the table was wrecked, the tubes were torn away from the "Sherrington" man, and some few seconds later his brain ceased functioning for ever. There was a sudden new commotion, and I stared in amazement. The curtains near the alcove parted and two men holding revolvers stepped into the room.

"Stick 'em up!"

Stinson alone heard without heeding. A bullet from the man on the left stopped him. The roar of the explosion of the gun shook the house. Professor Anstruther stepped aside from Donnelley and in a trice the two men had him handcuffed. Of the whole crowd I was the only one left like a fool, my two hands high over my head, hopelessly endeavoring to touch the ceiling!

Anstruther's voice brought me back to my senses.

"All right, Stewart, old top, come on back to earth. These two bloodthirsty gentlemen with the guns are two of my detective friends from headquarters. Meet Inspector Wilks and Sergeant Kearns, doctor—Doctor Stewart, Mr. Wilks, Mr. Kearns."

"But what's it all about? What are the police doing here? I thought you were in league with those thugs!"

Anstruther and the two policemen laughed.

"I thought you knew me better than that, Stewart," he humorously reproached me. "This was just a little stunt on our part to bring to justice a couple of our prominent gunmen of extraordinary ability—and I think we succeeded. Oh, yes, I am sure we succeeded—we succeeded with one anyway, for I think the little fellow is dead and I guess my financial worries are over for a while too!"

The little fellow was dead, all right. And the big fellow—Donnelley—was pretty nearly dead, too, now that the reaction had settled in. Those poor, mentally deficient crooks usually can't stand much of a mental strain. They need scientific training for that.

The whole thing was soon made clear. Anstruther had been with the police all the time, and through them some of their stool-pigeons had come in contact with Wilson's two companions. Wilson was the brainiest of the lot. He was out to "double-cross" his companions and so had secreted the loot in Donnelley's garden, unknown to both companions. He was going to get the whole thing for himself when the hullaballoo over the robbery had died down, and he would divide it—perhaps. When he was condemned, so great was his hatred of the world in general that he would tell nothing.

Donnelley confessed afterwards, but he insisted that he did not know where the loot was hidden. Of course he didn't, but his greed to obtain part of it led to his own hanging. The whole affair helped me to revise my romantic notion of honour among thieves.

Anstruther received his share too—the $10,000 reward offered for the recovery of the stolen money, which the police recovered in Donnelley's flower garden after a few hours' digging. But Anstruther did not publish the result of his experiment. Nor was the least hint of it given the newspapers. The two detectives received the credit, but not the money, for whatever was solved.

THE END.

In this department we shall discuss, every month, topics of interest to readers. The editors invite correspondence on all subjects directly or indirectly related to the stories appearing in this magazine. In case a special personal answer is required, a nominal fee of 25c to cover time and postage is required.

SOUND VIBRATION

Editor, AMAZING STORIES:

Across the ocean, I salute you for the wonderful thing you have done in producing AMAZING STORIES. Do you ever realize that you are an Empire builder? An Empire of Science! Through your magazine's pages countless folk must be becoming pleasantly instructed in the ways of science, unconsciously it must affect them, and to posterity will come the advantage of parents and contemporaries no longer buried by a ridiculous cloak of secrecy, hypocrisy, and essentially baseless bunkum.

I started reading your magazine about a year ago, discovering it by sheer accident in Messrs. Woolworth's. Since then I have had something of a task to get it, but by hook or by crook I've kept my numbers consecutive, and have also obtained the Quarterly. Now, however, I have communicated with your London distributors, and am getting AMAZING STORIES regularly. Being something of a science writer myself I saw in your stories the very thing I'd been looking for all my life—and I mean that earnestly! I admire your publication for its broad views on science, the extension of the possible, and the brilliant narration.

I consider that Dr. David Keller and Edward Elmer Smith, Ph. D., rank as your finest authors. I've seen various remarks concerning Dr. Keller's mentality, but I'm sure if one will but trouble to analyze his work, it becomes manifest that he has a brilliant knowledge of all classes of science, a constructive and intelligent insight into the relationship between present and future earthly conditions, and a first-class knowledge as to how to write convincingly and absorbingly.

Tell me, should not the "Skylark of Space" have been worked out on the Lorenz-Fitzgerald Contraction basis? Dr. DuQuesne informs us that his "bus" is moving at seven billion four hundred and thirteen million miles per second—yet light itself only moves at 186,000 miles a second. According to law the space-flier would have ceased to be when it exceeded the speed of light—but by the Fitzgerald Contraction it could have been carried on by some means or other. I take it also that stars seen in the rear of the machine would appear to move backwards, because the vessel was traveling faster than the light emanating from them. Another thing: when DuQuesne left the earth so suddenly, after he had captured Dorothy Vaneman, his ship was through the air before the ship had hardly warmed through. Well, he couldn't have gone any faster than the earth's spin, I believe—that of 18 miles a second. In that time, I should think, the ship would have got pretty hot, and even that armored shell would have glowed a little. Anyhow, though, it was a rattling fine story, the finest I have ever read, and I am now eagerly reading the sequel. It certainly beats its predecessor, and that's saying something!

The theory in some stories that it is possible to drag a planet out of its orbit strikes me as unconvincing. To shift any body in our System would demand a power of gravitation counterbalancing the sun's, would it not? And, unless the instrument used had certain attractive force of its own—which is well-nigh absurd—it would take a body weighing millions of tons to drag a planet out of its orbit, and no such body could be made by men because it would by far exceed the size of the planet it was proposed to build it on. I hope I'm clear.

By the way, if sound vibrations travel onwards into the void, why should they weaken? I'm not very clear on this. So far as I can make out it is only the absorptive properties of the atmosphere that cause sound diminishment. In the airless void who can say but that they go on forever and never lose their power? Traveling endlessly in a straight line, a light ray hurled into space would go on for countless light-centuries, would it not, and arrive at its eventual destination—even if millions of years ahead—with the same strength as it left earth. If so, why not sound? I confess to haziness on this matter.

As perhaps you know we have been doing honor to the great Professor Einstein in England recently, and I felt quite thrilled when listening to his deep and pleasing voice over the radio. Instantly my mind coupled him with that immortal Theory of Relativity.

Well, sir, I expect you're bored to death by this time—even if you've got this far—so I'll promise to make this letter my first and last, if you like. But I did just want to express my thanks for the work you're doing. It's the sort of work that will convince folks that science is not just a fad, but the very hub of life!

John Russell Fearn,
26 Langfield Avenue,
Blackpool, South Shore,
Lancashire, England.

(We are always flattered to receive such letters as yours from English readers—it is pleasant to feel that our efforts are appreciated in your country. Sound vibrations can only exist in a material substance, not in the ether. Therefore they cannot get outside of the earth's atmosphere. The vacuum of space must be an eternal silence.—EDITOR.)

AN INTERESTING LETTER FROM A FAVORITE AUTHOR ABOUT ERRORS IN STORIES

Editor, AMAZING STORIES:

I am delighted to see, in the February issue of AMAZING STORIES, that the challenge I sent out has been accepted. The readers are indeed sending criticisms.

To Mr. Taylor I will say in defense of the molecular motion principle that actual conduction is NOT the only way heat could be absorbed. There is still radiation. However, the conduction will be just as effective as ever. True, only the surface of the metal bar will be able to accumulate heat, and this heat will never be transferred to the interior. It will all be used right at the surface. But no matter where the heat is used, the same amount of energy is gotten from it. Just so long as the surface even is warmed continually, the effect is the same. It is only the surface which would absorb heat under any circumstances, therefore the heat absorbing qualities are not in the least affected, the surface is as active as ever.

As a matter of fact, in the ships, the solid metal bar was replaced by a hollow gas tank with helium inside. This gas was acted on by the molecular control, not the metal, but the gas was warmed by the metal which surrounded it.

