April

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AMAZING STORIES

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April, 1927

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Contents for April

Our Cover

depicts a scene from the story, "The Man in the Room," by Edwin Balmer and William B. MacHarg, in which Trant, the psychological detective, is giving a word-association test to the suspects, and the daughter of the murdered man. He is employing the aid of his elapsed-time-recording instrument.

In Our Next Issue:

THE TIME MACHINE, by H. G. Wells. According to Einstein, time is a dimension, the same as any other physical dimension. It should be possible, therefore, to go backward or forward in this dimension, the same as we do in the others. Long before Einstein pronounced his theory, H. G. Wells had written this famous story, which tells how an inventor perfects a most ingenious machine which projects him into the future, so he can see what the world will look like, not hundreds, but thousands of years hence.

THE STAR OF DEAD LOVE, by Will H. Gray. Here is an interplanetarian story which has an entirely new view point. It is one of the most charming tales it has been our good fortune recently to read. The scheme is so novel, the science so good, that we do not wish to give it away in advance. There is one thing, however, that we do predict, —— it is a story that will make a lasting impression on your mind.

THE MAN WHO WAS, by Walter Burch. It is bad enough to die, but when you are legally pronounced dead and the lawyers take charge of your affairs, thinking you dead, things are apt to be unpleasant when you return to actual life. A number of curious twists may occur, and the new author presents a most unusual tangle that might happen if you should discover sometime that you were supposed to have been dead.

THE SINGING WEAPON, by Bent Prout. Practically everything in nature has its fundamental vibratory reaction. When you play the piano, you may suddenly hear a window pane or a porcelain vase emit weird sounds. This is because the objects respond to their fundamental notes. If the note is powerful and persistent enough, objects may even be shattered. The present story has this phenomenon as its basis, and our new author gives us an ingenious story of the possible far-reaching effects of vibrations, which proves most absorbing.

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T. O'CONOR SLOANE, A.B., A.M., LL.D., Ph.D.

Noted Instructor, Lecturer and Author. Formerly Treasurer American Chemical Society and a practical chemist with many well known achievements to his credit. Not only has Dr. Sloane taught chemistry for years but he was for many years engaged in commercial chemistry work.

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What Some of Our Students Say of This Course:

I have not written since I received the big set. I can still say that it far exceeded my anticipations. Since I have been studying with your school I have been appointed chemist for the Scranton Coal Co. testing all the coal and ash by proximate analysis. The lessons are helping me wonderfully, and the interesting way in which they are written makes me wait patiently for each lesson.—MORLAIS COUZENS.

I wish to express my appreciation of your prompt reply to my letter and to the recommendation to the General Electric Co. I intend to start the student engineering course at the works. This is somewhat along electrical lines, but the fact that I had a recommendation from a reliable school no doubt had considerable influence in helping me to secure the job.—H. VAN BENTHUYSEN.

So far I've been more than pleased with your course and am still doing nicely. I hope to be your honor graduate this year.—J. M. NORKUS, JR.

I find your course excellent and your instruction, truthfully, the clearest and best assembled I have ever taken, and yours is the fifth one I've studied.—JAMES J. KELLY.

From the time I was having Chemistry it has never been thus explained to me as it is now. I am recommending you highly to my friends, and urging them to become members of such an organization.—CHARLES BENJAMIN.

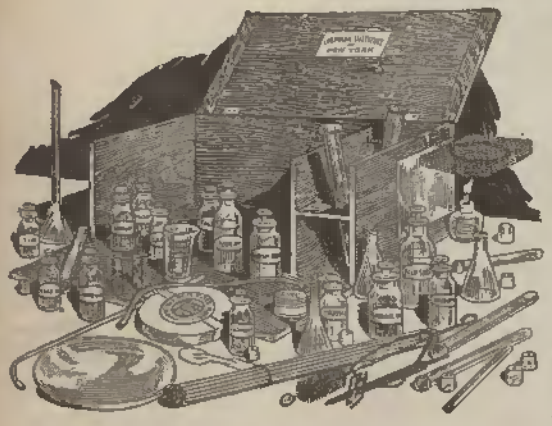
I shall always recommend your school to my friends and let them know how simple your lessons are.—C. J. AMDAHL.

I am more than pleased. You dig right in from the start. I am going to get somewhere with this course. I am so glad that I found you.—A. A. CAMERON.

I use your lessons constantly as I find it more thorough than most text books I can secure.—WM. H. TIBBS.

Thanking you for your lessons, which I find not only clear and concise, but wonderfully interesting. I am—ROBT. H. TRAYLOR.

I received employment in the Consolidated Gas. Co. I appreciate very much the good service of the school when a recommendation was asked for.—JOS. DECKER.



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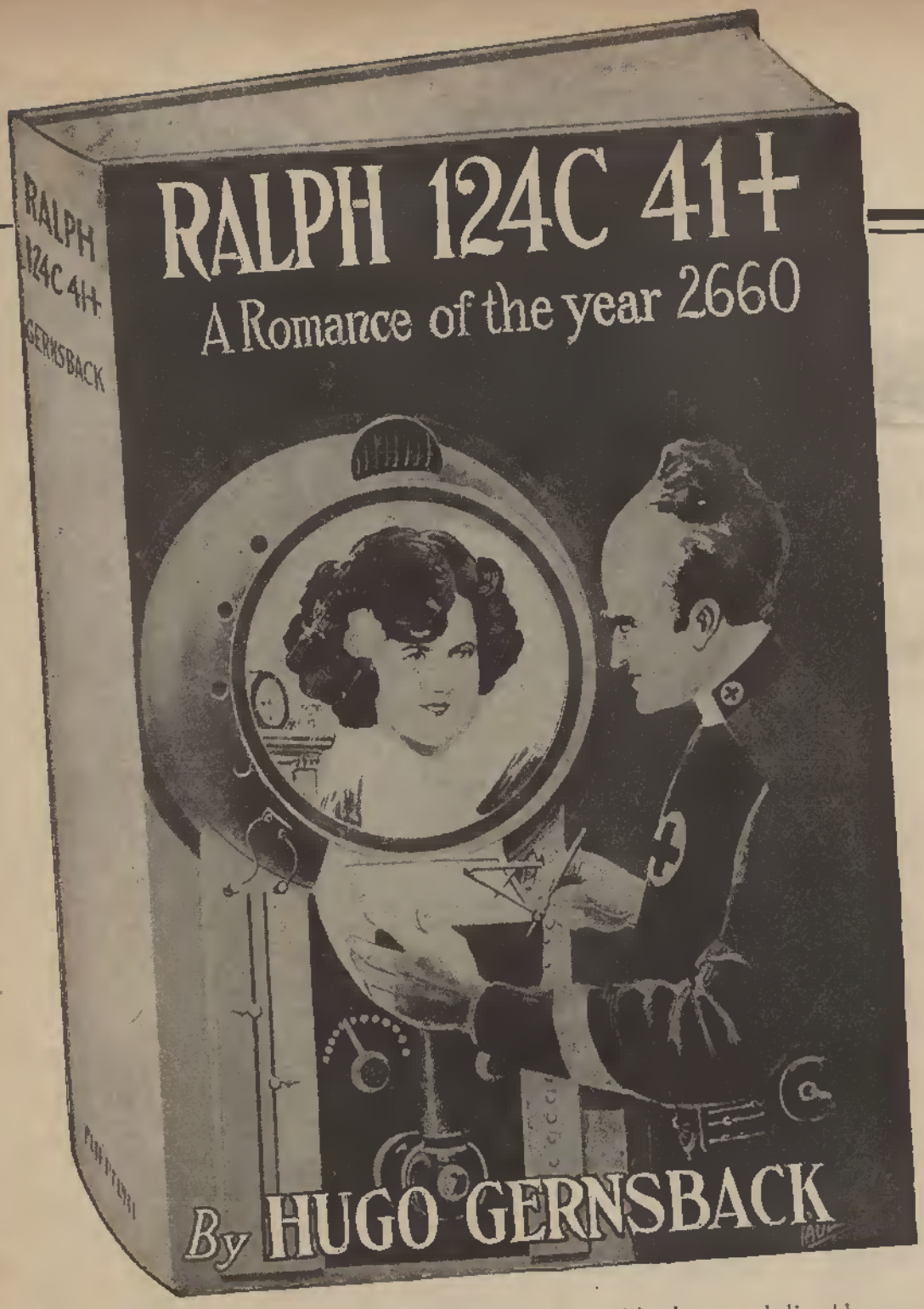

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VOLUME 2

AMAZING STORIES

THE MAGAZINE OF SCIENTIFICTION

APRIL, 1927 No. 1

HUGO GERNSBACK, *Editor* WILBUR C. WHITEHEAD, *Literary Editor*
DR. T. O'CONOR SLOANE, Ph.D.; *Associate Editor* C. A. BRANDT, *Literary Editor*
Editorial and General Offices: 230 Fifth Avenue, New York, N. Y.

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

THE MOST AMAZING THING

(In the Style of Edgar Allan Poe)

By HUGO GERNSBACK

SEATED on his throne, cut out of a pure crystal of Carborundum, rested the all-powerful Supremental,—who, in other universes, would perhaps be called the King. Before him appeared one of his distinguished explorers, who had just returned from an excursion through other worlds. The explorer's antennae touched those of the Supremental, upon which the following discourse took place:

"It will probably interest your Highness to know that on our visit to the Third Planet of the Sixth Universe we encountered a race of most amazing creatures. An exploration of the planet showed that they were not fashioned of the natural products of their own soil, or, indeed of their geology, as for instance we are. Instead these creatures are made of a rubber-like, soft substance. In shape they are most grotesque and they have a jerky, mechanical motion similar to that of certain of our own machinery. Instead of floating in space as we do, they move around with a sort of hop-motion. Their shapeless bodies, if such they may be called, are crowned with an oval appendage, totally out of keeping with the rest of their bodies."

"Most astonishing!" said the King.

"In this oval appendage, we found two remarkable television mechanisms, with a unique optical system. The light gathered through the two lenses is focused on a red sort of net, which is connected by literally millions of fine strands to a central exchange system, where the light is translated into pictures. A most roundabout system."

"Extraordinary!" ejaculated the Supremental.

"In the inside of their elliptical appendages is a vast electrical sort of exchange, from which center the entire machine is navigated and made to go through its various movements. In the inside of the creature, we found an extraordinary, but rather clumsy motor, which incessantly pumps a colored liquid through a tube system and which I think lubricates the various parts of the machine. There is also a sort of double bellows which purifies the liquid and acts in a manner similar to our own filters."

"Most astounding!" wheezed the King. "I don't believe a word of it. But tell me what fuel is used in these machines?"

"This is another amazing thing, which must surely tax your credulity, but it is true nevertheless. Instead of using reconverted light rays, as we do, these creatures go through the intricate process of using the strangest fuels, which they obtain from their flora and fauna. They never use the same fuel twice in succession, but keep on varying to an astonishing degree, which, however, does not seem to affect their machinery."

"Incredible!" snorted the King. "And how do they communicate with each other?"

"This is the most amazing part of all," continued the explorer." We were much puzzled at first by their strange methods. They use a sort of radio communication, if such I may call it. Certainly no antennae touch when communication takes place, neither do they touch each other. In the elliptical appendage of which I spoke, there is, in the center, a large hole, which opens and closes. When these beings communicate, this hole opens and closes more or less rapidly, although no substance comes forth, and nothing is perceived. It is thought that the communication is effected by some wave motion, but inasmuch as we have no organs to interpret it, we accidentally discovered by electrical means, that when the hole is opened and closed certain vibrations issue forth which to us are unintelligible and meaningless when translated into electric vibrations."

"Ha! Ha!!" chuckled the King. "What rubbish!"

"We found, on inspection of a dead specimen, which we opened, that at the side of the elliptical appendage there are two holes, which, incredible as it may seem, are an almost exact replica of one of our own telephone-like instruments, which we use for registering low vibrations on a moving paper strip. There is a diaphragm, such as we use in our instruments, and several small ivory-like substances pressing against the center. In a spiral tube of liquid there are fine strands, which go to the central exchange, evidently to convey the electric impulses to the exchange, by which communication is established between the various beings."

"Impossible!" cried the King.

"That, however, is not all," continued the explorer, unabashed. "Extending from the top of their bodies are two folding levers, which can be bent back and forth, seemingly at will. Instead of having normal tentacle-like appendages, they have these folding rods, with which they perform their work. At the end of the rods are a number of tentacles by which various things may be grasped at the will of the creature. This is also most strange, because nature certainly could have equipped them with our own suction apparatus, instead of using clutching appendages that have to wrap themselves around all objects in order to handle them."

"Piffle!" exploded the King.

"Moreover," continued the explorer, "electrical connections seem to run through every part of their bodies, so it is possible for each part to communicate with the central station in case of need. We found, for instance, that when we touched them on any part of their bodies with our radio perforers the rest of the things were sympathetic to whatever part we touched. The same seemed to be the case with changing temperatures. They seem to be able to distinguish heat from cold without using an antenna, which they do not possess. Moreover, this communication seemed to proceed at the speed of light. For instance, when we touched one of their tentacle-like appendages by means of our instruments the double lever-like appendage with its tentacles was jerked away instantly. From this we conclude that the communication taking place between the tentacle and the seat of motion must be instantaneous. Certainly that of the speed of light."

"Stuff!" yawned the King. "And do they float about as we do, by means of repulsion?"

"No, indeed"—this from the explorer—"The specific gravity of their bodies is extremely high. They are eternally chained to the soil of their planet, on top of which they live. They do not live in submerged caverns, like our own polar inhabitants, but they live in strange cubicles, which they fashion themselves. These cubicles have holes cut in their sides to admit light, and other ethereal vibrations. The things themselves never leave the surface of their planet except in clumsy contraptions. They usually conglomerate in large centers, like low insects, while most of their planet is not so peopled, but is covered with flora."

"Preposterous," commented the King.

"But what will interest your Highness most is that during part of the rotation of the planet, it becomes immersed in darkness. Then these incredible creatures fall down prone on their backs and relapse into a state of coma from which they are aroused only by sunlight, when the earth has rotated around sufficiently to come into the sunlight again. Why they should do this is a profound mystery to us. It seems a great waste of time."

"Ha, Ha!" laughed the King, now thoroughly amused by the incredible tale.