I believe that in "The Black Star Passes" I did mention the fact that it would be easy to jump over the asteroids, and said that exploration ships on their way to the outer planets were doing so. The asteroids are dangerous, however, in the belt, for it is difficult to turn a ship moving miles per second away from a block of stone or metal moving other miles per second. They are not exceedingly plentiful, but it takes only one, remember!

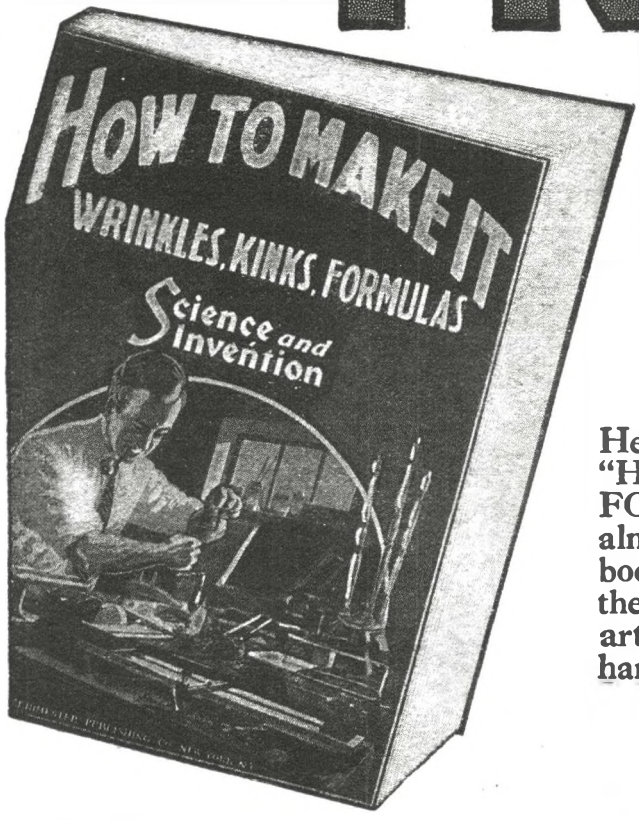
I apologize for the Venerian Atmosphere. That figure was a bit high, but it checked as originally written. I think there was a slip in the office somewhere. Remember it said in the story a little before the figures were given that there was about one tenth of one percent CO_2? It gave 14% instead of .14%.

* * *

But let all due credit be given Mr. James M. Hartley. He was the first to pick out a very obvious error which existed in both "Piracy Preferred" and "Solarite" as well as any other invisibility story. I quite agree with him, an invisible man can't see. My only excuse for this is that an invisible man can make a good yarn, *no es verdad?* If they were unable to see, they would be unable to do anything but fly in a straight line, so I'll admit they'd be pretty useless.

(*Continued on page* 1146)

HOW-TO-MAKE-IT FREE



With 6 Months of Science and Invention All for Only $1

Here's just the book you've been waiting for. "HOW TO MAKE IT—WRINKLES, KINKS, FORMULAS"—the complete all-around guide for almost all kinds of repairing and construction. A boon to every red-blooded man who has ever felt the urge to grip good tools and see useful finished articles take shape as the combined result of skillful hands and brain!

HERE are new thrills awaiting you—the thrills that come from making and doing things you can take pride in! Here, also, is real recreation and profit!

Breakfast Nooks — Fireplaces — Cedar Chests — Modernistic Sideboards — Blow Torches — Auto Accessories — Decorative Lighting Fixtures — Garden Fountains — Wood Lathes . . . whether it's carpentry, plumbing, masonry, electricity, "HOW TO MAKE IT" will tell you what to make and do—and how!

Hundreds of things for your car, for making your home more beautiful and comfortable, for broadening the facilities and usefulness of your own work shop!

Whether it's repairing or working in metals, concrete, woods, stains, paints, piping, or what have you—this handy book, the work of our expert mechanics and engineers, tells you exactly how by means of simple English, and scores of clear pictures, diagrams and plans.

FREE with Big Cash Saving on Science and Invention

Amateurs and experts in all lines—hundreds of thousands of them, have bought this "HOW TO MAKE IT" book at a substantial price, and have had countless occasions to congratulate themselves on their wise investment.

BUT—we have arranged to ship you this useful book, postpaid, ABSOLUTELY FREE OF CHARGE! And at the same time we will enter your subscription to SCIENCE & INVENTION for six full months (regular value $1.50), for only $1.00. *But don't delay!* To get the book FREE and two big issues of SCIENCE & INVENTION virtually WITHOUT COST, mail the coupon while we still have books on hand!

Mail Gift Coupon NOW!

SCIENCE & INVENTION, Dept. 2103
381 Fourth Avenue, New York, N. Y.

Gentlemen: Ship me, ENTIRELY FREE, prepaid, the valuable handy book, "HOW TO MAKE IT—WRINKLES, KINKS, FORMULAS"—and enter my subscription for the next Six Big Issues of SCIENCE & INVENTION at only $1, which I enclose. I understand you will promptly refund my $1 and I may keep the book if I am not more than satisfied.

Name .....

Address .....

City and State .....

That was one of the errors I made; undoubtedly there were others, not so obvious as that, but present none the less. But I do want to say in my own defense that an object transparent to light bombs is not the same thing as a body through which objects can pass unhindered. In the January issue I believe I was misquoted, I did not say that objects could pass through, but that light bombs could. Light can pass through a window, but objects cannot.

The reason Arcot used luminous paint on the enemy ships, instead of disrupting their invisibility was what I stated in the story, Arcot did not have any sufficient source of power to combat the Kaxorians in power. He could not disrupt their invisibility, but he could make it worthless. Luminous paint as "thin" as water would spread wide in a very short time if influenced by a thousand mile an hour air blast.

Having given the hero a disc of morlus as a medal, it would have been a peculiar thing to immediately give him a couple tons of it, would it not? I think it improved the story to let that go till later.

No turn they made could be too sharp for the men, for the rockets were the force controlling that turn. The turn would be no sharper than they could force, if it were any sharper, the centrifugal force fighting the rockets would straighten the turn out, just as a too-wide turn would be closed in by the rockets. Therefore, if they could stand the force of the rockets at any time, they could stand them on a curve.

But you'll probably find plenty to pick on later.

John W. Campbell, Jr.,
46 Bigelow Street,
Cambridge, Mass.

(This interesting letter from Mr. Campbell needs no comment from us.—EDITOR.)

DISCUSSING CO-ORDINATES

Editor, AMAZING STORIES:

There seems to be no doubt that time is the fourth dimension. How people have arrived at this conclusion is comical, to say the least. First H. G. Wells' arguments began the idea and, secondly, the fact that Einstein used the term "time," provisionally for the fourth dimension, while a more suitable term was to be devised when it was more fully understood fixed it. Most people think that we are traveling at a constant speed through time, hence (from their point of view) through the fourth dimension; their idea is to accelerate or retard this speed. This is quite fallacious. If we take a point of reference (the origin) and draw a fixed line through it, we have what may be termed a line of reference, x. An additional line y, through the origin, at right angles to x allows us to locate any point within the plane contained by the two lines. The space between these two lines is two-dimensional. To locate a point outside this space, a third line of reference z must be drawn at right angles to the first two. The space between these three lines is three dimensional and is *all* space—as far as we are concerned but it does not mean that a point outside this space could not be located by means of a fourth line t at right angles to the first three. The direction of this line is called the fourth dimension. A plane has duration as much as a solid, but time is not its third dimension. Its third dimension is at right angles to its two dimensions x and y. If a plane is moved through the third dimension, it goes outside "its world" altogether, into another, into another one quite distinct from it—it does not become older or anything of the sort.

The geometrical and mathematical discussion of the subject is extremely interesting but time-traveling is not in itself a subject of interesting "scientifiction," except in so far as the hero is thereby assured of meeting human beings more civilized than us without the author having to "invent" beetles and jellyfishes on the planets. Otherwise think of the argument of killing your grandfather before your father was born or killing someone after you are dead.

The final point to this question is: If we are traveling in time at a constant velocity, how fast are we traveling? One second per second?

"The Metal Horde" was good, but the Editor's note at the beginning gave the whole show away. Why they tried to throw Venus into the Sun I cannot understand. It could not be from a desire of revenge, since they were machines and could not have emotions.

The Sirians, of course, could not stop the planet by *pulling* since the action and reaction would be equal, but they could do so by *pushing* since the reaction would be on the gases (or whatever was used to propel the ships), which would not be in line with the planet.

Here is a problem for your readers: The chemical energy liberated when steel is dissolved in acid is directly proportional to the weight of steel taken. If a coiled spring is considered, it contains potential energy; if it be placed in acid, the steel will dissolve slowly and the potential energy just *disappears,* without giving off heat in any way other than that due to the chemical action. What happens to this potential energy?

R. A. Earls,
21 Earls Court Sq.,
London S. W. 5, England

(In discussing co-ordinates, you do not explain how the fourth co-ordinate can be drawn at right angles to the other three. A plane is not supposed to have three dimensions. The best solution we have ever seen for your spring problems is the following: When the coiled spring unwinds itself and exerts energy, it does it at the expense of heat, and grows cool. When it has done this, the heat is restored to it by the atmosphere and other objects, with which it is in contact. The immediate effect of winding it up is to make it hot again, and then again it is prepared to exert energy at the expense of heat. Hold a rubber band in your hands with the central parts between the lips. Now stretch it and it will get warm, just as the metal spring would. Bring the hands together and it will get cool. In both cases it is quickly restored to room temperature by the air.—EDITOR.)

A CORRESPONDENT WHO HAS WAITED A LONG TIME BEFORE WRITING.

Editor, AMAZING STORIES:

Although I have never before undertaken to communicate my views of your superb magazine to you, I have been reading it since the initial issue, and I think I should make up for lost time.

From the very start of your venture into this new field of fiction the improvement in each issue has been marked, but never so much as it has since the change of editors some few months ago. I have at various times subscribed for every magazine considered out of the ordinary, including a similar publication which sprang into being about a year ago, but AMAZING STORIES is the only one which I have renewed each year. The fact is that I have absorbed so much intellectual enjoyment and sheer pleasure from your magazine, that I cannot do without the entertaining instruction which it holds for me.

During its first years AMAZING STORIES published many fine stories but those which I consider best were "Station X," "A Columbus of Space," "The Second Deluge," "The Land That Time Forgot," "The Master Mind of Mars" and last but far from least that epic from the pen of A. Merritt, "The Moon Pool." I must say a few words in praise of this story, as it may be classed as a truly amazing story and one whose bewildering chain of action held me absorbed till the last word.

It was just two years ago that I thought I had met the acme of interplanetary stories in your earlier pages but when I read "The Skylark of Space" I mentally relegated all the others to the literary scrap heap. I have never read so gripping a tale, whose human interest was so closely united with a smooth coordination of science as to mark its author as an author of the first order. I enjoyed it so much that I gave a leap of exultation when I heard its sequel was to be published. I considered it the greatest story you had published, or that I had read, until I started on the first chapter of "Skylark Three" in your August, 1930 number. Then I was truly amazed at the lengths to which Dr. Edward E. Smith's imagination could go, and I decided that if "Skylark Three" continues as it has commenced, it bids fair to exceed in greatness its superb predecessor. My only hope is that Mr. Smith continues to regale his readers with such fine literature.

I did not understand where "The Secret Kingdom" deserved to be placed in a scientific magazine, there was little or no science throughout it. The two stories of "The Green Prism" by Verrill just wouldn't penetrate my cranium. The style was good but action scarce in both. In spite of such inadvertencies, I still have faith in AMAZING STORIES as I have taken advantage of your offer and renewed my subscription for three years.

John J. Hennessy,
1423 1st Avenue,
Watervliet, N. Y.

(We frequently have reluctance in printing letters which we receive and hesitate about putting them in among the correspondence, for the reason that we feel that sometimes they compliment us too highly. The only apology we can make to ourselves for printing such letters as yours is, that while we cannot feel that we deserve such high

praise, it does show that our work is succeeding in reaching the tastes of our readers. Dr. Smith certainly gives his imagination full rein in the Skylark stories, and it takes a good man to loosen the reins of his fancy completely, and yet produce a real good science-fiction story. And the two "Green Prism" stories by A. Hyatt Verrill have won great praise from our readers. So you see that after all we are having rather good luck from the standpoint of readers' appreciation. The science in "The Secret Kingdom" is in the line of archaeology and ethnology.

AN ENCOURAGING LETTER

Editor, AMAZING STORIES:

About a year ago when your firm went into bankruptcy, I gave up reading your magazine. It was not till recently that I took it up again; in fact only two months ago. Accidentally, I saw the cover of the August issue featuring "Skylark Three" and remembering the excellence of Smith's former work I decided to try it again. I found that the change had been astounding. When I left off last year the stories were punk and the illustrations worse. When I resumed the former had improved 300 per cent. and the artists had twelve of their motors started and starters on the other two. I am extremely grateful to you for featuring "Skylark Three" as if you had not I should now be missing several very interesting stories.

After those compliments I feel that I can ask a favor of you. Please—for my sake and that of many other readers whose sentiments I think I express—cut out the would-be romance that appears in so many of your stories. Don't misunderstand me—I don't expect you to cut out all of it. What I object to is the "mush." In stories of length that you print to develop a romance it is practically impossible, especially as it can only be a side issue. So if you have any influence with your writers, try to get them to leave out the mush till they learn how to handle romance because then, you see, it won't be mush any more.

I have one more request to make. Unless my memory fails me, there appears in "Science and Invention" in the latter part of 1926 a story called "Into the Fourth Dimension." From what I remember of it, it was very interesting. Could you reprint it, and also a series of stories that ran under the name of "Doctor Hackensaw's Discoveries (or Inventions; I'm not sure which)? I am sure your readers will enjoy both.

M. Ashman,
314 Rochester Ave., Brooklyn, N. Y.

P. S.—In the September issue I find an amusing typographical error. On page 506, seven lines from the bottom of column two, you have "as if the listeners were *both* to leave".

(Of course the word should have been "loath." The text of each story receives two editings; the proof is read twice in this office, besides the proofreading by the printer, yet some errors will escape. We want to please our readers but they do not seem to object to what you call "mush." And we have so many original stories on hand that we have reduced our number of reprints. You are going to like AMAZING STORIES we are sure.—EDITOR.)

ANOTHER FRIENDLY LETTER

Editor, AMAZING STORIES:

I have been a constant reader of AMAZING STORIES for the past three years. I think this magazine can easily classify itself with the best on the market. I have noticed a few other magazines now on the market which are of the same type as AMAZING STORIES. This would give ample proof that the public is taking an interest in this type of story. I have tried them all, but they never can compare with AMAZING STORIES.

Your artists, Wesso and Morey are great and I don't think you could find any better.

Your authors are also doing very nicely; I liked every story that was ever published in AMAZING STORIES.

I can not see any sense in criticizing an author in this type of story because he is only giving us what he imagines would take place if this or that were to happen. If he were to write nothing but facts and other scientific principles, the stories would become almost true stories and would lose interest and romance.

I hope you continue with your good work and are able to keep "our" magazine the leader.

Fred Kruger,
890 Summit Avenue,
Jersey City, N. J.

(We thank you for your favorable comments and certainly will do our best in continuing what you kindly term "our good work."—EDITOR.)