"But the worst is yet to come," continued the explorer. "Every once in a while, for apparently no reason at all, they fall upon each other and exterminate thousands of themselves with the most astonishing implements, which bore holes through their bodies, or with weird machines which give out gases as some of our insects do; or they annihilate each other's cubicles by dropping destructive missiles on them. Yet, when it is all over, they appear to become good friends once more."

"Enough of this," roared the All Highest. "I certainly do not believe a word of this fantastic tale. It is impossible that nature should create such foolish creatures. And where, may I ask, did you find these things, and by what name do they go?"

"Their world," continued the explorer, "is called by them the planet Earth, and the things, we understand, call themselves human beings."

The PLAGUE of the LIVING DEAD

By A. Hyatt Verrill

Author of "Through the Crater's Rim," "The Man Who Could Vanish," etc.

. . . Racing as fast as their old legs could carry them, the two fellows came dashing toward him, terror on their faces, panting and breathless, while at their heels came a mob of men and women, screaming, shouting incomprehensible words, waving their arms threateningly, and obviously hostile.

THE astounding occurrences which took place upon the island of Abilone several years ago, and which culminated in the most dramatic and most remarkable event in the history of the world, have never been made public. Even the vague rumors of what happened in the island republic were regarded as fiction or as the work of imagination, for the truth has been most zealously and carefully concealed. The whole thing was far too horrible and too terrifying to permit of its being made known, until all fear of the threatened results were at an end. And to have made the public acquainted with the facts would merely have caused world-wide uneasiness and perhaps panic. Even the press of the island cooperated with the officials in their desire to maintain absolute secrecy regarding what was taking place, and instead of making capital of the affair, the papers merely announced—as the government had requested them to do—that an unknown contagious disease had broken out upon the island and that a most rigid quarantine was being enforced.

But even if the incredible news had been blazoned to the world, I doubt if the public would have believed it. At any rate, now that it is forever a thing of the past, there is no reason why the story should not be told in all its details.

When the world-famous biologist, Dr. Gordon Farnham, announced that he had discovered the secret of prolonging life indefinitely, the world reacted to the news in various ways. Many persons openly scoffed and declared Dr. Farnham was either in his dotage or else had been misquoted. Others, familiar with the doctor's attainments and his reputation for conservative statements, expressed their belief that, incredible as it might seem, it must be true; while the majority were inclined to treat the matter as a joke or as a newspaper canard. This was the attitude of nearly all the daily papers. In jocular, sarcastic or burlesque manner they printed garbled and exaggerated articles, and published cartoons of the scientist; the Sunday supplements had elaborately illustrated but entirely unfounded and ridiculous stories purporting to voice the doctor's views and statements on the subject.

Only one paper, the reliable, conservative and somewhat out of date "*Examiner*" saw fit to print the biologist's announcement verbatim and without comment. Upon the vaudeville stage, and over the radio, jokes based on Dr. Farnham's alleged discovery were all the rage, a popular song in which immortality and the scientist were the leading themes was heard on every side and at length. In sheer desperation, Dr. Farnham was forced to make public a detailed statement of his discovery. In this, he clearly pointed out that he had not claimed to have learned the secret of prolonging human life indefinitely, for, in order to prove that he had done so it would be necessary to keep a human being alive for several centuries, and even then the treatment might merely have prolonged life for a certain period and not forever. His experiments, he stated, had hitherto been confined to the lower animals and by his treatment of them he had been able to extend their normal span of life four to eight times. In other words, if the treatment worked equally well with human beings, a man would live for five to eight hundred years—quite long enough to fulfill most persons' ideas of immortality. Certain persons, whose names he declined to reveal, had, the doctor stated, taken his treatment, but of course its effect had not yet had time to prove his claims. He added that the treatment was harmless, that a chemical preparation injected into the system figured in it, and that he was willing to treat a limited number of persons if they wished to experiment and test the efficacy of his discovery. For Dr. Farnham, who was sparing of words both in conversation and writing, and who rarely gave out anything for publication, this statement was remarkable and, so his champions claimed, proved that he was sure of his stand. But, such is the psychology of the average person that the biologist's perfectly logical and straightforward explanation, instead of convincing the public or the press, served merely to bring an even greater storm of ridicule upon his head.

Curious crowds gathered about his laboratory. Wherever he went he was stared at, laughed at and watched. At every turn press photographers snapped cameras at him. Hardly a day passed without some new and humorous or sarcastic article appearing in the press and his pictures appeared along with those of crooks, murderers, society divorcees and prize-fighters in the illustrated tabloid newspapers. To a man of Dr. Farnham's retiring habits, self consciousness and modesty, all this was torture, and finally, unable to endure his unwelcome publicity longer, he packed up his belongings and slipped quietly and secretly away from the metropolis, confiding the secret of his destination to only a few of his most intimate scientific friends. For a space his disappearance created something of a stir, and further sensational news for press and public, but in a short time, he and his alleged discovery were forgotten.

Doctor Farnham, however, had no intention of abandoning his researches and experiments and, together with his supposedly immortal menagerie, as well as three aged derelicts who had offered themselves for treatment, and who had agreed to remain with the scientist indefinitely—at larger salaries than they had ever received before—he moved to Abilone Island. Here he was wholly unknown, and scarcely an inhabitant had ever heard of him or his work. He purchased a large abandoned sugar estate and here, he thought, he could carry on his work unnoticed and unmolested. But he did not take into consideration his three human experiments.

IF you should read this story by our well-known author with incredulity and feel inclined to lay it aside with the remark "impossible," please be apprized of the following facts:

At the Rockefeller Institute, in New York City, the famous surgeon, Dr. Alexis Carrel, for the last fifteen years, has retained a fragment of a chicken's heart in a special medium, in which it has not only stayed alive and pulsating but has continued growing also, so that it only needs to be trimmed every little while, to be kept alive.

Here, then, is immortality in the laboratory. Mr. Verrill's story, therefore, is not as fanciful as it might seem.

These worthies, finding that their treatment was having its effects and that they were remaining, as it were, steadfast in years and vigor, and quite convinced that they would continue to live on forever, could not resist boasting of the fact to those whom they met. The white residents listened and laughed, deeming the fellows a little mad, while the colored population listened with rolling eyes and regarded the doctor's patients with superstitious awe, and were convinced that Doctor Farnham was a most powerful and greatly to be feared "Obeah man."

The fact that his secret and his reasons for being on the island had leaked out, did not, however, interfere with Doctor Farnham's work as he had dreaded. The intelligent whites, who were in the minority, of course, jokingly referred to what they had heard when they met the scientist, but never asked him seriously if there was any truth in the story, while the negroes avoided him as they would Satan himself and gave his grounds a wide berth, for which he was thankful. But, on the other hand, he had no opportunities to try out his immortality treatment on human beings, and hence was obliged to carry on his experiments with the lower animals.

Quite early in the course of his experiments, he had discovered that while his treatment halted the ravages of time on vertebrates, and the creatures or human beings treated gave every promise of living on indefinitely, yet it did not restore them to youth. In other words, a subject treated with his serum remained in the same condition, physically and mentally, as existed when the treatment was administered, although, to a certain extent, there was an increase in the development of muscles, an increased flexibility of joints, a softening of hardened arteries and a greater activity, due perhaps, to the fact that the vital organs were not being worked to their limit to stave off advancing age.

Thus the oldest—in point of years—of the doctor's human experiments was to all external appearances over ninety, (his exact age was ninety-three when he had taken the treatment) or precisely as he had appeared when, two years previously, he had submitted his ancient frame to the doctor's injections. His gums were toothless, his scanty hair was snow white, his face was as seamed and gnarled as a walnut, and he was bent, stoop-shouldered and scrawny-necked. But he had thrown aside his glasses, he could see as well as any man, his hearing was acute, and he was as lively as a cricket and physically stronger than he had been for years, and he ate like a sailor. For all he or the scientist could see he would go on in this state until the crack of doom, barring accidents, for each day his blood pressure, his temperature, his pulse and his respiration were carefully noted, microscopic examinations were made of his blood, and so far, not the least sign of any alteration in his condition, and not the least indication of any increase in age, had been detected.

BUT Doctor Farnham was not satisfied with this. If his discovery was to be of real value to the human race, he would have to learn how to restore at least a little of lost youth, as well as to check age; and day and night he worked trying to discover how to accomplish this seemingly impossible miracle.

Countless rabbits, guinea pigs, dogs, monkeys and other creatures were treated, innumerable formulæ were worked out and tested, endless and involved experiments were made, and volumes of closely written and methodically tabulated observations filled the shelves of Doctor Farnham's library.

But still, he seemed as far from the desired result as ever. He was not, in his own estimation, trying to perform a miracle, nor was he striving to bring about the impossible. The human system, or that of any creature, was, he argued, merely a machine, a machine which, through marvelously perfected and most economical means, utilized fuel in the form of food to produce heat, power and motion, and which in addition constantly replaced the worn parts of its own mechanism. The presence of a soul or spirit, as anything divine or incomprehensible, the biologist would not admit, although he willingly granted that life, which actuated the machine, was something which no man could explain or could create. But, he argued, this did not necessarily mean that, sooner or later, the secret of life might not be discovered. Indeed, he affirmed, it was the machine of the body which produced life, rather than life which actuated the machine. And, following this line of reasoning, he would hold that the spirit or soul, or as he preferred to call it, "the actuative intelligence," was the ultimate product, the goal so to speak, of the entire machinery of the organic body.

"The unborn embryo," he once said, "is capable of independent motion, but not of independent thought. It does not breathe, it does not produce sounds, it neither sleeps nor wakes, and it does not obtain nourishment by eating. Neither does it pass excrement. In other words, it is a completed machine as yet inoperative by its own power, a mechanism like an engine with banked fires, ready to be set in motion and to produce results when the steam is turned on. This moment is the time of birth. With the first breath, the machinery starts in motion; cries issue from the vocal organs; food is demanded, waste matter is thrown off and steadily, ceaselessly, the machine continues gradually forming and building up the intelligence until it has reached its highest state, whereupon, the machine, having accomplished its purpose, begins to slow down, to let its worn out parts remain worn, until at last, it is clogged, erratic and finally fails to function."

So, having decided, to his entire satisfaction, that any living creature was in its basic principles a machine, Doctor Farnham felt that in order to keep the machine running forever it was only necessary to provide for the replacement of worn out units and to provide an inducement for the "actuative intelligence" to keep the mechanism going after it had fulfilled its original purpose. And to all intents and purposes, the scientist had accomplished this. Animals which he had treated, and which under his care and observation had lived on for several times their normal span of life, at no time showed any signs of hardening of the blood vessels, or the ac-

cumulation of lime in the system, or of glandular deterioration.

Moreover, the doctor had discovered that creatures which had been treated could propagate their race, although normally they would have been sterile through age, and he grew wildly excited over this, for, if his conclusions were correct, the young of these supposedly immortal animals would inherit immortality. But here Doctor Farnham ran against a seemingly insurmountable obstacle to propagating a race of immortals. A litter of young rabbits remained, for month after month, the same helpless, blind, naked, embryonic things they had been at birth. No doubt they would have continued in that state forever had not the mother, perhaps growing impatient or disgusted with her offspring, devoured the entire litter. However, it proved that the power of inheriting the results of the treatment existed, and Doctor Farnham felt sure that in time he could work out some scheme by which the young would develop to any desired stage of life before the cessation of age took effect, and they would then remain indefinitely in that state. Herein, he felt assured, lay the solution to the restoration of youth. Not that he could restore old age to youth, but that, provided he discovered the means, all future generations would—if they desired—attain vigorous manhood or womanhood and would then cease to increase in age and would forever remain at the very pinnacle of mental and physical power. It was while conducting his researches in this direction that Doctor Farnham accidentally made a most amazing discovery which quite altered his plans, and to which were directly attributable the terrible and horrible events that followed.

He had been working on an entirely new combination of the constituents of his original product, and in order to test its penetrative peculiarities, he injected a little of the fluid into a chloroformed guinea pig—for the doctor was most humane and bitterly opposed vivisection, his idea being to dissect the creature—so as to determine the progress of the material through the various organs. To his utmost astonishment the supposedly dead animal at once began to move, and, before the astounded doctor's eye, was soon running about as lively as ever. Doctor Farnham was speechless. The little creature had been supposedly dead for hours—its body had even been stiff, and yet here it was obviously very much alive.

Could it be that the guinea pig had merely been in a state of anesthesia? Or was it possible,—and Doctor Farnham trembled with excitement at the idea—that his serum had actually restored life to the animal?

Scarcely daring to hope that this was the case, the scientist quickly secured a rabbit from his stock, and placing it under a bell glass administered enough ether to have killed several men. Then, forcing himself to be patient, he waited until the rabbit's body was cold and *rigor mortis* had set in. Even then the doctor was not satisfied. He examined the rabbit's eyes, listened with a most delicate stethoscope for possible heart beats, and even opened a vein in the animal's leg. There could be no question, the rabbit was dead. Then, with nervous but steady fingers, the doctor inserted the point of his hypodermic needle in the rabbit's neck and injected a small quantity of the new liquid. Almost immediately the rabbit's legs twitched, its eyes opened, and as the doctor gazed incredulously, the creature rose to its feet and hopped off.

HERE *was* a discovery! The serum with its new constituents would not only check the inroads of age but it would restore life!

But Doctor Farnham was a hard-headed scientist and not a man given to imaginative romancing, and he fully realized that there must be limitations to his discovery. It could not, he felt sure, restore life to a creature which had met a violent death through injury to a vital organ, nor to a creature which had died from some organic disease. In coming to this conclusion he was unconsciously comparing living things with machinery, as usual. "One might stop the pendulum of a clock," he thought, "and the mechanism will cease to function until the pendulum is again put in motion; but if the clock stops through loss of a wheel or broken springs or cogs, it cannot be made to function again unless the broken parts are replaced or repaired."

But, he pondered, would his treatment revive animals which had succumbed to death by other means than anesthetics? That was a most important matter to settle, and Doctor Farnham immediately proceeded to settle it. For his first experiment, a kitten was sacrificed to the cause of science, and was humanely and very thoroughly drowned. In order that his experiment might be the more conclusive, the biologist decided to delay his attempted resurrection until all possibility of ordinary means of resuscitation were at an end, in other words he set four hours as the time which he would permit to elapse before he injected his serum in the defunct cat. In the meantime, he prepared for another test. He had mentally checked off the various causes of premature death, aside from those by organic disease and violence, and found that drowning, freezing, gas-poisoning, and poisoning by non-irritant poisons led the list; after these came fright, shock, and various other rare causes.