SHORT COMMENTS ON STORIES AND AUTHORS

Editor, AMAZING STORIES:

With your permission, I would like to comment upon the August issue of the pioneer science-fiction magazine—AMAZING STORIES.

The stories in order of merit are: 1 "World Atavism," 2 "The Last War," 3 "When Inca-Land Revolted," 4 "South Polar Beryllium Limited," 5 "Skylark Three."

"World Atavism" was a wonderful story as all Mr. Hamilton's stories are.

Queer as it may seem, I absolutely hated "The Skylark of Space" and I can't see much to "Skylark Three"—its sequel.

Captain S. P. Meek is a wonderful author and his latest "The Last War" is great. More of him.

I don't like the arrangement of your contents page. I think you should list the stories in the current issue on the left-hand column, and forthcoming stories in the right-hand column; in other words, in exact opposition to the new arrangement.

Your department, "In the Realm of Books" is wonderful. I hope you are not going to discontinue it.

As a whole I have nothing against the magazine; keep it as it is, it's great now!

E. Anderson,
1765 Southern Boulevard,
New York, N. Y.

(Your letter is very interesting as showing how tastes differ. The Skylark stories have won the greatest praise imaginable from our readers, so you will see that your note of dissent certainly represents a minority and of course all that the Editors of the magazine can do is to please the majority. We will give consideration to what you say about the contents page, but we dislike to make a change in any features which have been carried out for so many months. We have no idea of forever discontinuing the department "In the Realm of Books." There is a dearth of new books during the summer months, particularly, of books which lend themselves to review in our columns. We plan to run this department whenever possible. We are glad that you like Captain Meek, who is not only a talented author, but a professional soldier who understands his subjects very thoroughly.—EDITOR.)

MORE ABOUT "SKYLARK THREE" AND "SOLARITE"

Editor, AMAZING STORIES:

I shall begin this letter by giving you some brickbats and some errors in "Skylark Three" and "Solarite."

First, if the faidon used by Seaton in the "Skylark Three" was crystallized ether, wouldn't it offer some resistance to the ether, making the speed of the Skylark at a certain definite limit unless streamlined?

Secondly, in "Solarite" the total percentage of the gases composing the air of Venus was in my book 118.5%. I really don't see how the author can count straight if this is a fair example of his reasoning.

Since June, the worst story and illustrations were as follows: "The Second Missile," by Ed. Earl Repp, and the worst illustration came in the same issue as the drawing for "Anachronism," by Muller.

As a whole, though, your magazine is very good. The best stories and serials published were "Skylark of Space," "Universe Wreckers," "Skylark Three," "Piracy Preferred," "Solarite," and "The Eclipse Special."

Your authors are on the average fairly good. What one lacks another has. Your new artist, however, is terrible.

I am a boy of 13, in high school, and get many good hints in science from your magazine. My friends all borrow them and then forget to return them, so many copies are missing.

Mark L. Dannis,
6731 Jeffery Ave.,
Chicago, Ill.

(We are very well acquainted with Mr. Campbell and can assure you he is an excellent scientist. We will leave it to him to take up the question of the percentage which you mention, but he can count straight, if anyone can. Muller can draw. He is an excellent artist but he is too modernistic, apparently, for AMAZING STORIES. We have published another letter by a boy twelve years old who was even more severe than you in his criticism. You will find as you get older that you will take a milder view of things than you do now, so we leave the answering of your letter to the authors you refer to in it.—EDITOR.)

A RIVETED LAP JOINT IS A STRONG ONE—"THE ECLIPSE SPECIAL" CRITICIZED

Editor, AMAZING STORIES:

Let me edge in a few words here among the many of congratulations you doubtless are receiving about your adoption in the December issue of real magazine paper—stuff that will stand binding. More power to you. Or should I say "may your circulation increase threefold"?

The tournament of which round three, between Dr. E. E. Smith and John Campbell, Jr., over "Skylark Three," appeared in the December issue, was well worth the price of the magazine. Dr. Smith corresponds quite as forcefully and as interestingly as he writes stories—smooth—plausible and to the point, with very few errors, I should say mistakes in theme, for errors are excusable. I have read John W. Campbell, Jr. I find he makes mistakes in his theme, seeming unable to connect it up smoothly as Dr. Smith does. You might liken his continuity (Mr. Campbell's) to a lapped joint in boilermaking, riveted, in other words, easy to see, and to "feel," while Dr. Smith's continuity is seamless, or welded together so cleverly and smoothly that the "joints" can't be seen or felt.

Speaking of Dr. Smith—when are you going to induce him to write another Skylark or similar story?

"Anachronism" was the best so far of Charles Cloukey's contributions to your magazine. It was excellent. Better told than "Paradox" or *ditto* "plus." "The Eclipse Special" was a very good story. Seems like all the Ph.D.'s can write good stories. "The Second Missile" was another "lapped joint (riveted)," kind of story—too much explanation—not enough left to the reader's imagination, except in one place where the scientist had been able to put his son in suspended animation and bring him back to life, without the aid of the drugs so necessary. Also why did he take out his brain?

Captain Meek's "Drums of Tapajos" got off to a slow rambling sort of start. Not much like his usual short story style, but he is accelerating now—guess he is up to about 3 "light speeds" by now in the last instalment, which I wish I had. Of course I know everything will turn out all right for the heroes, but still there is the element of suspense. They might be entombed down there forever. Anyway, so far the second instalment makes up and more for any shortcomings the first might have had.

"Reaping the Whirlwind" by Mr. Tooke and Dr. Breuer's poem to fill in vacant space. Both fair. Guess you must have used this as you did maybe someone else might like these. Tooke's story was well written, but it had the same old plot. The machine performed perfectly. The scientist could direct a force strong enough to wreck a modern concrete factory without any trial or rehearsal. The experimenters escaped, as usual, by a hair. The machine was, of course, utterly destroyed, all as usual and as certain as the proverbial 2 plus 2 or 2 times 2 equal 4 formula. As far as I am concerned, and I mean this but not insultingly, as a poet, Dr. Breuer is an excellent author. I like his stories but not his poems.

Let's return to Dr. Lemkin's story, "Eclipse Special." I forgot to give you a call down on it. Dr. Lemkin failed to state how it was possible for the flyer to be equipped with fast enough propulsive power on such short notice as to enable it to exceed the speed of the sweep of the "beam" across the face of the earth when such propulsive power had never been invented yet. Also, how was it possible to take pictures and observations while under rocket propulsion, which the author first said through Dr. Boyd, could not be done? Another thing if this could be done why use the "Solunaray"? And another thing—if the beam was only a few feet wide and a few feet long what kept the flyer from swerving those few feet to one side and losing "contact," especially as this must have been possible, for it was possible for the vessel to "outrun" the ray without any trouble? Likewise, if they could overtake the ray, why could they not cut in gravity and drop out of it. They could have done this as easily as they cut out gravity and went up, as the author said they did. Seems that stories like this would be more plausible and not violate such laws as common sense dictates or rather one part should not contradict another. If it does, it should be explained plausibly.

J. Wall Murr,
Macon, Georgia

(The letters we receive speaking of the "Skylark" series should certainly please Dr. Smith, for almost everybody seems to think very highly of the stories. No one can please everybody. The men with one wife must have an easier time than the polygamists of other lands. We think a great deal of Dr. Lemkin's work and he shows much ingenuity in his story "The Eclipse Special," making it seem as if it was all quite possible. We are sure that Captain Meek will be interested in your thoughtful remark on his last story. You may be sure that AMAZING STORIES is not restricted to giving possible stories. It is perfectly fair to say that we distinctly favor what may be called the impossible and the experiences of generations has shown that it is far from safe to pronounce anything impossible in view of what may be done in the future. "The Eclipse Special" with which you find fault, has been a great favorite with many of our readers.—EDITOR.)

AN INTERESTING LETTER FROM A FRIENDLY CRITIC

Editor, AMAZING STORIES:

I have followed the progress of this publication with interest for about two years, first as a newsstand reader, and now as a subscriber. I should like to comment on it.

The immediate reason for my writing this missive (or missile) is that I wish to compliment you on the new and better paper which you used extensively throughout your latest issue (the December magazine) which I have just received.

I must say that when the magazine first changed management some time ago, it became definitely worse. It started improving though, and by about the December, 1929, issue (was it the December cover that had the little men with the big ears on it?) (No, it was January.—Ed.) it was as good as it ever was. And, I may add, AMAZING STORIES has continued to improve until now it is much, much better.

By better or worse I mean the magazine as a whole—stories, art work and paper.

The stories, of course, are the most important. My favorite authors are Miles J. Breuer, Jack Williamson, William Lemkin, Ph.D., Edward E. Smith, Ph. D., Charles Cloukey and John W. Campbell, Jr. I'll never forget "Paradise and Iron," by Dr. Breuer in the QUARTERLY if I live to celebrate my 171st birthday, so strong was the impression it made on me. Williamson's "The Green Girl" was very good. I especially like Jack's descriptive passages. "Cold Light" by Lemkin was also good, and of course, "Skylark Three" takes first honors on all counts. The "Paradox" stories are what we want more of, also others like "When the Atoms Failed." But I am forgetting Aladra Septama. Handicapped though he is with that name his stories are usually good reading. Why do his stories always appear in the QUARTERLY only? I do not consider Verrill's work is scientifiction usually.

Harl Vincent, Edmond Hamilton and Captain Meek are passable, but not good. Dr. Keller I do not like: "The Worm" for instance.

As to artists, one of the worst things about your magazine when it was at its worst was the art work. Mackay was awful, as was Bob Dean. Briggs is a little too fantastic, too unreal. Still an illustration by him once in a while is all right. This should be put in capital letters: by all means keep Morey, Wesso and Paul, and use them all! All are good, but in different ways, and a magazine illustrated by different artists has a pleasing variety of illustrations. I do not object to your trying out new artists from time to time either. I can't quite comprehend Muller's "futuristic" illustrating. Is is really art? or what? As a reader of the Book of Revelations, AMAZING STORIES, I should know; but I confess I do not.

As AMAZING STORIES has been improving lately I expect it is to continue to do so, therefore a few suggestions may not be amiss from a reader who is convinced that he knows more about running a magazine than the editor does.

1. Continue to print the best scientifiction stories.

2. The inside arrangement and art work have an important psychological effect on the reader. If good, the reader is prejudiced in favor of the story causing his mind to be in a better receptive mood than it would otherwise be. If the art work is poor the opposite is true. The same thing can be said about the quality of paper used. A person naturally expects better stories from a smooth paper book than from a pulp paper book. Smooth paper is better anyway. For that reason I suggest that the next improvement be to make AMAZING STORIES an all smooth paper book (and incidentally add about 16 pages to the size).

3. The cover. Lots should be done to the cover. Here is my idea. Starting at the top of the page there would be a narrow white band

with nothing on it. Then there would be a band about three inches wide bearing the name AMAZING STORIES (MONTHLY should be in to distinguish from the QUARTERLY). The public cannot be expected to know all about it. Dumb newsstand owners do not know all about it. Because the name gradually gets smaller there would be some motto to take up the remaining space, such as "Thrilling Fiction of Future Science." This band would be of such a color as to harmonize with the predominating color in the picture and the name, of course, would be in contrasting color. It would be separated from the picture by another white narrow band bearing the information of the date and price. The picture itself would be horizontal 6" × 9" instead of the present vertical 9" × 12". It would bear no printing. Below it another narrow band would proclaim that the picture was from Blank Story by John Doe, beginning (or complete, as the case may be) in this issue. Below this another color band corresponding to the one above the picture bearing the name (and motto) would tell the world that this issue contained such and such a story by so and so and that other stories in this issue were, etc. Then another narrow white band at the bottom of the page, this one likewise blank. Such a cover layout would rob your cover of its cheap look and give better opportunities for art work besides, for a horizontal picture is handiest for all work except portraits. The printing would stand out clear and not be obscured in some grass or behind a tree of the picture for no printing would be on the picture. It would look better and please the readers too, I am sure, not to have printing all over the pictures.

Harry R. Pancrast,
306 W. 28th St.,
Wilmington, Delaware.

(A letter like yours which not only speaks well of our work but implies in its text that the writer is a true friend of AMAZING STORIES is certainly a comfort. Perhaps, however, it is well that we do get some critical letters. We are surprised that you do not like Dr. Keller. He has done a great deal of fiction writing and his knowledge of science makes him particularly well adapted for our columns. He has the knack of carrying a story over to the last sentence before you get at what the end is to be. We recall one of his stories where the single word "silly" at the very end unravelled the mystery. We are keeping the three artists you name. The ones you criticize unfavorably have their distinctive merits, and have done very good work, each in his own line. It is interesting to see how you have studied out the subject of the cover. We shall be much interested in knowing how our art director will be affected by your idea.—EDITOR.)

AN APPRECIATION WITH A CRITICISM

Editor, AMAZING STORIES:

Well, what have we here, an experiment or the finished article? This nice compact little December issue with its fine quality paper sure is a surprise to me. My copy is perfect but I saw a copy at a newsstand last night which was, or at least looked, as fat and clumsy as the old issues. How come?

Now for the criticism: "Solarite" topped the list for the November issue, but "The Drums of Tapajos" was a close second, and by the time that I finish the whole story I may change my views. The rest of the stories weren't so good and "Globoid Terror" was an insult to Mr. Starzl's usual form. The "Terror" seemed to me distinctly out of place in the story, and it had such a nice beginning too. In the current issue I have read only Capt. Meek's second instalment and "Anachronism," both of which are great.

I think that you are managing your three big artists very well, but I don't like Mr. Muller's modernistic drawing, if that's what it is.

Before I close let me beg you to keep the future issues up to the level of the last one.

Robert F. Collins,
38 Lexington St.,
Fall River, Mass.

(There was a change made in the paper of AMAZING STORIES and it may be that there was a sort of lap-over of the older stock in some copies. Your criticisms are very interesting because it is evident that you are a critical reader—one who forms his own judgment about what he reads. The name Tapajos is pronounced with two broad a's and the j is pronounced like an English h. Mr. Muller is distinctly of the modernistic school. We can faithfully promise you that we will do all we can to keep future issues up to standard.—EDITOR.)

THE SKYLARK STORIES

Editor, AMAZING STORIES:

I have been reading your magazine for some time, but this is my first attempt at writing. The only fault I can find in stories like "Skylark of Space" and "Skylark Three" is that the other stories seem so commonplace a few months after they are finished. I think that the author who wrote them has more ability as a story writer than the rest of your staff put together. There is one thing I could not get and I hope that you can put me straight. In the story "Skylark Three," Seaton and Rovol journeyed to a small dwarf star to obtain a material that was dense enough to be used in the fifth order projector. What is puzzling me is, if the material found in the dwarf star was dense enough to use, it would also be dense enough to deflect the fifth order carrier wave, which Seaton used to send his projections back to earth. He must have passed through several such suns. Maybe I missed something in the story, but I don't think so.

Arthur W. Bensman,
312 Grant Street,
Buffalo, N. Y.

(A very interesting feature of the Skylark stories which have won such praise from our readers is that they are really by a new author. Your query we will leave to Doctor Smith to answer. But our other stories are not commonplace. In publishing letters from readers we do not pick out the favorable ones, but as you will have noticed in the past, we publish those which criticize us severely. This being the case, if you will look through our Discussions columns, you will find that many of our readers put our other stories on a par with or even ahead of the Skylark series.—EDITOR.)