It might be difficult to provide subjects killed by all of these means, but he could test the efficacy of his treatment on the more important ones, so he proceeded to prepare subjects by freezing, gassing and poisoning a number of animals. By the time these corpses had been made ready, the dead cat had reposed upon his laboratory table for the alotted four hours, and, with pulse quickened in a wholly unscientific manner, Doctor Farnham forced a dose of his compound into the kitten's neck. In exactly fifty-eight seconds by the doctor's watch, the cat's muscles twitched, its lungs began to breathe, its heart commenced to resume its interrupted functions, and at the expiration of two minutes and eighteen seconds, the kitten was sitting up and licking its damp and bedraggled fur. The experiments with the frozen, gassed and poisoned subjects were equally successful, and Doctor Farnham was thoroughly convinced that, barring injuries or deterioration of vital organs or excessive loss of blood, any dead animal could be brought back to life by his process. Naturally, he was most anxious to test the marvelous compound on human beings, and

he at once hurried to the coroner's office with a request that he might try a new form of resuscitation on the next person drowned or poisoned on the island. Then he visited the hospital in the hopes of finding some unfortunate who had expired through some cause which had not wrought injury to the vital organs, but was again disappointed. However, the authorities promised to notify him if such a case as he desired turned up, and filled with thoughts of what his discovery might mean to the human race, he returned to his laboratory to carry on more extensive tests.

Among other matters, he wished to determine how long a creature could remain dead and yet be revived, and, with this end in view, he began a wholesale slaughter of his menagerie intending to label each body and carry on a progressive series of experiments, each animal being allowed to remain dead a certain number of hours, until his injections failed to restore life, thus enabling him to determine the exact limits of its efficacy.

It so happened, that in the excitement and interest of his discovery, he had neglected to place the resurrected kitten in a cage, and during his absence from the laboratory, his servant—the youngest of the three human immortals—had found the creature loose, and thinking it had escaped from its pen, had replaced it with the other cats. And later when the doctor selected half a dozen healthy-looking cats as martyrs to science, he inadvertently included the animal which, a few hours previously, he had brought back from death. And this trivial incident led directly to an even more astounding and incredible discovery than any he had made hitherto.

Together with its fellow felines, the resurrected kitten was placed in an air-tight chamber into which lethal gas was forced, and wherein the cats were allowed to remain for nearly an hour. Feeling certain that the deadly fumes had most thoroughly done their work, the doctor, wearing a gas-mask, opened the chamber preparatory to removing the bodies of the deceased creatures. Imagine his amazement when, as the cover was removed, a bristling, meowing cat sprang from within, and racing across the room, leaped upon a table, spitting and snarling and most obviously very much alive.

"Extraordinary! Most extraordinary!" exclaimed the scientist, as he caustiously peered into the chamber and saw the other cats stretched lifeless within. "A most remarkable example of natural immunity to the effects of hydrocyanic acid gas. I must make a note of the fact."

After considerable difficulty in mollifying the irate creature, Doctor Farnham examined her most carefully, puzzling his brains over the strange ability of the cat to survive the fumes which were so fatal to its fellows. In doing so he noticed a small wound upon the cat's neck and uttered a surprised ejaculation. This was the very cat he had resuscitated! The mark upon its neck was where he had inserted his hypodermic needle, and across his brain flashed a wild, impossible thought. The cat was immortal! Not only would it resist death by age indefinitely, but it could not be killed!

But the next instant, the scientist's common sense came to his rescue. "Of course," he reasoned, "that is impossible; absolutely preposterous."

But, after all, he thought, was it any more preposterous than bringing dead creatures back to life? There might, he mentally reasoned, be some unknown effect of his treatment which rendered creatures subjected to it immune to certain poisons. But if so, then other means would destroy the cat's life, and, anxious to prove this theory, he secured the cat and proceeded to drown her the second time. Having left her immersed in water for a full hour, Doctor Farnham lifted the wire basket containing the supposedly defunct kitten from the tank, and the next second leaped back as if he had been struck. Within the close-meshed container the cat was scratching, yowling, fighting like a fury to escape, and evidently very much alive and most highly indignant at having been immersed in the cold water.

UNABLE to believe his senses, Doctor Farnham sank into a chair and mopped his forehead while the cat, having at last freed itself, dashed like a mad thing about the room and finally sought refuge under a radiator.

Presently, however, the doctor recovered his accustomed self possession, and considered the seeming miracle more calmly. After all, he thought, the cat had been restored to life after drowning, so why was it not possible that having once been resuscitated, it could not thereafter be drowned, even though subject to death through other means? But then again, the creature had also survived the gas. Here was something that must be investigated. He would try freezing the cat—he chuckled to himself as he thought of the time-honored saying that cats had nine lives—and if the beast still refused to succumb he would test every other means. But the cat had other ideas on the subject and, having had quite enough of the doctor's experiments, it eluded the scientist's grasp, and with arched back and fluffed-out tail sprang through a partly-opened window and vanished forever in the shrubbery of the open spaces.

Doctor Farnham sighed. Here was a most valuable and interesting experiment lost, but he soon consoled himself. He recollected that he still had a rabbit and a guinea pig which had also been revived from an apparently dead state, and he could carry out his tests on these.

And the doctor became more and more astounded as his tests proceeded. The two creatures were frozen as stiff as boards, but no sooner had they thawed out than they were as healthy and lively as before; they were gassed, chloroformed, poisoned and electrocuted but all to no purpose. They could not be put to sleep by anesthetics and they could not be killed. At last the scientist was forced to believe that, utterly incredible as it might seem, his treatment literally rendered living things immortal.

And when at last he was convinced, and had assured himself that he was still sane, he threw himself into a chair and roared with truly maniacal laughter.

What would the papers back in the States say to this? What would those numbskull, facetious cub reporters say if they could only witness the experiments he had just conducted? Would they laugh at the possibility of immortality now? They were

unable to take his modest claims seriously then, and now, now he actually had discovered the secret of immortality and all the marvelous things it meant. And as his mind dwelt on this he fairly shook with the excitement and the immensity of it all. Not only could human beings live on forever, as far as age was concerned, but they would be immune from the most common causes of accidental death. Persons going on sea voyages would have no dread of disaster for they could not be drowned. Electricians need have no fear of live wires or third rails for they could not be killed by any current. Arctic explorers could be frozen solid but would revive when thawed out. And half the terrors of war, the deadly gases on which such vast sums had been spent and to which so many years of research had been devoted, now meant nothing, for an army treated with the marvelous compound would be immune to the effects of the most fatal gases.

And the immunity to death was inheritable. In a few generations the inhabitants of the country which possessed the secret would all be immortals. What a power, what a secret for a nation to own! What possibilities were opened for a race which was immortal! What progress, what inventions might be made by men who could work on, could use their brains and their muscles for hundreds, thousands of years!

The doctor's head fairly whirled with the ideas that crowded his brain. But still he was not entirely satisfied. He had proved his amazing discovery by testing it on the lower animals, but was he positive that it would perform the same miracles on human beings? He thought of trying it on his three companions, but hesitated. Suppose, suppose some peculiarity of the human system prevented the same results that he had secured with cats, rabbits and guinea pigs. Supposing he drowned, poisoned or gassed one of the three old men and the fellow failed to revive? Would he not be guilty of murder in the eyes of the law, even if the subject had willingly submitted to the test? And dared he actually take the risk? Doctor Farnham shook his head as he thought on this. No, he admitted to himself, he would not dare risk it. Many times, he knew, experiments which were perfectly successful with the lower animals, were anything but successful when applied to men. And then again, if he could not test his discovery on human beings, how would he ever be sure that it would or would not render mankind immortal?

Possibly, he decided, by dissecting one of his immortal creatures, he might discover something which would throw light on the matter. And then a puzzled, troubled frown wrinkled his forehead. He was a humane, kind-hearted man and thoroughly antagonistic to vivisection. And yet, how could he dissect one of his creatures without practicing vivisection? Of course, he thought, he could kill the rabbit by a blow on the back of the head, by piercing the brain painlessly with a lancet or by decapitating it. But in that case he might be destroying the very thing which he was in search of.

Still, that was the only way. Not even in the interests of science, not to set his mind at rest, would he willingly torture any living thing. But he could kill the rabbit by injuring its brain and kill the guinea pig by an equally painless death by way of its heart, and thus be reasonably sure of having both the nervous and circulatory systems uninjured.

So, rather regretfully, he picked up the unsuspecting rabbit, and with the utmost care and precision, he thrust a slender-bladed scalpel into the base of the creature's brain.

The next instant his instrument fell from his hand, he felt faint and weak, and he sat staring with gaping jaw and unbelieving eyes. Instead of becoming instantly limp in death at the thrust, the rabbit was quite unconcernedly nibbling a bit of carrot, and appeared as much alive and as healthy as before!

Doctor Farnham now felt convinced that he had gone mad. The excitement, the nerve strain, his long hours of experimenting had caused him to have hallucinations, for he well knew that no matter how remarkable his discovery had actually proved, no warm-blooded vertebrate could survive a scalpel thrust in its brain.

HE shook himself, rubbed his eyes, pinched himself. He looked about his laboratory, gazed at the palm trees and shrubbery of the grounds about his dwelling, perused a few pages of a book, and put himself to a dozen tests. In every respect he seemed in his normal senses.

Something, he reasoned, must have gone wrong. By some error he had failed to reach a vital spot, and forcing himself to calmness, and steadying his nerves by a tremendous effort, he again picked up his lancet, and holding the rabbit's head immovable, he ran the full length of the razor-edged blade into the animal's brain.

And then he almost screamed, and limp and faint, slumped into his chair, while the rabbit, shaking its head and wiggling its ears as if a bit uncomfortable, hopped from the table and began sniffing about for bits of carrot which had dropped to the floor!

For fully half an hour the biologist remained, inert, entirely overcome, his nerves shaken, his brain in a whirl. How could such a thing be possible? By what uncanny means could his discovery have operated to preserve life in a creature even when a vital organ was injured?

It could not be, he decided; it was far too miraculous; far beyond all bounds of science.

At last, slowly, almost fearfully, Doctor Farnham rose, and with determination written on his features, he secured the guinea pig, and, by an almost superhuman exercise of will power, he stretched the animal upon a table and deliberately ran a scalpel through its heart. But, aside from a small amount of blood which issued from the wound, the creature appeared absolutely uninjured. Indeed it did not even seem to suffer any pain and made no effort to escape when released.

For the first time in his life, Doctor Farnham swooned.

When, nearly an hour later, his henchman, frightened half out of his wits, managed to revive the scientist, darkness had fallen, and, trembling and utterly unnerved, Doctor Farnham staggered from his laboratory, scarcely daring to look about and

wondering if it had all been some nightmare or the hallucination of his fainting fit.

It was a long time before he recovered his usual calm, and having forced himself to view the two animals which, by all accepted ideas and scientific facts, should be stiff in death, were enjoying excellent health, and having braced himself by a hearty meal and some fifty-year-old rum, the doctor set himself to face incontrovertible facts and to determine the reasons therefor.

From the time he had entered his senior year at college, he had devoted himself to the study of biology, which, as everyone knows, is the science of life. No other biologist living had won such an enviable reputation as a master of the science. No other biologist had made more important or world-famous discoveries. No other scientist could boast of such a voluminous and complete library or a more valuable and perfect collection of instruments, apparatus and paraphernalia for studying in his chosen field, for Doctor Farnham was fortunate in being immensely wealthy, and he devoted all his income to his beloved science. Although thoroughly revolutionary and unconventional in his theories, his experiments and his beliefs, yet he was willing to admit that no man can know everything, and that the most exact and careful persons will at times make mistakes. Hence, even if he did not entirely agree with them, he would consult works of other scientists, and, very often, he would find much of value in their monographs and reports. Also, on more than one occasion, he had seized upon some statement or apparently unimportant data which had been passed by with cursory mention, and by his keen insight and intensive knowledge, had built it up to a scientific truth which startled the scientific world.

So now, faced with an impossible fact, Doctor Farnham proceeded, in true scientific manner, to get at basic facts and discover how and why something which existed had always been deemed non-existent.

Surrounded by his own voluminous notes, the reports and scientific works of every well known biological authority, society and organization of the past five or six centuries, as well as by every known reference work, Doctor Farnham began his task.

To describe in detail all his deductions, to analyze his reasonings, or to mention the authoritative confirmations—in a dozen languages, which led to his final conclusions—would be impossible. But, as transcribed in his notes, which he jotted down as he worked, they were as follows:

"No one can exactly define life and death. What is fatal to one form of animal life may be innocuous to other forms. A worm or an amœba, as well as many invertebrates, may be subdivided, cut into several pieces, and each fragment will continue to survive and will suffer no inconvenience. Moreover, under certain conditions, two or more of these fragments may join and heal together in their original form. Some vertebrates, such as lizards and turtles, may survive injuries which would destroy life in other creatures, but which, in their cases, produce no ill effects. Cases are numerous in which such organs as hearts or even brains have been removed from tortoises, and yet the creatures survived and were able to move about and eat for considerable periods. We speak of vital organs, but can we say which organs *are* vital? An accidental injury to the brain, heart or lungs may cause death, and yet even more serious injuries may be inflicted by surgeons and the patient will survive. A human nose, ear or even a finger, if severed, may be made to grow to the stump, but a limb once severed cannot be rejoined. But why not? Why should it be possible to graft certain organs or portions of anatomy and not others? One man may be shot through the brain or heart and may be instantly killed, while another may have several bullets fired through his brain or may be shot or stabbed through the heart and may live in perfect health for years thereafter. Even so-called vital organs may be removed by surgery without visibly affecting the patient's health, whereas an injury to a non-essential organ may produce death in another. It is not uncommon for persons to die of hemorrhage from a pin prick or a superficial abrasion of the skin, while it is equally common for persons to survive the loss of a limb by an accident or the severing of an artery.

"Life is customarily defined as a condition wherein the various organs are functioning, when the heart beats and the respiratory system is in operation. Conversely, a person or other animal is ordinarily considered dead when the organs cease to function and heart and lung actions cease. But, in innumerable cases of suspended animation, all organs cease functioning and there are no audible or visible traces of heart or lung action. In cases of immersion or drowning, the same conditions exist, the blood ceases to flow through arteries and veins, and the victim, if left to himself, will never revive. But by artificial respiration and other means he may be resuscitated. Is the drowned person alive or dead?

"To sum up: It is impossible to define life or death in exact or scientific terms. It is impossible to state definitely when death takes place until decomposition sets in. It is impossible to say what causes life or produces death. No one has ever yet determined the uses or functions of many glands, and no one can explain the precise action of stimulants, narcotics, sedatives or anesthetics.

"Is it not possible or even probable that, under certain conditions, life may continue uninterrupted despite causes which ordinarily would result in death? Is it unreasonable to suppose that certain chemical reactions may be produced which will so act upon the vital organs and tissues that they resist all attempts to destroy their functions?

"My contention is that such things are possible. That, scientifically speaking, there is no more reason for an animal surviving the removal of its kidney, stomach, spleen or ductless glands, or injuries to these organs, than for surviving similar injuries to or the removal of the heart, brains or lungs."

HERE the doctor dropped his pen, pushed aside his pad and books, and became buried in thought. He had, after all, learned nothing he did not already know. He had come back to his starting point. In fact, he had already answered his own queries and had proved his contention. But

his studies and researches had started new trains of thought. Never before had he been so close to the mystery of life and death. Never before had it occurred to him that life might be a thing entirely apart from the mere physical organism,—the machine, as he called it. And if his theories were correct, if his deductions were sound, could he not then restore life to a creature killed by violence or whose organs were injured or diseased? And where might his discovery not lead? Into what weird, uncanny, bizarre and utterly incredible fields might he not enter? If a creature could be so treated that it could resist death by drowning, by gassing, poisoning, freezing and electrocution, and the perforation of heart or brains, would it be possible to deprive that creature of life by any means? Even if the animal were cut into pieces, if its head were severed from its body, would it die? Or would it, like the earthworm or the amœba, continue to live, and living, would the parts reunite and function as before?

Suddenly the scientist leaped from his chair as if a spring had been released beneath him. He had it at last! That was the solution! No one had been able to explain why certain forms of life could be subdivided without injury, while other forms succumbed to comparatively slight injuries.

But whatever the reason, whatever the difference between the lower and higher animals as regards life and death, he had bridged the gap. By his discovery the warm-blooded invertebrates were rendered as indestructible as animalcules.

Yes, it must be so; it must be that by his treatment a mammal could survive the same mutilation as an earthworm. A man—, excited, forgetting everything else in his desire to prove that he was right, Doctor Farnham rushed to his laboratory, seized the rabbit, and without the least qualms or hesitation severed the head from the body.

And although he had been prepared for it, although he was confident of the result, yet he paled, and staggering back, grasped a chair for support, when the headless creature continued to hop about, erratically and aimlessly, but fully alive, while the bodiless head wiggled its nose, waved its ears and blinked its eyes as if wondering what had become of its body. It was a ghastly, horrible, nightmarish sight, but scientific ardor had driven everything else from the mind of the doctor, and hastily picking up the living body and the living head, he placed them together, sewed and splinted them securely in position, and elated at the success of his experiment, placed the apparently contented and non-suffering rabbit in its cage. But there was still one experiment Doctor Farnham had not tried. Could he resuscitate a creature killed by violence? He would soon find out; and securing a healthy hare he mercifully and painlessly killed it by a thrust in its brain, and immediately prepared to inject a dose of his almost magical preparation into the dead animal's veins.

But the test was never made, for Fate now took a hand in the scientist's experiments and enabled him to carry out his seemingly impossible desire to test his marvelous discovery upon human beings.

AS everyone knows, Abilone Island is of volcanic formation and is subject to frequent earthquakes. Hence, while during the past few days earth tremors had been felt, no one gave much attention to them, and even Doctor Farnham, who subconsciously noted that one or two tremors had been unusually severe, was merely disturbed because they interfered with his work and the adjustment of his delicate instruments.

Now, as he bent above the dead body of the hare, his hypodermic syringe in hand, a terrific quake shook the earth; the floor of the laboratory rose and fell; the walls cracked; glass came slithering down from the skylight; beakers, bell-glasses, retorts, test-tubes, jars and porcelain dishes toppled to the floor in a clash of shattered fragments; tables and chairs were overturned, and the doctor was thrown violently against the wall. It was no time for hesitating, no time for scientific experiments, and Doctor Farnham, being thoroughly human and quite alive to his own danger, dashed from the wrecked laboratory to the open air, still grasping his syringe in one hand and a vial of his preparation in the other. Quite forgetting that they were supposedly immortal, his three aged companions rushed screaming with terror from the crumbling dwelling, and, scarcely able to keep their feet, nauseated and dizzy from the rocking, oscillating earth shocks which followed one another in rapid succession, the four gazed speechless and awed as the buildings were reduced to shapeless ruins before their eyes.

But the worst was yet to come. Following upon the quakes, came a deafening, awful roar—the sound of a terrific explosion that seemed to rend the universe. The sky grew black; bright daylight gave way to twilight; the palm trees bent with a howling gale, and, unable to stand, the four men threw themselves flat upon their faces.

"An eruption!" shouted the doctor, striving to make himself heard above the howling wind, the explosive concussions that sounded like the detonations of shell-fire, and the thrashing of palm-fronds. "The volcano is in eruption," he repeated. "The crater of Sugar Loaf has burst into activity. We are probably out of danger, but thousands of people may have been destroyed. God pity the villagers upon the mountain's slopes!"

EVEN while he spoke, dust and ashes began to fall, and soon, the earth, the vegetation, the ruins of the buildings and the men's clothing were covered with a gray coating of the volcanic ash. But presently the dust ceased to fall, the wind died down, the explosions grew fainter and occurred at longer intervals and the four shaken and terrified men rose to their feet and gazed about upon a landscape they would never have recognized.

The houses, outbuildings, laboratory and library were utterly destroyed, for fire had broken out and had completed the destruction of the earthquake, and Doctor Farnham's priceless books, his invaluable instruments, his work of years were gone forever. Somewhere under the heap of blazing ruins lay the formulæ and ingredients for his elixir of immortality; somewhere in the smoking pile reposed the bodies of the creatures which had proved its efficacy, and sadly, unable to voice the immensity of his loss, Doctor Farnham stood re-

garding what had so shortly before been his laboratory. Suddenly, from beneath the piles of débris, a brown and white creature appeared, and with a confused glance about, scuttled off into the weeds and brush. The scientist stared, rubbed his eyes and gasped. That any living thing could have survived that catastrophe seemed impossible. And then he broke into hysterical laughter. Of course! He had forgotten! It was the immortal guinea pig! And scarcely had this explanation dawned upon him when, from another pile of blackened, shattered masonry and timbers, a second animal appeared. Like a man bereft of reason the doctor stared incredulously at the apparition,—a large white rabbit, its neck swathed in bandages and adhesive tape. There could be no doubt of it. It was the rabbit whose head had been severed from its body and then replaced! All of the biologist's scientific ardor came back with a rush at sight of this incredible demonstration of the miraculous nature of his discovery, and leaping forward, he attempted to capture the little rodent. But he was too late. With a bound, the rabbit gained a clump of hibiscus and vanished as completely as if the earth had swallowed him up.

For a moment Doctor Farnham stood irresolute, and then he gave vent to a shout which startled his three companions almost out of their immortal senses. Across his brain had flashed an inspiration. There must be scores, hundreds, perhaps thousands of men and women killed or badly injured by the earthquake and eruption. He still possessed enough of his anti-death preparation to treat hundreds of persons. He would hurry to the stricken districts near the volcano, and would use the last drop of his priceless compound in restoring life to the dead and dying. At last he could test his discovery on human beings to the limit of his desires, and he would be carrying on a work of humanity and incalculable scientific value at one and the same time. If nothing were gained, nothing would be lost, whereas, if the treatment proved efficacious with human beings, he would have saved countless lives and would have rendered those he treated immortal and forever safe from subsequent eruptions and earthquakes. Luckily, partly owing to chance and partly owing to carelessness, the doctor's shabby but thoroughly serviceable car was uninjured, having been left standing in the driveway at some distance from the buildings. Leaping into it and followed by the uncomprehending three, Doctor Farnham stepped on the gas and dashed toward the mountain slopes above which hung a dense black smoke cloud lit up by vivid flashes of lightning, intermittent bursts of flaming gas, and outbursts of incandescent lava-bombs.

"Not so serious an eruption as I thought," commented the scientist, as the car, bumping over the earthquake-disrupted roads and across cracked culverts and bridges, drew nearer and nearer to the hills. "Apparently largely of local extent," he continued, "no signs of mud flows on this side of the cone,—probably ejected on the opposite side towards the sea."

And it must be admitted that, as Doctor Farnham drew near to the still active and threatening volcano, he became somewhat disappointed at finding the catastrophe had been no worse. Not that he was sorry the eruption had caused such a comparatively small amount of damage and loss of life, but because he began to fear that he would have no opportunity to test out his discovery on human beings.

But he need not have worried. Although, as he had assumed, the crater had erupted on the northern side, and the stupendous masses of red-hot lava and lava-bombs had flowed down the almost uninhabited seaward slopes into the ocean, still several small villages and many isolated houses had been utterly wiped out of existence; scores of persons, both white and black, had been burned to cinders or buried under many feet of ashes and mud; thousands of acres of cultivated fields and gardens had been transformed into barren, desolate steaming seas of mud, and an incalculable amount of damage had been done.

Close to the crater, which since time immemorial had been considered wholly extinct, the destruction, where it had occurred at all, had been complete. But beyond this zone of scalding steam, red-hot cinders and blazing gases, even greater fatalities had occurred through the action of heavy, deadly gases which, descending from the upper strata of air, had left hundreds of asphyxiated human beings in its wake.

But as is almost always the case with volcanic eruptions and phenomena, the death-dealing fumes had taken their toll in a most erratic and inexplicable manner. People had fallen in their tracks by scores in one spot, while within a few yards, none had suffered. One side of a village street had been swept by the noxious gas, while the opposite side of the narrow thoroughfare had been unaffected, and, when later intelligible reports had been made, it was found that in several instances a man had been overcome and killed while conversing with a friend who had escaped without injury. Of all the settlements which had thus been made the target for the deadly gases, that of San Marco had suffered the most, and as Doctor Farnham and his companions drove into the stricken village the scientist knew that the opportunity of his lifetime had come. Everywhere, the crumpled-up, inert bodies of men and women lay where they had fallen when overcome by the gas from the volcano. They were stretched on the sidewalks and in the street, they lay sprawled on steps and in doorways; the market place and tiny plaza were filled with them, and less than a dozen of the inhabitants of the town remained alive and unhurt. And as these had fled from the gas-stricken village, Doctor Farnham and his three men were the sole living beings in San Marcos. Naturally, the scientist was immensely pleased. There was nobody to interfere with him or to raise foolish and wholly unjustifiable objections to his work. There was a superabundance of material to work on, and subjects of the most desirable kind, for at his first glance Doctor Farnham knew that the people had been killed by gas or shock, and that the deaths had not been caused by injuries to vital organs, in which case he would have had less confidence in his treatment. And we cannot blame him for his elation at finding the village strewn with corpses.

Why should he have felt sorrow, pity or regret when, in his own mind, he felt positive that he could bring the stricken people back to life, yes, more than life, to a state of immortality? To him they were not dead, but merely in a temporary state of suspended animation, from which they would awaken never to die.

Leaping from his car, and assisted by his three ancient, but lively and energetic companions, Doctor Farnham proceeded methodically to inject the minimum dose of his precious elixir of life into each body in turn. At the very outset, however, he realized that he could not by any possibility restore *all* the dead in the village to life. He did not possess half enough of his compound for that, and he was in a quandary. In the first place, he most ardently desired to retain enough of his material to test it on the bodies of those who, he felt sure, must have met violent deaths nearer the volcano. In the second place, how could he decide whom to save and bless with immortality and whom to leave?

It was a difficult, hard question to solve, for never before had any one man possessed the power of life and death over so many of his fellows. But he could not devote much time to deciding. He did not know how long a human being could remain dead and be resuscitated, and much precious time had already elapsed since the villagers had been struck down by the gas. Some decision must be made at once, and he made it. Life, he decided, was more important to the younger and more vigorous persons than to the aged, and more desirable to the intelligent and educated individuals than to the ignorant and illiterate. He knew that, broadly speaking, his treatment would result in the persons treated remaining indefinitely in the physical state in which they were at the time of treatment, that even with the slightly renewed vigor and strength which followed, an old man or woman would remain physically old, and, he reasoned, it was very probable that an infant or a child would remain forever undeveloped mentally and physically. Hence, for the good of the world, he would treat the bodies of those who had died in the prime of life,—but for the sake of science a few of the children would be treated as well—permitting the old, the diseased, the maimed and the decrepit to remain dead. In this, he felt he was not acting inhumanely or callously. He could only save a certain number anyway, and those whom he passed by would be no worse off than they were at present, for he had assured himself, by a rapid examination, that according to all medical and known standards the victims were as dead as door nails.

SO, having come to his decision, he hurried about, injecting his compound into the veins of those he deemed worthy to survive, and in the meantime filled with visions of the future, of a race of immortal people developing from the nucleus he had started. Anxious to know the results of his treatment, and to find out how long it took for a dead person to come back to life, Doctor Farnham ordered his three companions to remain behind and watch the bodies of those treated, and to report to him the moment any of the dead showed signs of reviving. He had commenced his work at the plaza, and here he stationed one of the three; at the market he left another, and the third was to be stationed a few blocks farther on. By the time Doctor Farnham reached the market he had treated several hundred bodies, and yet no word had come from the fellow watching for results at the plaza. Doubts began to assail the scientist as he continued on his way. Perhaps, after all, human beings would not respond to his treatment. Possibly the effects of this particular and unknown gas rendered his treatment valueless. It might be . . . Terrifying sounds from the rear suddenly interrupted his thoughts. From the direction of the plaza came screams, shouts, a babel of sounds. It had worked! Where a moment before was the silence of death now could be heard the unmistakable sounds of life. The dead had been raised. The impossible had been accomplished, and, forgetting all else in his anxiety to witness the resurrection, Doctor Farnham dropped syringe and vial beside the body he had been about to treat, and hurried towards the plaza.