SEX STUFF NEVER APPEARS IN AMAZING STORIES

Editor, AMAZING STORIES:

I should not join your Readers' Column if it were not for the small part of Mr. D. Richard's letter I have ringed round.

Keep the introduction of ladies in your stories strictly on the basis of scientific collaborators.

The moment you introduce sex stuff, as such, I for one will drop your magazine. Current literature specializes in that for those that like it. Also I prefer your paper to "——" because those are .05 science and 99.05 sensation and morbid muck.

Stories of murder pure and simple and sheer gruesome rubbish are not fit for the young growing mind and merely intensely boring and nauseating to the adult.

Vic. Gilmer,
9 Beak Street,
Regent Street, London, W. 1, Eng.

(What you call the "introduction of ladies" in our stories seems to be quite a live question. We give the quotation from Mr. Richard to which you refer and as you do not agree with him you will realize the peculiar position of an editor whose work it is to please people of diametrically opposite ideas:

"Why shouldn't 'females', as Dalton calls them, be included in the science fiction stories? Remember, 'Love makes the world go around', and also gives a rosy atmosphere to an otherwise cold, machine-like scientific story."

So, if the fair sex figures too much for your fancy in any story, you must remember that others like to have them play their part. However, AMAZING STORIES will never become a sex magazine. We promise you that.—EDITOR.)

A GOOD WORD FOR THE MODERNISTIC ARTIST

Editor, AMAZING STORIES:

By all means have Muller do the cover some month and watch the reaction of the public. His illustration this month is the type that the magazine needs.

In the past ten years I have read largely of stories that dealt with science, not seriously, but as fiction, and I have read your magazine from the first, and have no comments to make, other than that the smartest thing you could do is to use Muller for the cover.

Stephen Derluphire,
1105 Watauga St.,
Raleigh, N. C.

(This letter comes from one who likes the work of the artist, Muller. Your contradictory views on this one artist whom others object to strongly are a good illustration of the difficulties of an editor.—EDITOR.)

AN APPRECIATION FROM ENGLAND

Editor, AMAZING STORIES:

I am writing to you from far off England to tell you how much we appreciate your magazine in this country.

I commenced reading AMAZING STORIES just a year ago and I consider that my rather meager scientific knowledge has been increased considerably since that date.

As you perhaps know, there are, unfortunately, no such magazines in Great Britain, and although it is somewhat difficult to obtain American fiction in England, it is well worth the trouble.

Your authors have marvelous imaginations and your artists, especially Wesso, are first rate.

My favorite stories are those concerning interplanetary travel and Four Dimensional exploration. I do not, however, like serials, as a month is much too long to hold a story in mind.

I must say that the size, binding and cutting of your magazine are excellent, but in my opinion you could make a great improvement by keeping the fiction and discussions away from the advertisements and not numbering the advertisement pages, as many readers desire to bind magazines of this type and it is really useless to do so if their volumes are to be full of advertisements.

My favorite author is David H. Keller. His stories are always so different.

The finest stories that I have read recently are: "The Troglodytes," "A Visit to Suari," "The Universe Wreckers," "The Ivy War," "Through the Veil," "Rhythm," and "Callisto at War."

If you keep up this standard of scientific fiction, your publication has a great future, supported as I hope, by the best wishes of

Cameron Hannah,
100 Elgin Crescent,
London W. 11, England.

(There should be no trouble in obtaining AMAZING STORIES in England. We are told that it is on many newsstands in London and we have several agents in London who are charged with its distribution. AMAZING STORIES falls distinctively into the class of magazines that for a definite reason places advertisements on the same page with reading matter. It is done in a great many magazines in this country. Some, like the *Atlantic Monthly*, keep advertisement and reading matter separate. People are apt to feel that the Englishman is hard to please. It is a curious fact that we get nothing but favorable letters from English critics, and you will find a delightful one from a seventeen-year-old English school girl recently received. As curiosities, we have put in two very strenuously discharged brickbats, one from a twelve-year-old boy and another from a thirteen-year-old boy—both of these young gentlemen were Americans. No one more definitely needs encouragement than an editor. He always feels that perhaps something else would have been better than what he has done. Dr. David H. Keller has repeatedly shown a special ability to lead up to an ending. The last two or three sentences have to be read in some cases to bring the story to a climax.—EDITOR.)

WHAT A SEVERE CRITIC A TWELVE-YEAR-OLD CAN BE

Editor, AMAZING STORIES:

I am a boy twelve and this is my first fan letter, so overlook the mistakes. I think your book is one of the best there is. I can hardly wait for the issues. I'll tell you of some stories I thought very good and some very bad. I thought "The Green Girl" was exceptional and whether you like it or not "Skylark Three" was terrible and boresome and everything else bad. "The Metal Horde" was good and so was the "Passing Star." The "War Lord of Venus" was great and "The Drums of Tapajos" was unsurpassable.

Dustin Duke,
547 N. Flores,
Los Angeles, Calif.

(We are always glad to get letters from young readers. When a few more years have rolled over your head, you will, we think, be less positive in forming and in expressing your opinions about things. Many of our readers think that "Skylark Three" was one of the best things we have ever published. If we took a vote on the subject, we are satisfied that you would be snowed under in your views about this story. We particularly desire to preserve characteristic features of AMAZING STORIES.—EDITOR.)

A BRIGHT LETTER FROM AN ENGLISH SCHOOL GIRL

Editor, AMAZING STORIES:

As an English school girl of 17 years, at last able to get A. S. regularly, I wish to express my sincere appreciation of your first-class magazine. Truthfully, it is a Heaven-sent gift to me, for in England here we never get such a treat. To be frank, I find A. S. the perfect science tutor; it teaches in a concise and altogether pleasant way the intricacies of science, so far as the human mind can at present reach, and I do believe that, at some time in the future, many of the inventions your authors depict will come to pass.

My chief interests in science are the possibilities of atomic universes and the mysteries of gravitation and relativity. Interplanetary comes next. The "Skylark of Space" and its sequel are masterpieces. I've yet to read Part III of the latter. If I were not a girl I would take my hat off to Dr. Smith; as it is I bow deeply and earnestly.

One of my hobbies is gymnastics. I am assisted by a friend of mine, also scientific, and between us we try to solve the relationship between gymnastics and science. Perhaps you think I have got bats in my belfry, but listen to this. In one exercise my friend holds me so that I swing around her. She grips me under my armpits and swings me round so that I am parallel with the floor. Now, doesn't she, metaphorically speaking, represent the sun; her arms the invisible gravitative pull of the sun; I myself the earth. I'm held to her by her grip, and go in circles round her. The only thing is she turns to me, whereas, I believe, the sun does not turn with the earth. Anyhow, though, it shows the analogy of solar attraction on the earth. If she were to let go I'd fly off into outer space. That's just one sort of experiment we made. Still we both insist there is a scientific relationship. Again is it gravitation that makes it impossible for us to stand on our heads for any length of time? I can stay head downward on a trapeze for three full minutes, but after that the pressure of blood in my face becomes too severe for me to continue. Now why? Is it the way we are made or gravitation causing the blood to flow downwards? Many birds, I'll instance a bat, though that is not a bird; even sleep head downwards, yet their brains are in their craniums the same as ours. Why cannot we do the same thing? It has always puzzled me. I can't see why we can't move upside down as well as on our feet.

With regard to time, I can comprehend the theory of going forward better than backward for the reason that anything may go into the future, whereas the past is done with. It seems to me that the only way to go into time is *via* relativity—namely, to boil down to the concrete truth that everything is in relation to our state of perceiving. Then when we have discovered that past and future are merely relative, we have but to move our consciousness into either state and observe what transpires. Maybe this is a bit foggy, but if you have got a vacuum in the office you might try to brush the cobwebs away and penetrate the vasty deeps of my brains (if any). (Very well put. Editor.)