The sounds were increasing and coming nearer. Of course, he thought, the dead in the market were coming to life. But why, he wondered, had his two men failed to report?

The answer came most unexpectedly. Racing as fast as their old legs could carry them, the two fellows came dashing around a corner; terror on their faces, panting and breathless, while at their heels came a mob of men and women, screaming, shouting incomprehensible words, waving their arms threateningly, and obviously hostile.

Gaspingly, hurriedly, the two men tried to explain. "They're mad," exclaimed he who had been stationed at the plaza, "murderin' mad! Lord knows why, but they set on me like tigers. Mauled me something dreadful. How I lived through it I dunno. Cracked me over the head with stones and beat me up."

"Me, too," chimed in the fellow who had been at the market place. "Stuck a machete in me, one fellow did. Looka here!" As he spoke he bared his chest and revealed a three-inch incision over his heart. The doctor, despite the approaching and obviously dangerous mob, gasped. The wound should have killed the fellow, and yet he appeared in no way inconvenienced. Then it dawned upon him. Of course he had not been killed. How could he be killed when he was immortal!

The two men were in no danger. No matter what the mob did they would survive, and Doctor Farnham had a fleeting, instantaneous vision of the two fellows being chopped into bits or torn to pieces and each separate fragment of their anatomies continuing to live, or perhaps even reuniting to form a complete man again. And bitterly he regretted that he had never tried the treatment on himself. Why hadn't he? For the life of him he didn't know. But there was no time for introspection or regrets. The mob was close now, and something must be done. "You can't be hurt," he shouted to his companions. "You are immortal. Nothing can kill you. Don't run, don't be afraid. Face the mob."

But the fellows' confidence in the scientist's treatment and words was not great enough to cause them to obey, and furtively glancing about for a refuge, they prepared to flee. For a brief instant the doctor thought of facing the mob, of reasoning with them, of explaining why he was there, of quieting them, for he had reasoned that, in all probability, their actions were due to terror and nerve strain; that, reviving, they had been filled with the mad terror of the eruption which had been their last conscious sensations; that seeing many of their fellow men still lying dead they had become panic-stricken, and that their attack on the two watchmen had been merely the unreasoning, unwarranted act of half-crazed, fear-maddened men.

But the scientist's half-formed idea of facing the mob was abandoned almost as soon as conceived. No one could reason with the crowd. In time the mob would calm down; once they realized the eruption was over they would forget their terrors and would busy themselves burying the remaining dead. For the present, discretion was the better part of valor, and seizing his three companions, for the third fellow had now arrived on the scene, Doctor Farnham ducked around the nearest building and the four raced like mad for the car. But even as they fled, shouts, curses and screams came from the other direction; men and women appeared from streets and dwellings, and scores of resuscitated people rushed forward and fell madly, fiendishly upon the mob from the plaza. Instantly pandemonium reigned, and the four fugitives stood, transfixed with the horror of the scene. Fighting, clawing, biting, stabbing, the people fell upon one another, and the watching four shuddered as they saw men and women, minus arms or hands, faces shapeless masses of pulp, bodies gashed, pierced and torn, still leaping, springing about; still struggling and wholly oblivious to their terrible wounds, for being immortal nothing could destroy them.

Heedless of the dead bodies which had not been resuscitated, the struggling mob swayed here and there, while now and then—and Doctor Farnham and his men felt faint and sick at the sight—some panting man or woman would leave the milling mob, and springing like a beast on one of the trampled corpses, would tear and devour the flesh.

It was too much! Madly the four raced to the car, leaped in, and unheeding the peril of the road drove towards the distant town.

As they tore along, Doctor Farnham gradually calmed himself and forced his mind to function in its accustomed manner. He could not fully account for the horrible savagery of the resurrected inhabitants of the village, but he could formulate reasonable theories to account for it. "Reversion to ancestral types under stress of great mental strain," he mentally classified it. "Suddenly finding themselves alive and safe after the impression that they were being destroyed, released inhibitions and gave dormant, savage instinct full rein. A mental explosion as it were. Probably normal calm and other conditions will follow."

But was it not possible,—and the scientist trembled at the thought,—was it not possible that while his treatment restored life, it did not restore mentality? He had hitherto experimented only with the lower animals, and who could say whether a rabbit or a guinea pig possessed normal or abnormal mentality after being retrieved from death? Then, through Doctor Farnham's mind came thoughts of the actions of the kitten which he had first resuscitated by his discovery, and he remembered how the beast had spit and scratched and yowled, finally escaping and taking to the brush like a wild thing. Perhaps only the physical organism could be restored to life, and the mental processes remained dead. Perhaps, after all, there *was* such a thing as a soul or spirit and this fled from the body at death and could not be restored. Doctor Farnham shivered despite the sweltering heat of the sun. If this were so, if all the soul or spirit or reason or whatever it was that kept the balance of a human being or any animal, if this inexplicable unknown thing were absent when the dead were revived, then God help the world. As the possibilities of this, as the probabilities of it, fully dawned upon Doctor Farnham, he cursed the day when he had first discovered his compound. Instead of benefitting mankind he had wrought destruction. He had produced immortal beings devoid of every spark of humanity, love, affection, kindness, intelligence, knowledge of right or wrong, self-restraint or any of the attributes of human beings. They could not be destroyed, they could propagate their kind, and gradually, but surely and irresistibly they would occupy the world to the exclusion of all other beings.

NO one could visualize the results. The resurrected dead and their progeny must continue. They could not even destroy one another, and the entire earth would become a hell such as Dante never dreamed of. "But was such a terrible calamity possible?" thought the doctor, as, weak and shaking, he subconsciously guided his car towards the town. "Would Almighty God permit such an inexpressibly horrible thing?" And now, for the first time in many years, Doctor Farnham found himself thinking of God, mentally praying to the Creator that his wild thoughts might be wrong, beseeching the Almighty to prevent any such calamity resulting from his well-meant efforts to aid the human race.

Then, more calmly, and feeling vastly relieved, he tried to cheer himself with the thought that, after all, there might be no basis for his fears. Perhaps the actions of the savage beings back in the village were merely temporary, that possibly, even if mentality or the soul was lacking at first, it would return in time and again fit itself to the resurrected body. No one could say, no one could do more than theorize; but whatever the ultimate result, Doctor Farnham had made up his mind that he would report the matter to the authorities, that regardless of what the consequences might be for him, he would make a clean breast of it, and would do all in his power, would devote all of his fortune and his time to trying to right what he had done, if, as he feared, matters were as bad as they might be.

In this manner came the Plague of the Living

Dead, as it was afterwards known. At first, the authorities at Abilone believed that Doctor Farnham and his three companions had gone temporarily mad through the effects of the earthquake and the eruption, and they tried to calm the four and to soothe them. But when, a few hours later, the survivors of a relief party reported that the village and the neighborhood was filled with wild, blood-mad savages, and that three members of the party had been attacked, killed and torn to pieces, the authorities took action, although they still had no faith in Doctor Farnham's tale, and scoffed at the idea that he had resuscitated the dead or that the savages were immortal, and considered these the hallucinations of an overwrought mind,

No doubt, they said, the survivors of the catastrophe had been driven crazy by the eruption and had reverted to savagery, but it would be a simple matter to round them up, confine them in an asylum and gradually cure them.

But the force of police sent to the vicinity of the village found that neither Doctor Farnham nor the relief party had exaggerated matters in the least. In fact, only two policemen managed to escape, and with terror-filled eyes they told a story of horrors beyond any imagination. They had seen their fellows destroyed before their eyes. They had poured bullets into the bodies of the savage villagers at close range, but with no effect. They had fought hand to hand and had seen their short swords bury themselves in their antagonists' flesh without result, and they shuddered as they told of seeing armless, yes, even headless, men fighting like demons.

At last the officials were convinced that something entirely new and inexplicable had occurred. Incredible as it might seem, the doctor's story must be true, and something must be done without delay to rid the island of its curse,—this Plague of the Living Dead. Far into night, and throughout the following day, all the officials of the island sat in conference with the scientist, for, being sensible men, the authorities realized that no one would be so likely to offer a solution of the problem as the man who had brought it about. And very wisely, too. The first suggestion that was made and acted upon was to establish a strict censorship on everything leaving the island. To let the outside world know what had occurred would be most unwise. The press would get hold of it; reporters and others would rush to the island to secure the facts; Abilone would be made the butt of incredulous ridicule or a place accursed, according to whether or not the press and public believed in the reports. But how to establish a censorship, how to prevent outsiders from visiting the island or to prevent the islanders from leaving was the question. This was solved by Doctor Frisbie, the medical inspector of the port. It would be announced that a virulent contagious disease had broken out in a remote village,—which was in a way no more than the truth, and that until further notice, no vessels would be allowed to enter or leave the ports. Of course, this would entail some hardships, but the available supplies of food were sufficient to support the population for at least several months, and long before the expiration of that period it was hoped that the Living Dead would be eliminated. But as time passed, those upon Abilone began to fear that no human power could conquer the soulless automatons in human form who cursed the land and could not be destroyed. Luckily, being absolutely lacking in intelligence and with no reasoning powers, the things did not wander far, and showed no inclination to leave their original district to attack persons who did not bother them. And to prevent any possibility of their spreading, immense barriers of barbed wire were erected about the locality where the Living Dead held sway.

As Doctor Farnham had pointed out, the barbed wire would not deter the things through the pain or injuries caused by its jagged points, and hence the fence was erected for strength and height, and formed a barrier which even elephants could scarcely have broken through. This, however, took time, and long before it was completed innumerable attempts had been made to surround and capture or to destroy the soulless beings, for so fixed are certain ideas in the human brain that the officials could not believe that the Living Dead could not be killed, despite the arguments of Doctor Farnham who, over and over again, declared that it was a waste of money and life to attempt to annihilate the beings he had resurrected. But, of course, every attempt was futile. Bullets had no effect upon them, and when, after many arguments and innumerable protests, it was decided that, as the beings were no better than wild beasts and, therefore, a menace to the world, any means were justifiable, preparations were made to burn them out. Innumerable fires were kindled, and before a fresh wind the flames swept across the entire area occupied by the Living Dead and reduced the last vestiges of their former village to ashes. But when, the fire over, a detachment of police was sent into the district to count the bodies, they were attacked, almost annihilated and driven back by the horde of singed, mutilated, ghastly beings who had survived the conflagration as completely as they had survived powder and ball, poison gases, and every other means to destroy them. Next, it was suggested that they be drowned, and although Doctor Farnham openly scoffed at the idea and the expense involved, no one could be made to believe that the things were really immune to death in any form. Hence, at a terrific expense, a dam was built across the river flowing through the district, and for days the entire area was flooded. But at the end of the time the Living Dead were as lively, as savage, as unreasoning and as great a plague as ever. Strangely enough, too, not one of the beings had ever been captured. On two occasions, to be sure, members of the band had been seized, but on each occasion the beings had literally torn themselves free, leaving a dismembered arm or hand in possession of their captors. And these fragments of flesh, to everyone's horror and amazement, had continued to live.

It was indescribably gruesome to see the dismembered arm twisting and writhing about, to see the muscles flexing and the fingers opening and closing. Even when placed in jars of alcohol or formaldehyde, the limbs continued to retain their

life and movement, and at last, in sheer desperation, the officials buried them in masses of concrete where, as far as they were concerned, the immortal fragments of anatomy might continue to survive and writhe until the crack of doom.

INTENSIVE studies and observations of the Living Dead had, however, been made, and at last it was conceded that Doctor Farnham had been right and had not in the least overestimated the supernatural attributes of the beings. And it was also admitted that his theories regarding their condition and actions were in the main correct. They could not be killed by any known means. That had been conclusively proved. They could exist without apparent ill effects even when horribly mutilated and even headless. They could literally be cut to pieces and each fragment would continue to live and, if two of these pieces came into contact, they would reunite and grow into monstrous, nightmarish, terrible things. Watching the area within the barrier through powerful glasses, the observers saw many of these inexpressibly horrible things. Once, a head which had joined to two arms and a leg went racing across an open space like a monstrous spider. On another occasion a body appeared minus legs, and with two additional heads growing from the shoulders from which the original arms had been severed. And many of the fairly whole beings had hands, fingers, feet or other portions of anatomy growing from wounds upon various parts of their bodies. For the Living Dead, having no reasoning powers, yet instinctively sought to replace any portions of their bodies which they had lost, and picked up the first human fragment they found and grafted it into any wound or raw surface of their flesh. Strangely enough, too, although it was perfectly logical once the matter was given thought, those individuals who were minus heads appeared fully as well off as those whose heads remained upon their shoulders, for without any glimmerings of intelligence, without reason and merely flesh and blood machines uncontrolled by brains, the Living Dead had no real need of heads. Nevertheless, they seemed to have some strange subconscious idea that heads were desirable, and fierce battles took place over the possession of a head which two of the things discovered simultaneously. Very frequently, the head, when re-established upon a body, was back-side-to, and a large percentage of the beings wore heads which did not originally belong to them. Moreover, the beings became head-hunters, and lopping off one another's heads became their chief diversion or occupation.

The amazing speed with which the most ghastly wound healed, and the incredibly short period of time required for a limb or head to graft itself firmly in place, were downright uncanny, but were accounted for by Doctor Farnham who explained that whereas, ordinarily, the tissues of normal human beings partially die and must be replaced by new growths, the tissues of the Living Dead remained alive, active and with all their cells intact, and hence instantly reunited, while at the same time, septic infection and injurious microbes could find no opportunity to act upon healthy living tissues. Although at first the beings had struggled and fought night and day, yet as time passed, they became more peaceable and seldom battled among themselves. When this was first observed, the authorities were hopeful of the beings eventually becoming rational, but Doctor Farnham disillusioned them and was borne out in his statements by the island's medical and scientific men.

"It is the logical and to-be-expected result," he declared. "In the first place, being without reason or the powers of deduction, and not being able to profit by experience, they have merely exhausted their powers of fighting. And, in the second place, a large proportion of their numbers are composites. That is, they have arms, limbs, heads or other portions of their anatomy belonging to other individuals. Hence to attack another being would be equivalent to attacking themselves. It is not a question of either instinct or brain, but merely the reaction of muscles and nerves to the inexplicable but long recognized cellular recognition or affinity existing in all organic matter."

At first, too, it had been thought that the Living Dead could be starved to death, or if truly immortal, that they could be so weakened by lack of food that they could easily be captured. But here again, the authorities had overlooked the basic features of the case. Although the creatures now and then devoured one another—and Doctor Farnham wondered what happened when an unkillable being was devoured by his fellows—yet this cannibalism seemed more a purely instinctive act than a necessity. The headless members of the community could not of course, eat, but they got along just as well, and at last it dawned upon the officials that when a creature is truly immortal, nothing mortal can affect it.

Meanwhile, the island was getting perilously short of provisions and the people were being put on rations. Very soon, all knew, it would be necessary to allow a vessel to enter the port to bring in supplies, and the quarantine, moreover, could not much longer be maintained without arousing suspicion. Of course, long before this, the government had come to a realization of the fact that the terrible secret of the island could not be kept indefinitely. But the authorities had hoped that the Plague of the Living Dead might be forever removed before it became necessary to apprise the world at large of the curse which had fallen upon Abilone.

Had it not been for its isolated position, and the fact that news of the eruption had reached the outer world and the public had assumed that the reported epidemic was the direct result of this, the true facts of the case would have become public property long ago.

Now, however, the authorities were at their wits' ends. They had tried every means to exterminate the Living Dead without success. They had devoted a fortune and had sacrificed many lives trying to capture the terrible things, all without avail. And Doctor Farnham had, so far, been unable to suggest a means of ridding the island and the world of the incubus he had so unfortunately put upon it.

This, then, was the status of the case when, on

a certain night, the officials had gathered in conference to pass upon the question of lifting the quarantine and giving up in despair, trusting to keeping the Living Dead confined indefinitely within the wire barrier.

"That," declared Colonel Shorham, the military commandant, "is, or rather will be, impossible. As Doctor Farnham has told you, these beings can propagate their kind, and, as you have seen for yourselves, new monsters are being constantly formed by the union of various portions of individuals. So far, thank God, the things have made no attempt to tear down or scale the barrier, but sooner or later, they will. If they possessed reason they would have done so long ago, but some day—perhaps to-morrow, perhaps not for a century—they will decide to move, and the stoutest barricade man can erect will not hold them in check. Why, one of those spider-like monsters, consisting of legs and arms, could clamber over the wire as readily as a fly can walk on yonder wall. And by the time they do this they may number thousands in place of hundreds. And do not forget, gentlemen, that water is no barrier to these terrible beings. They cannot be drowned, and hence they may be carried by sea to distant lands and may spread to the uttermost ends of the earth. Terrible and blasphemous as it may sound, I wish to God that another eruption might occur and that a volcano might break forth under the Living Dead and blow them into space. Personally—"

He was interrupted by a shout from Doctor Farnham, who, leaping to his feet, excitedly drew the attention of everyone to himself.

"Colonel!" he cried, "to you belongs the credit of having solved the problem. You spoke of blowing the Living Dead into space. That, gentlemen, is the solution. We will not need to invoke Divine aid in creating the volcano to do this, but we will provide the means ourselves."

The others looked at one another and at the enthusiastic scientist in utter amazement. Had his worries driven him mad? What was he driving at?

BUT Doctor Farnham was most evidently sane and most obviously in earnest. "I quite realize how visionary the idea may appear to you, gentlemen," he said, striving to speak calmly. "But I think you will all accept it after my most unfortunate discovery, which resulted, it is true, in our present predicament, but which, nevertheless, proved that the most visionary and seemingly impossible things may be possible. I feel sure, I repeat, that after what you have all seen, you will agree with me that my present scheme is not either visionary or impossible. Briefly, gentlemen, it is to construct an immense cannon, or perhaps better, an artificial crater, beneath the Living Dead and blow every one of the beings into space. In fact, blow them to such an immense distance that they will be beyond the attraction of the earth and will either land on the moon or will forever revolve, like satellites, about our planet."

As he finished, silence fell upon those present. A few weeks previously they would have jeered, scoffed, ridiculed the idea or would have felt sure he was mad. But too many seemingly insane things had occurred to warrant a hasty judgment, and all were thinking deeply. At last, a dignified white-haired gentleman rose to his feet and cleared his throat. He was Señor Martinez, a descendant of one of the old Spanish families who had originally owned the island, and a retired engineer of world-wide fame.

"I feel," he began, "that Doctor Farnham's suggestion might be carried out. I have only two questions in my mind as to its feasibility. First; the cost of the undertaking which would be prodigious—far more than the somewhat depleted treasury of Abilone would permit. And second; by what form of explosive the force could be generated which would project the beings so far that they would not fall back upon earth, and being immortal, still be living things?"

"The expense," announced Doctor Farnham, as Señor Martinez resumed his seat, "will be borne by me. My fortune, which originally amounted to something over three millions, has remained practically untouched for the past forty-five years, for I have expended but a small fraction of the income. As it was entirely due to my interference with the laws of a most wise and divine Creator that the Plague of the Living Dead has been brought upon your island, I feel that it is no more than just that I should devote my last cent and my last effort to righting the wrong. As for the explosive, Señor Martinez, that will be a combination of nature's forces and modern high-power explosives. Beneath the area occupied by the Living Dead is a deep-seated fissure connecting, in all probability, with the Sugar Loaf volcano. By excavating and tunneling we will enlarge that fissure to form an immense hollow under the area we desire to destroy, and we will fill the hollow with all the highest explosives known to science, and which can be purchased with my wealth. In the meantime, the San Marco river will be diverted from its present course and will be led to a tunnel which will be cut through the rim of the old crater. By means of electricity we will arrange to explode the charge under the Living Dead at the precise instant when the water of the river is released, and emptying into the crater, creates a steam pressure sufficient to produce an eruption. That pressure, gentlemen, being released by the detonation of the explosives will unquestionably follow the line of least resistance and will burst forth as a violent sporadic eruption coincidentally with the force of the explosives, and will, I feel sure, project the Living Dead beyond the attraction of our planet."

For a brief instant silence followed the scientist's words, and then the hall echoed to uproarious applause.

When the demonstrations had at last subsided, the elderly engineer again spoke. "As an engineer, I approve most heartily of Doctor Farnham's ideas," he announced. "A few years ago such an undertaking would have been impossible, but science in many lines has advanced by leaps and bounds. We now know the exact pressure generated by water in contact with molten igneous rocks at various depths,—thanks to the researches

of Signor Banardi and Professor Svenson, who devoted several years to intensive studies of volcanic activities in their respective countries of Italy and Iceland. We now know the exact pressure of steam essential to produce a volcanic eruption, and we also knew the precise temperature at that steam pressure. Hence it will be a comparatively simple matter to devise means of detonating explosives coincidentally with the eruptive forces, as Doctor Farnham has outlined. Also, the modern explosives, which I presume would be the recently discovered YLT, and the even more powerful Mozanite, have already proved to possess sufficient force to project a missile several thousand miles beyond the earth's atmosphere, and in all probability beyond the attractive forces of our sphere. The one really great difficulty which I foresee will be to calculate the exact diameter and depth of the excavation and to confine the Living Dead to the area immediately above it. I am most happy, gentlemen, to offer my poor services in this cause, and if you desire it, I will most gladly place my knowledge of engineering at the disposal of the government and will be honored by collaborating with Doctor Farnham."

Amid vociferous applause Señor Martinez took his chair, and the governor rose and thanked him and accepted his offer. He was followed by Colonel Shoreham, who expressed his gratification in having inadvertently suggested the means of destroying the Living Dead, and who offered a plan for confining the beings to the restricted area desired. "It is possible, I think," he said, "to gradually push the wire barrier nearer and nearer the selected spot. It will, I take it, require some considerable time to complete excavations and prepare for the grand finale, and in the interim we can move the barrier forward an inch or two at a time. As the Living Dead have no intelligence they will never notice the change, and even if they do they will not understand what it means. As soon as Doctor Farnham and Señor Martinez have decided upon the exact spot, and the extent of the area to be blown up, I will commence moving the barrier."

This suggestion appeared to solve the last difficulty, and, vastly relieved that at last there seemed to be hopes of forever destroying the Plague of the Living Dead, the meeting broke up after voting *carte blanche* to those who had volunteered to see the scheme through.

There is little more to be told. Everything proceeded smoothly. The precise area which was to be blown into space was determined, and true to his word, Colonel Shoreham moved the steel barrier forward until the inhuman, though human, monsters within were confined to the selected spot. Meanwhile, with millions at their disposal, the engineer and his assistants diverted the San Marco river, cut a tunnel through the base of the thin outer rim of the crater, and held the pent-up stream in check by a dam which could be destroyed by a single explosion set off by an electrical connection and detonator. Beneath the doomed beings, great electrically-driven machines were tunneling deep into the bowels of the mountain slope, and each hour, as the excavation deepened, the heat increased and scalding steam jets were more frequently met, all of which was most promising as proving that the active crater was not many feet below the spot wherein the work was going on. At last Señor Martinez feared to go deeper. Beneath the vast hole the roaring and rumbling of the volcano's forces could be heard; the steam issued from every crevice and crack in the rocks, and the temperature registered over two hundred degrees. Carefully, hundreds of tons of the most powerful of up-to-date explosives were piled within the vast excavation—tons of the recently discovered YLT, which had entirely superseded TNT and was nearly one hundred times as powerful, and tons of the even more powerful Mozanite—until the cavity was completely filled with the explosives. At last all was in readiness. Delicate instruments had been placed deep within the crater, instruments which at predetermined temperatures would send a charge of electricity to the detonating caps in the explosive-filled excavations, and instruments which would accomplish the same result when the steam pressure reached a prearranged pressure.

FOR weeks, the inhabitants had been warned away from the vicinity of activities, though there was little need of this, for few persons cared to visit that portion of the island. And in order that persons in distant parts of the island might not be unduly alarmed, notices had been posted stating that at any time a stupendous explosion might occur, but which would cause no damage to outlying districts. Far more excited and nervous than they had ever been in their lives, the officials, together with the engineer and Doctor Farnham, waited within their bomb-proof shelter several miles from the area of the Living Dead, for the last act in the stupendous drama.

Without a hitch the dam was blown up, and the vast torrent of water rushed in a mighty cataract through the crater wall and into the depths of the volcano. Even from where they watched, the officials could see the far-flung white cloud of steam that instantly arose from the towering mountain top. One minute passed, two, three,—With a roar that seemed to split heaven and earth, with a shock that threw every man to the ground, the entire side of the mountain seemed to rise in air. A blinding glare that dulled the midday sun clove the sky; a pillar of smoke that shot upward to the zenith blotted sun and sky from sight, and for miles around, the earth was split, rent and riven. Streams overflowed their banks; landslides came crashing down mountain sides; forest trees were splintered into matchwood. Birds were killed in midair by the concussion, and for days afterwards, dead fish floated by thousands upon the surface of the sea. To those in the bombproof shelter, it seemed as if the explosion would never end, as if the mightiest of the volcano's forces had been conjured from the bowels of the earth and might never cease to erupt. And for what seemed hours, no debris, no stones or pulverized earth and rocks came tumbling back to earth. But at last,—in reality but a few moments after the explosion,—thousands of tons of broken rock, of splintered trees, of ash and mud, of impalpable dust came

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"My first impression was that he was drunk. He did not notice me. He was clawing out at something invisible a yard in front of his face. He put out his hand, slowly, rather hesitatingly, and then clutched nothing."

The REMARKABLE CASE of DAVIDSON'S EYES

By H. G. Wells

Author of "The New Accelerator," "In the Abyss," "Empire of the Ants," etc.

CHAPTER I

THE transitory mental aberration of Sidney Davidson, remarkable enough in itself, is still more remarkable if Wade's explanation is to be credited. It sets one dreaming of the oddest possibilities of inter-communication in the future, of spending an intercalary five minutes on the other side of the world, or being watched in our most secret operations by unsuspected eyes. It happened that I was the immediate witness of Davidson's seizure, and so it falls naturally to me to put the story upon paper.

When I say that I was the immediate witness of his seizure, I mean that I was the first on the scene. The thing happened at the Harlow Technical College, just beyond the Highgate Archway. He was alone in the larger laboratory when the thing happened. I was in a smaller room, where the balances are, writing up some notes. The thunderstorm had completely upset my work, of course. It was just after one of the louder peals that I thought I heard some glass smash in the other room. I stopped writing, and turned around to listen. For a moment I heard nothing; the hail was playing the devil's tattoo on the corrugated zinc of the roof. Then came another sound, a smash—no doubt of it this time. Something heavy had been knocked off the bench. I jumped up at once and went and opened the door leading into the big laboratory.

I was surprised to hear a queer sort of laugh, and saw Davidson standing unsteadily in the middle of the room, with a dazzled look on his face. My first impression was that he was drunk. He did not notice me. He was clawing out at something invisible a yard in front of his face. He put out

his hand, slowly, rather hesitatingly, and then clutched nothing. "What's come to it?" he said. He held up his hands to his face, fingers spread out. "Great Scott!" he said. The thing happened three or four years ago, when every one swore by that personage. Then he began raising his feet clumsily, as though he had expected to find them glued to the floor.

"Davidson!" cried I. "What's the matter with you?" He turned round in my direction and looked about for me. He looked over me and at me and on either side of me, without the slightest sign of seeing me. "Waves," he said; "and a remarkably neat schooner. I'd swear that was Bellow's voice. *Hallo!*" He shouted suddenly at the top of his voice.

I thought he was up to some foolery. Then I saw littered about his feet the shattered remains of the best of our electrometers. "What's up, man?" said I. "You've smashed the electrometer!"

"Bellows again!" said he. "Friends left, if my hands are gone. Something about electrometers. Which way *are* you, Bellows?" He suddenly came staggering towards me. "The damned stuff cuts like butter," he said. He walked straight into the bench and recoiled. "None so buttery that!" he said, and stood swaying.

I felt scared. "Davidson," said I, "what on earth's come over you?"

He looked round him in every direction. "I could swear that was Bellows. Why don't you show yourself like a man, Bellows?"