If anything ever stopped the earth revolving, what would it be? A planet of Jovian dimensions offering a counter pull, or merely a little asteroid? Can you tell me please?

Grace Lawson,
Heaton Moor,
Manchester, Lancs., England

(We have seen it stated that the English school boy is a particularly nice creature, but here we have an example, which shows how nice and interesting an English school girl can be. It is interesting to note that we receive a good many letters from English readers and our humble efforts seem to please them greatly. As for taking your hat off to Dr. Smith, the young men of this country are forming the habit of going without hats like the Bluecoat boys of your country. Many of them would have to pull their forelock, sailor fashion, to this popular author. Your interpretation of your gymnastic exercises with your friend is quite clever. We have never seen any record of how long a person can remain head downwards. This globe of ours is really in a very ticklish state. As it revolves around the sun it generates centrifugal force exactly as you and your gymnastic friend do, and this is just enough to hold it in its orbit. If it stopped pursuing its elliptical path it would rush into the sun. We hope this will not be your last letter and shall expect sometime to get another letter from you, just as bright as this.—EDITOR.)

PITY THE POOR EDITOR WHO CANNOT PLEASE EVERYONE

Editor, AMAZING STORIES:

You will not like this very critical, perhaps too critical, letter, but it is meant to be friendly.

AMAZING STORIES is the greatest paradox on the newsstands. The primary rules of story-writing are: first, that the author has a story to tell, and, second, that he tells it well. In the great majority of the stories published in your magazine, both rules are violated; yet the magazine prospers more and more. Why is this? The answer is clear: because it ventures into uncharted paths of literary endeavor. Originality was ever a writer's greatest virtue.

When A. S. first loomed in the literary horizon, it promised to develop into a magazine of distinction. That early promise has not been fulfilled. Why? I think it is due to its short-sighted editorial policy. The editors showed themselves too willing to accede to the demands of their readers. The readers demanded interplanetary stories; forthwith the magazine became glutted with the same old stories, told over and over. The readers wrote of certain authors in glowing terms; consequently the same names appeared issue after issue. Harl Vincent and the Doctors Keller and Breuer are all right in their places; but those places are not every issue of A. S.

You ask, "How were the primary rules of literature violated?" You ask it rather indignantly, let us say. As for the first rule, anent having a story to tell, a casual glance into any issue will reveal that here are the same old plots recurring in endless succession. Edmond Hamilton has told his one little story dozens of times. The much-demanded sequels to stories read almost exactly like the original story. When, in your magazine, are we to see the earth not threatened by beings from space, or by some mad earth scientist? Science, I regret to say, is demanded in all stories. Your average writer knows next to nothing about science. Then what is he going to do, knowing that every story must have a scientific background? Correct, Watson, the first time. He is merely going to copy the science of the other writers. That is why we read so many interplanetary stories, fourth dimension stories, gigantic insect stories, death-ray stories, atomic stories, etc. On the other hand, the writers who *do* have a scientific education know almost nothing about the construction of stories. Consequently, we receive stories that read like textbooks. The stories of Robert A. Wait and John W. Campbell, Jr., are good examples of this.

In the second place, the majority of your writers are not professional writers, but merely amateurs unversed in the technique of story-telling. For instance, Julian D. Kendig, Jr., author of "The Fourth Dimensional Space Penetrator," wrote this story, his first story, when he was a sophomore at high school. Many of them have original ideas for stories, but do not know how to develop them. As a result, the stories have an amateurish ring.

Thus we come to the second rule of story-writing: namely, that the author must produce a well-written story. How many stories can you think of that appeared in A. S. that were well-written? Very few. The stories which first appeared in the magazine were immeasurably better written than the late concoctions. Why? Because they were, for the most part, reprints. Practically all the stories that were enthusiastically received had been written years before: "The Moon Pool," by A. Merritt—the greatest scientifiction story ever penned: "Station X," by G. McLeod Windsor—apparently the low remuneration scared him away; "A Columbus of Space" and "The Second Deluge," by Garrett P. Serviss; "Treasures of Tantalus," by Garret Smith, still writing science stories for another periodical; "The Land That Time Forgot," by Edgar Rice Burroughs, who turns out a new science tale every five months; "The Time Machine," and the other tales by H. G. Wells; "The Skylark of Space," by Edward Elmer Smith, Ph. D.—a story, by the way, that I did not finish, due to boredom (his latest tale is even worse; and—but why go on)? Almost every outstanding story which has graced A. S.'s pages is an old one. The loosely constructed, hastily written stories ground out every month simply cannot compete with them.

As an indication of how A. S. is regarded in literary circles, I refer you to Edward J. O'Brien's lists. For years he has selected the leading stories of the year, judging on the basis of substance and writing. He studies all short stories published during the year for merit. He gives stories no stars, one, star, two stars, and three stars, according to their quality. In all the years of A. S.'s existence, he gave stars only to H. G. Wells' reprints and to one original story—"The Colour Out of Space," by H. P. Lovecraft, which he gave three stars! To illustrate the short-sightedness of your editorial policy, H. P. Lovecraft has never written another story for A. S., although he appears rather regularly in another periodical. Another writer whom you have let go, your best writer by the way, A. Merritt, has written the sequel to his "The Face in the Abyss" for another magazine!

There is no doubt about it, A. S. is deteriorating, and very rapidly, at that. The magazine is becoming more and more amateurish, despite your efforts. You are losing your writers to your competitors, who pay far more. Your artists' works are slipshod affairs, unworthy of illustrating the stories they do. Paul is about the only one who has the slightest conception of science. Wesso's drawings sometimes are interesting, but Morey has never aroused from his amateurish lethargy. Your new artist, Muller, is almost as bad as Bob Dean was. All this, when there are dozens of artists who can draw excellent illustrations for science fiction stories.

This letter is not meant to be derogatory, but merely offers some advice. And, lest you think me too severe, I'll let you in on something: I have never missed an issue of AMAZING STORIES since the third issue.

J. Vernon Shea, Jr.,
1140 N. Negley Ave., Pittsburgh, Pa.

(There is little to be said in answer to this letter. You will not find the three authors, Breuer, Keller and Vincent in "every issue" of our magazine. Each of these authors is a graduate in science and they are highly appreciated as writers. We agree with your criticism of Hamilton, who is considered nevertheless a sort of classic. Campbell has won praise enough from our readers to turn his head. If you will run through the discussions' columns you will be surprised to see how our readers admire the exact stories you condemn. We may observe that we do our work to please our readers, not to meet "mechanical criticism." How many, even better class magazines, are frequently honored by Mr. O'Brien? Anyhow, thank you for your letter of warning. We shall look to our laurels. —EDITOR.)

THE SUBJECT OF ONE OF OUR COVER ILLUSTRATIONS CRITICIZED UNFAVORABLY—THE ART VALUE COMMENDED

Editor, AMAZING STORIES:

Since my first introduction to your magazine, AMAZING STORIES some three of four years ago, I have been a constant subscriber.

Your stories impress me, more for their newness and exciting details than for their science, a subject in which I am sub-normal.

I should be unable to detect the errors in just script, but the art work—ah!—that's different, that's my business! Please allow me to state that the steady improvement in your covers and story illustrations have been a source of delight, with the exception of the cover on the November issue, which I should class as a "throw back."

An undertaker advertises his business with a floral spray, rather than a picture of a corpse; why pick the most gruesome subject in the book for the cover?

It is not to be used to scare the children, but rather to advertise the contents, and this particular illustration would lead one to believe that the book was one of these more or less popular "dream books."

The artist concerned has shown his worth, particularly in the last quarterly, so it is not the quality of the work, but the subject that arouses this complaint.

Please accept this for what it is worth from just one of a multitude of your readers.

Howard L. Franklin,
112 Van Dusen St., Newark, N. Y.