It occurred to me that he must be suddenly struck blind. I walked round the table and laid my hand upon his arm. I never saw a man more startled in my life. He jumped away from me, and came round into an attitude of self-defence, his face fairly distorted with terror. "Good God!" he cried. "What was that?"

"It's I—Bellows. Confound it, Davidson!"

He jumped when I answered him and stared—how can I express it?—right through me. He began talking, not to me, but to himself. "Here in broad daylight on a clear beach. Not a place to hide in." He looked about him wildly. "Here! I'm *off*." He suddenly turned and ran headlong into the big electro-magnet — so violently that, as we found afterwards, he bruised his shoulder and jawbone cruelly. At that he stepped back a pace, and cried out with almost a whimper, "What, in Heaven's name, has come over me?" He stood, blanched with terror and trembling violently, with his right arm clutching his left, where that had collided with the magnet.

By that time I was excited and fairly scared. "Davidson," said I, "don't be afraid."

He was startled at my voice, but not so excessively as before.

I repeated my words in as clear and as firm a tone as I could assume. "Bellows," he said, "is that you?"

"Can't you see it's me?"

He laughed. "I can't even see it's myself. Where the devil are we?"

"Here," said I, "in the laboratory."

"The laboratory!" he answered in a puzzled tone, and put his hand to his forehead. "I *was* in the laboratory—till that flash came, but I'm hanged if I'm there now. What ship is that?"

"There's no ship," said I. "Do be sensible, old chap."

"No ship," he repeated, and seemed to forget my denial forthwith. "I suppose," said he slowly, "we're both dead. But the rummy part is I feel as though I still had a body. Don't get used to it all at once, I suppose. The old shop was struck by lightning, I suppose. Jolly quick thing, Bellows—eh?"

"Don't talk nonsense. You're very much alive. You are in the laboratory, blundering about. You've just smashed a new electrometer. I don't envy you when Boyce arrives."

He stared away from me towards the diagrams of cryohydrates. "I must be deaf," said he. "They've fired a gun, for there goes the puff of smoke, and I never heard a sound."

I put my hand on his arm again, and this time he was less alarmed. "We seem to have a sort of invisible bodies," said he. "By Jove! there's a boat coming round the headland. It's very much like the old life after all—in a different climate."

I shook his arm. "Davidson," I cried, "wake up!"

CHAPTER II

IT was just then that Boyce came in. So soon as he spoke, Davidson exclaimed "Old Boyce! Dead too! What a lark!" I hastened to explain that Davidson was in a kind of somnambulistic trance. Boyce was interested at once. We both did all we could to rouse the fellow out of his extraordinary state. He answered our questions, and asked us some of his own, but his attention seemed distracted by his hallucination about a beach and a ship. He kept interpolating observations concerning some boat and the davits, and sails filling with the wind. It made one feel queer, in the dusky laboratory, to hear him saying such things.

He was blind and helpless. We had to walk him down the passage, one at each elbow, to Boyce's private room, and while Boyce talked to him there, and humored him about this ship idea, I went along the corridor and asked old Wade to come and look at him. The voice of our Dean sobered him a little, but not very much. He asked where his hands were, and why he had to walk about up to his waist in the ground. Wade thought over him a long time—you know how he knits his brows—and then made him feel the couch, guiding his hands to it. "That's

HERE we have our favorite author who wrote this story long before television had ever been talked about as glibly as it is today. Not that this story has to do with television; rather, it deals with second sight. Wells does not attempt to make it a clairvoyance story, but the story is unique in scientifiction literature, in that it treats the subject from an entirely new angle.

Nikola Tesla once told the editor of this publication that during a serious illness it was possible for him to hear whispers through several walls emanating from a far distant room. This was probably a case of sickness attuning the ears to an unheard-of degree. That the same thing may be possible with sight may seem improbable to us of the present, but so much is discovered every day, that extra sight per se might as yet be brought about.

a couch," said Wade. "The couch in the private room of Professor Boyce. Horse-hair stuffing."

Davidson felt about, and puzzled over it, and answered presently that he could feel it all right, but he couldn't see it.

"What *do* you see?" asked Wade. Davidson said he could see nothing but a lot of sand and broken-up shells. Wade gave him some other things to feel, telling him what they were, and watching him keenly.

"The ship is almost hull down," said Davidson presently, *apropos* of nothing.

"Never mind the ship," said Wade. "Listen to me, Davidson. Do you know what hallucination means?"

"Rather," said Davidson.

"Well, everything you see is hallucinatory."

"Bishop Berkeley," said Davidson.

"Don't mistake me," said Wade. "You are alive and in this room of Boyce's. But something has happened to your eyes. You cannot see; you can feel and hear, but not see. Do you follow me?"

"It seems to me that I see too much." Davidson rubbed his knuckles into his eyes. "Well?" he said.

"That's all. Don't let it perplex you. Bellows here and I will take you home in a cab."

"Wait a bit." Davidson thought. "Help me to sit down," said he presently; "and now—I'm sorry to trouble you—but will you tell me all that over again?"

Wade repeated it very patiently. Davidson shut his eyes, and pressed his hands upon his forehead. "Yes," said he. "It's quite right. Now my eyes are shut I know you're right. That's you, Bellows, sitting by me on the couch. I'm in England again. And we're in the dark."

Then he opened his eyes. "And there," said he, "is the sun just rising, and the yards of the ship, and a tumbled sea, and a couple of birds flying. I never saw anything so real. And I'm sitting up to my neck in a bank of sand."

He bent forward and covered his face with his hands. Then he opened his eyes again. "Dark sea and sunrise! And yet I'm sitting on a sofa in old Boyce's room! . . . God help me!"

CHAPTER III

THAT was the beginning. For three weeks this strange affection of Davidson's eyes continued unabated. It was far worse than being blind. He was absolutely helpless, and had to be fed like a newly-hatched bird, and led about and undressed. If he attempted to move, he fell over things or struck himself against walls or doors. After a day or so he got used to hearing our voices without seeing us, and willingly admitted he was at home, and that Wade was right in what he told him. My sister, to whom he was engaged, insisted on coming to see him, and would sit for hours every day while he talked about this beach of his. Holding her hand seemed to comfort him immensely. He explained that when he left the College and drove home —he lived in Hampstead village—it appeared to him as if we drove right through a sandhill—it was perfectly black until he emerged again—and through rocks and trees and solid obstacles, and when he was taken to his own room it made him giddy and almost frantic with the fear of falling, because going upstairs seemed to lift him thirty or forty feet above the rocks of his imaginary island. He kept saying he should smash all the eggs. The end was that he had to be taken down into his father's consulting room and laid upon a couch that stood there.

He described the island as being a bleak kind of place on the whole, with very little vegetation, except some peaty stuff, and a lot of bare rock. There were multitudes of penguins, and they made the rocks white and disagreeable to see. The sea was often rough, and once there was a thunderstorm, and he lay and shouted at the silent flashes. Once or twice seals pulled up on the beach, but only on the first two or three days. He said it was very funny the way in which the penguins used to waddle right through him, and how he seemed to lie among them without disturbing them.

I remember one odd thing, and that was when he wanted very badly to smoke. We put a pipe in his hands—he almost poked his eye out with it—and lit it. But he couldn't taste anything. I've since found it's the same with me—I don't know if it's the usual case—that I cannot enjoy tobacco at all unless I can see the smoke.

But the queerest part of his vision came when Wade sent him out in a bath-chair to get fresh air. The Davidsons hired a chair, and got that deaf and obstinate dependant of theirs, Widgery, to attend to it. Widgery's ideas of healthy expeditions were peculiar. My sister, who had been to the Dogs' Home, met them in Camden Town, towards King's Cross, Widgery trotting along complacently, and Davidson, evidently most distressed, trying in his feeble, blind way to attract Widgery's attention.

He positively wept when my sister spoke to him. "Oh, get me out of this horrible darkness!" he said, feeling for her hand. "I must get out of it, or I shall die." He was quite incapable of explaining what was the matter, but my sister decided he must go home, and presently, as they went uphill towards Hampstead, the horror seemed to drop from him. He said it was good to see the stars again, though it was then about noon and a blazing day.

"It seemed," he told me afterwards, "as if I was being carried irresistibly towards the water. I was not very much alarmed at first. Of course it was night there—a lovely night."

"Of course?" I asked, for that struck me as odd.

"Of course," said he. "It's always night there when it is day here. . . . Well, we went right into the water, which was calm and shining under the moonlight—just a broad swell that seemed to grow broader and flatter as I came down into it. The surface glistened just like a skin—it might have been empty space underneath for all I could tell to the contrary. Very slowly, for I rode slanting into it, the water crept up to my eyes. Then I went under and the skin seemed to break and heal again about my eyes. The moon gave a jump up in the sky and grew green and dim, and fish, faintly glowing, came darting round me—and things that seemed made of luminous glass; and I passed through a tangle of seaweeds that shone with an oily lustre. And so I drove down into the sea, and the stars went out one by one, and the moon grew greener and darker, and the seaweed became a

luminous purple-red. It was all very faint and mysterious, and everything seemed to quiver. And all the while I could hear the wheels of the bath-chair creaking, and the footsteps of people going by, and a man in the distance selling the special *Pall Mall*.

"I kept sinking down deeper and deeper into the water. It became inky black about me, not a ray from above came down into that darkness, and the phosphorescent things grew brighter and brighter. The snaky branches of the deeper weeds flickered like the flames of spirit-lamps; but, after a time, there were no more weeds. The fishes came staring and gaping towards me, and into me and through me. I never imagined such fishes before. They had lines of fire along the sides of them as though they had been outlined with a luminous pencil. And there was a ghastly thing swimming backwards with a lot of twining arms. And then I saw, coming very slowly towards me through the gloom, a hazy mass of light that resolved itself as it drew nearer into multitudes of fishes, struggling and darting round something that drifted. I drove on straight towards it, and presently I saw in the midst of the tumult, and by the light of the fish, a bit of splintered spar looming over me, and a dark hull tilting over, and some glowing phosphorescent forms that were shaken and writhed as the fish bit at them. Then it was I began to try to attract Widgery's attention. A horror came upon me. Ugh! I should have driven right into those half-eaten—things. If your sister had not come! They had great holes in them, Bellows, and . . . Never mind. But it was ghastly!"

CHAPTER IV

FOR three weeks Davidson remained in this singular state, seeing what at the time we imagined was an altogether phantasmal world, and stone blind to the world around him. Then, one Tuesday, when I called I met old Davidson in the passage. "He can see his thumb!" the old gentleman said, in a perfect transport. He was struggling into his overcoat. "He can see his thumb, Bellows!" he said, with the tears in his eyes. "The lad will be all right yet."

I rushed in to Davidson. He was holding up a little book before his face, and looking at it and laughing in a weak kind of way.

"It's amazing," said he. "There's a kind of patch come there." He pointed with his finger. "I'm on the rocks as usual, and the penguins are staggering and flapping about as usual, and there's been a whale showing every now and then, but it's got too dark now to make him out. But put something *there*, and I see it—I do see it. It's very dim and broken in places, but I see it all the same, like a faint spectre of itself. I found it out this morning while they were dressing me. It's like a hole in this infernal phantom world. Just put your hand by mine. No—not there. Ah! Yes! I see it. The base of your thumb and a bit of cuff! It looks like the ghost of a bit of your hand sticking out of the darkling sky. Just by it there's a group of stars like a cross coming out."

From that time Davidson began to mend. His account of the change, like his account of the vision, was oddly convincing. Over patches of his field of vision, the phantom world grew fainter, grew transparent, as it were, and through these translucent gaps he began to see dimly the real world about him. The patches grew in size and number, ran together and spread until only here and there were blind spots left upon his eyes. He was able to get up and steer himself about, feed himself once more, read, smoke, and behave like an ordinary citizen again. At first it was very confusing for him to have these two pictures over-lapping each other like the changing views of a lantern, but in a little while he began to distinguish the real from the illusory.

At first he was unfeignedly glad, and seemed only too anxious to complete his cure by taking exercise and tonics. But as that odd island of his began to fade away from him, he became queerly interested in it. He wanted particularly to go down in the deep sea again, and would spend half his time wandering about the low-lying parts of London, trying to find the water-logged wreck he had seen drifting. The glare of real daylight very soon impressed him so vividly as to blot out everything of his shadowy world, but of a night-time, in a darkened room, he could still see the white-splashed rocks of the island, and the clumsy penguins staggering to and fro. But even these grew fainter and fainter, and, at last, soon after he married my sister, he saw them for the last time.

CHAPTER V

AND now to tell of the queerest thing of all. About two years after his cure I dined with the Davidsons, and after dinner a man named Atkins called in. He is a lieutenant in the Royal Navy, and a pleasant, talkative man. He was on friendly terms with my brother-in-law, and was soon on friendly terms with me. It came out that he was engaged to Davidson's cousin, and incidentally he took out a kind of pocket photograph case to show us a new rendering of his *fiancée*. "And, by-the-by," said he, "here's the old *Fulmar*."

Davidson looked at it casually. Then suddenly his face lit up. "Good heavens!" said he. "I could almost swear——"

"What?" said Atkins.

"That I had seen that ship before."

"Don't see how you can have. She hasn't been out of the South Seas for six years, and before then—"

"But," began Davidson, and then, "Yes—that's the ship I dreamt of; I'm sure that's the ship I dreamt of. She was standing off an island that swarmed with penguins, and she fired a gun."

"Good Lord!" said Atkins, who had now heard the particulars of the seizure. "How the deuce could you dream that?"