(No one appreciates more than the editors of AMAZING STORIES the value of intelligent criticism such as yours. It is precisely what we want and desire to have and whether it is flattering or the reverse makes no difference. Our desire is to know definitely how our work affects our readers. We are delighted to know that our feeling that our art work is improving is confirmed by a critic. We will keep in mind what you say about the selection of subjects for the covers.—EDITOR.)

A WONDERFUL OPPORTUNITY

The great Radio industry, because of its amazingly rapid growth, is today badly in need of hundreds of "trained" men to fill its more responsible jobs in Radio, Talking Pictures, and Television work.

To qualify for these jobs men must know Radio as they know their A B Cs. They must know the theory as well as the practice, and be able to teach other men some of the things they know.

To such men the great Radio industry offers a wonderful opportunity for steady work at exceptionally good pay, now, and early advancement to still better jobs as a future. It is, in fact, the chance of a life-time for ambitious men.

But first these men must be trained, for no ordinary knowledge of Radio will do.

The Radio Industry, itself, has no time to train these men. It is growing so fast, and changing so fast, that its manufacturers and jobbers have all they can do to keep up with the trend of the times, by improving their methods of manufacture and distribution.

So the training of men for these jobs has become the task of the Radio and Television Institute, of Chicago.

As few men can afford to quit their work and get this Training at some University or Technical School, the Radio and Television Institute has been organized to train such men at home — no matter where they live, — in their spare time, and at a very nominal cost, for these better paying jobs in Radio, Talking Pictures and Television.

The Institute's Course of home-training was planned, written, and is actually supervised by an Advisory Board made up of prominent and highly paid engineers and executives, each of whom is actively connected with some big Radio concern.

This means that your training will be right, because these men, working with big Radio concerns, know exactly what the industry needs in the way of "trained" men, and exactly how you should be trained to meet that need. And this Advisory Board will have complete supervision over your training from the day that you become a student of this Institution.

For this reason, prominent Radio men, everywhere—and our country's largest and most important Radio Trades Associations —are unqualifiedly endorsing this home training, and recommending it to men whom they want to see make good in Radio work.

So, if you are ambitious—if you are making a cent less than $75 a week—investigate.

Find out for yourself all about this amazingly easy Course of home-training, and also all about the wonderful opportunities for "trained" men in this, the world's fastest growing industry. Everything is fully explained in the Radio and Television Institute's "Opportunity" book. Send today for your copy. It's free.

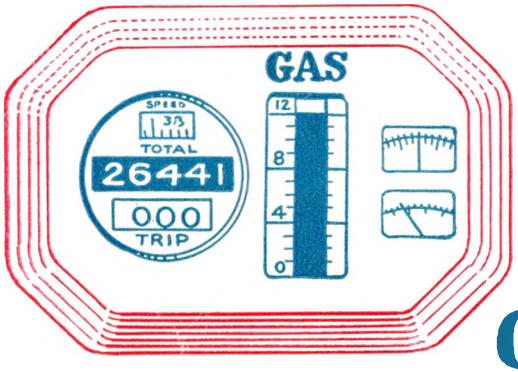
RADIO AND TELEVISION INSTITUTE, Dept. 783 2130 Lawrence Ave., Chicago

Without obligation of any kind please send me a copy of the Radio Opportunity Book. I am interested in your home-training and the opportunities, you say exist in the great field of Radio, for "trained" men.

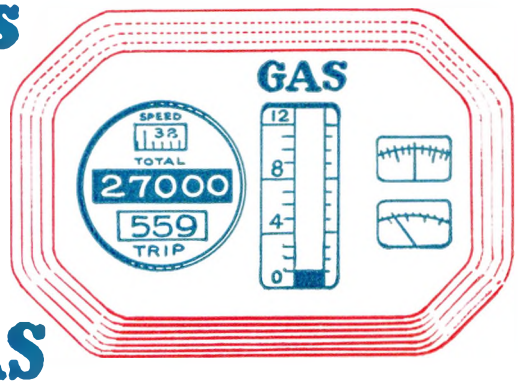
NAME_____

ADDRESS_____

Over the Mountains from Los Angeles



559 Miles on 11 Gallons of GAS



Think of it! FIVE HUNDRED FIFTY-NINE MILES over rough mountainous country burning only ELEVEN GALLONS OF GASOLINE. Imagine more than FIFTY MILES to the GALLON. This is what the WHIRLWIND CARBURETING DEVICE does for D. R. Gilbert, enough of a saving on just one trip to more than pay the cost of the Whirlwind.

THE WHIRLWIND SAVES MOTORISTS MILLIONS OF DOLLARS YEARLY

Whirlwind users, reporting the results of their tests, are amazed at the results they are getting. Letters keep streaming into the o e telling of mileages all the way from 22 to 59 miles on a gallon, resulting in a saving of from 25 to 50% in gas bills alone.

Mark H. Estes writes: "I was making 17 miles to the gallon on my Pontiac Coupe. Today, with the Whirlwind, I am making 35 5/10 mi s to the gallon. Am I glad I put it on? I'll say so!"

P. P. Goerzen writes: "I made an actual test both with and without a Whirlwind, getting 13½ miles without and 34 6/10 miles with the Whirlwind, or a gain of 21 miles to the gallon. The longer the Whirlwind is in use on the machine, the better the engine runs, has more pep and quicker starting. It makes a new engine out of an old one, and starts at the touch of the starter button."

R. J. Tulp: "The Whirlwind increased the mileage on our Ford truck from 12 to 26 miles to gallon and 25% in speed. We placed another on a Willy's Knight, and increased from 12 to 17 miles per gallon.

Arthur Grant: "I have an Oakland touring car that has been giving me 15 miles to the gallon average, but I can see a great difference with the Whirlwind, as it climbs the big hills on high and gives me better than 23 miles to the gallon of gas, which is better than 50% saving in gas."

W. A. Scott: "I had my Whirlwind for three years. Winter and summer it gives the same perfect service, instant starting, smoother running, and what I saved in gasoline these last few years has brought other luxuries which I could not have afforded previously."

Car owners all over the world are saving money every day with the Whirlwind, besides having better operating motors. Think what this means on your own car. Figure up your savings—enough for a radio—a bank account—added pleasures. Why let the Oil Companies profit by your waste. Find out about this amazing little device that will pay for itself every few weeks in gas saving alone.

FITS ALL CARS

In just a few minutes the Whirlwind can be installed on any make of car, truck, or tractor. It's actually less work than changing your oil, or putting water in the battery. No drilling, tapping or changes of any kind necessary. It is guaranteed to work perfectly on any make of car, truck or tractor, large or small, new model or old model. The more you drive the more you will save.

GUARANTEE

No matter what kind of a car you have—no matter how big a gas eater it is—the Whirlwind will save you money. We absolutely guarantee that the Whirlwind will more than save its cost in gasoline alone within thirty days, or the trial will cost you nothing. We invite you to test it at our risk and expense. You are to be the sole judge.

SALESMEN AND DISTRIBUTORS WANTED

To Make Up to $100.00 a Week and More

Whirlwind men are making big profits supplying this fast-selling device that car owners cannot afford to be without. Good territory is still open. Free sample offer to workers. Full particulars sent on request. Just check the coupon.

WHIRLWIND MANUFACTURING CO.

999-457-A Third Street Milwaukee, Wisc.

FREE OFFER COUPON

WHIRLWIND MANUFACTURING CO.
999-457-A Third Street, Milwaukee, Wisc.

Gentlemen: You may send me full particulars of your Whirlwind Carbureting device and tell me how I can get one free. This does not obligate me in any way whatever.

Name .....

Address .....

City .....

County ..... State .....

☐ Check here if you are interested in full or part time salesmen position.

VOL. 8 NO. 11 AMAZING STORIES SCIENTIFICTION MARCH 1931