And then, bit by bit, it came out that on the very day Davidson was seized, H.M.S. *Fulmar* had actually been off a little rock to the south of Antipodes Island. A boat had landed overnight to get penguins' eggs, had been delayed, and a thunderstorm drifting up, the boat's crew had waited until the morning before rejoining the ship. Atkins had been one of them, and he corroborated word for word, the descriptions Davidson had given of the island and the boat. There is not the slightest doubt in any

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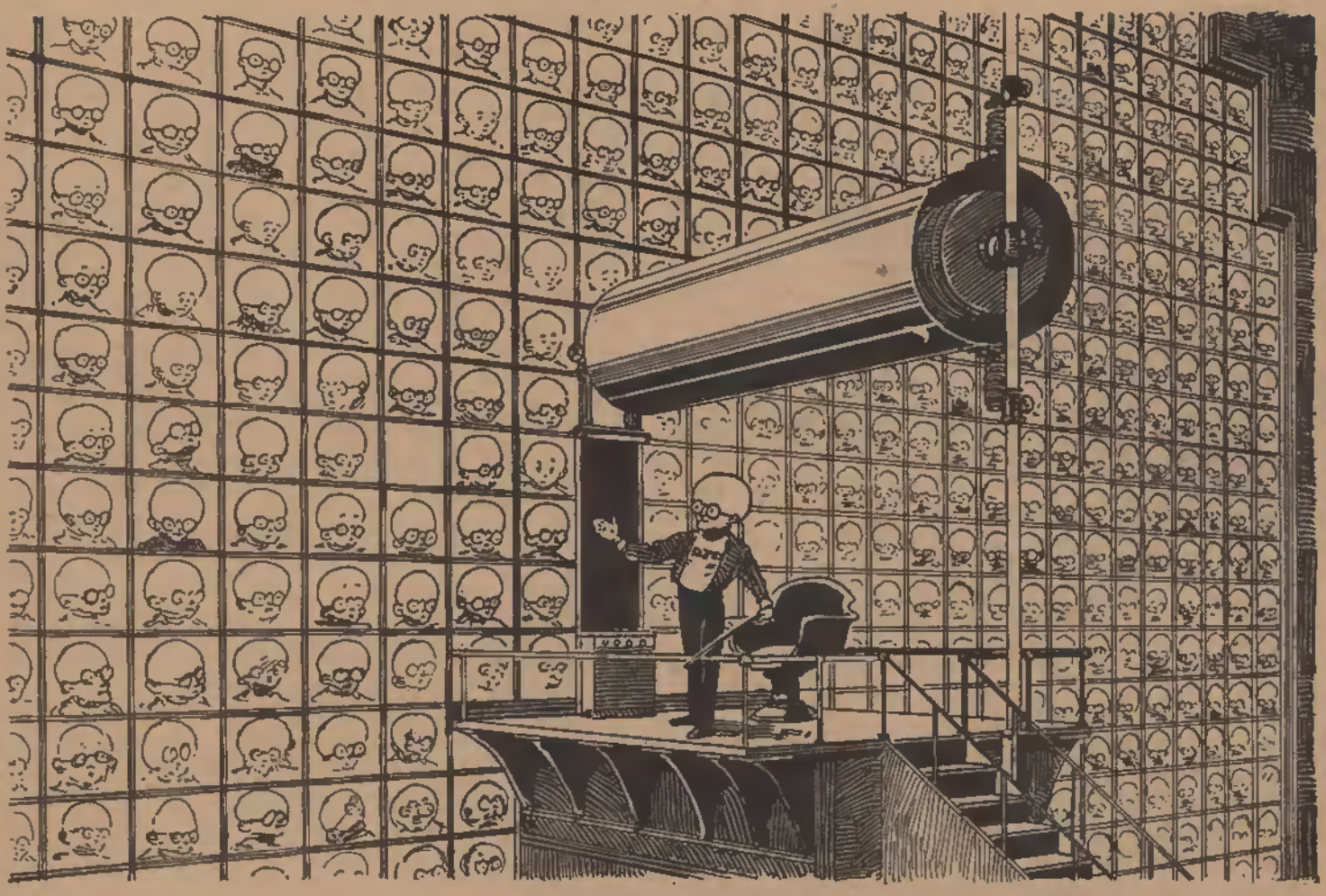
JOHN JONES'S DOLLAR

By Harry Stephen Keeler



. . . As though in answer to the summons, the frosted glass squares began, one by one, to show the faces and shoulders of a peculiar type of young men; young men with great bulging foreheads, bald, toothless, and wearing immense horn spectacles. Only one square remained empty . . . "I am pleased, gentlemen, to see you all posted at your local Visaphones this afternoon."

ON the 201st day of the year 3221 A.D. the professor of history at the University of Terra, seated himself in front of the Visaphone and prepared to deliver the daily lecture to his class, the members of which resided in different portions of the earth.

The instrument before which he seated himself was very like a great window sash, on account of the fact that there were three or four hundred frosted glass squares visible. In a space at the center, not occupied by any of these glass squares, was a dark oblong area and a ledge holding a piece of chalk. And above the area was a huge brass cylinder; toward this brass cylinder the professor would soon direct his subsequent remarks.

In order to assure himself that it was time to press the button which would notify the members of the class in history to approach their local Visaphones, the professor withdrew from his vest pocket a small contrivance which he held to his ear. Upon moving a tiny switch attached to the instrument, a metallic voice, seeming to come from somewhere in space, repeated mechanically: "Fifteen o'clock and one minute — fifteen o'clock and one minute—fifteen o'clock and one min——" Quickly, the professor replaced the instrument in his vest pocket and pressed a button at the side of the Visaphone.

As though in answer to the summons, the frosted glass squares began, one by one, to show

IF you wish to amuse yourself, take a chess or checkerboard with 64 squares on it, and place on the first square a grain of wheat. On the second, put two grains. on the third, four grains, on the fourth eight grains, and so on, until you have filled the 64 fields with grain. Simple as this operation seems, you will soon find out, before you fill the 64th field, that the entire world's crop of wheat this year would not be sufficient for the purpose.

Likewise, the power of accumulated money is well-nigh tremendous. What would happen, for instance, if you were to place a dollar in the bank with the stipulation that the accumulation of interest and compound interest should be paid out to your descendant of the tenth generation? It is all most astonishing, as you will find by reading this excellent story.

the faces and shoulders of a peculiar type of young men; young men with great bulging foreheads, bald, toothless, and wearing immense horn spectacles. One square, however, still remained empty. On noticing this, a look of irritation passed over the professor's countenance.

But, seeing that every other glass square but this one was filled up, he commenced to talk.

"I am pleased gentlemen, to see you all posted at your local Visaphones this afternoon. I have prepared my lecture today upon a subject which is, perhaps, of more economic interest than historical. Unlike the previous lectures, my talk will not confine itself to the happenings of a few years, but will gradually embrace the course of ten centuries, the ten centuries, in fact, which terminated three hundred years before the present date. My lecture will be an exposition of the effects of the John Jones Dollar, originally deposited in the dawn of civilization, or to be more precise, in the year of 1921—just thirteen hundred years ago. This John Jon——"

At this point in the professor's lecture, the frosted glass square which hitherto had shown no image, now filled up. Sternly he gazed at the head and shoulders that had just appeared.

"B262H72476Male, you are late to class again. What excuse have you to offer today?"

From the hollow cylinder emanated a shrill voice, while the lips of the picture on the glass square moved in unison with the words:

"Professor, you will perceive by consulting your class book, that I have recently taken up my residence near the North Pole. For some reason, wireless communication between the Central Energy Station and all points north of 89 degrees was cut off a while ago, on account of which fact I could not appear in the Visaphone. Hence—"

"Enough sir," roared the professor. "Always ready with an excuse, B262H72476Male. I shall immediately investigate your tale."

From his coat pocket, the professor withdrew an instrument which, although supplied with an earpiece and a mouthpiece, had no wires whatever attached. Raising it to his lips, he spoke:

"Hello. Central Energy Station please." A pause ensued. "Central Energy Station? This is the professor of history at the University of Terra, speaking. One of my students informs me that the North Pole region was out of communication with the Visaphone System this morning. Is that statement true? I would—"

A voice, apparently from nowhere, spoke into the professor's ear. "Quite true, Professor. A train of our ether waves accidently fell into parallelism with a train of waves from the Venus Substation. By the most peculiar mischance, the two trains happened to be displaced, with reference to each other, one half of a wave length, with the unfortunate result that the negative points of one coincided with the positive points of maximum amplitude of the other. Hence the two wave trains nullified each other and communication ceased for one hundred and eighty-five seconds—until the earth had revolved far enough to throw them out of parallelism."

"Ah! Thank you," replied the professor. He dropped his instrument into his coat pocket and gazed in the direction of the glass square whose image had so aroused his ire. "I apologize, B262H-72476Male, for my suspicions as to your veracity—but I had in mind several former experiences." He shook a warning forefinger. "I will now resume my talk."

"A moment ago, gentlemen, I mentioned the John Jones Dollar. Some of you who have just enrolled with the class will undoubtedly say to yourselves: 'What is a John Jones? What is a Dollar?'

"In the early days, before the present scientific registration of human beings was instituted by the National Eugenics Society, man went around under a crude multi-reduplicative system of nomenclature. Under this system there were actually more John Joneses than there are calories in a British Thermal Unit. But there was one John Jones, in particular, living in the twentieth century, to whom I shall refer in my lecture. Not much is known of his personal life except that he was an ardent socialist—a bitter enemy, in fact, of the private ownership of wealth.

"Now as to the Dollar. At this day, when the Psycho-Erg, a combination of the Psych, the unit of esthetic satisfaction, and the Erg, the unit of mechanical energy, is recognized as the true unit of value, it seems difficult to believe that in the twentieth century and for more than ten centuries thereafter, the Dollar, a metallic circular disk, was being passed from hand to hand in exchange for the essentials of life.

"But nevertheless, such was the case. Man exchanged his mental or physical energy for these Dollars. He then re-exchanged the Dollars for sustenance, raiment, pleasure, and operations for the removal of the vermiform appendix.

"A great many individuals, however, deposited their Dollars in a stronghold called a bank. These banks invested the Dollars in loans and commercial enterprises, with the result that, every time the earth traversed the solar ecliptic, the banks compelled each borrower to repay, or to acknowledge as due, the original loan, plus six one-hundredths of that loan. And to the depositor, the banks paid three one-hundredths of the deposited Dollars for the use of the disks. This was known as three percent, or bank interest.

"Now, the safety of dollars, when deposited in banks, was not absolutely assured to the depositor. At times, the custodians of these Dollars were wont to appropriate them and proceed to portions of the earth, sparsely inhabited and accessible with difficulty. And at other times, nomadic groups known as 'yeggmen' visited the banks, opened the vaults by force, and departed, carrying with them the contents.

"But to return to our subject. In the year 1921, one of these numerous John Joneses performed an apparently inconsequential action which caused the name of John Jones to go down forever in history. What did he do?

"He proceeded to one of these banks, known at that time as 'The First National Bank of Chicago,' and deposited there, one of these disks—a silver

Dollar—to the credit of a certain individual. And this individual to whose credit the Dollar was deposited was no other person than the fortieth descendant of John Jones who stipulated in paper which was placed in the files of the bank, that the descendency was to take place along the oldest child of each of the generations which would constitute his posterity.

"The bank accepted the Dollar under that understanding, together with another condition imposed by this John Jones, namely, that the interest was to be compounded annually. That meant that at the close of each year, the bank was to credit the account of John Jones's fortieth descendant with three one-hundredths of the account as it stood at the beginning of the year.

"History tells us little more concerning this John Jones—only that he died in the year 1931, or ten years afterward, leaving several children.

"Now you gentlemen who are taking mathematics under Professor L127M72421Male, of the University of Mars, will remember that where any number such as X, in passing through a progressive cycle of change, grows at the end of that cycle by a proportion p, then the value of the original X, after n cycles, becomes x (1+p)n.

"Obviously, in this case, X equalled one Dollar; p equalled three one-hundredths; and n will depend upon any number of years which we care to consider, following the date of deposit. By a simple calculation, those of you who are today mentally alert can check up the results that I shall set forth in my lecture.

"At the time that John Jones died, the amount in the First National Bank of Chicago to the credit of John Jones the fortieth, was as follows."

The professor seized the chalk and wrote rapidly upon the oblong space:

1931	10 years elapsed	$1.34

"The peculiar sinous hieroglyphic," he explained, "is an ideograph representing the Dollar.

"Well gentlemen, time went on as time will, until a hundred years had passed by. This First National Bank still existed, and the locality, Chicago, had become the largest center of population upon the earth. Through the investments which had taken place, and the yearly compounding of interest, the status of John Jones's deposit was now as follows." He wrote:

2021	100 years elapsed	$19.10

"In the following century, many minor changes, of course, took place in man's mode of living; but the so-called socialists still agitated widely for the cessation of private ownership of wealth; the First National Bank still accepted Dollars for safe keeping, and the John Jones Dollar still continued to grow. With about thirty-four generations yet to come, the account now stood:

2121	200 years elapsed	$364.00

"And by the end of the succeeding hundred years, it had grown to what constituted an appreciable bit of exchange value in those days—thus:

2221	300 years.	$6920

"Now the century which followed contains an important date. The date I am referring to is the year 2292 A.D., or the year in which every human being born upon the globe was registered under a numerical name at the central bureau of the National Eugenics Society. In our future lessons which will treat with that period of detail, I shall ask you to memorize that date.

"The socialists still agitated, fruitlessly, but the First National Bank of Chicago was now the first International Bank of the Earth. And how great had John Jones's Dollar grown? Let us examine the account, both on that important historical date, and also at the close of the 400th year since it was deposited. Look:

2299	378 years	$68,900
2321	400 years	$132,000

"But gentlemen, it had not reached the point where it could be termed an unusually large accumulation of wealth. Far larger accumulations existed upon the earth. A descendant of a man once known as John D. Rockefeller possessed an accumulation of great size, but which, as a matter of fact, was rapidly dwindling as it passed from generation to generation. So, let us travel ahead another one hundred years. During this time, as we learn from our historical and political archives, the socialists began to die out, since they at last realized the utter futility of combating the balance of power. The account, though, now stood:

2421	500 years	$2,520,000

"It is hardly necessary for me to make any comment. Those of you who are most astute, and others of you who flunked my course before and are now taking it the second time, of course know what is coming.

"Now, the hundred years which ended with the year 2521 A. D., saw two events—one, very important and vital to mankind, and the other very interesting. I will explain.

"During the age in which this John Jones lived, there lived also a man, a so-called scientist called Metchnikoff. We know, from a study of our vast collection of Egyptian Papyri and Carnegie Library books, that this Metchnikoff promulgated the theory that old age—or rather senility—was caused by colon-bacillus. This fact was later verified. But while he was correct in the etiology of senility, he was crudely primeval in the therapeutics of it.

"He proposed, gentlemen, to combat and kill this bacillus by utilizing the fermented lacteal fluid from a now extinct animal called the cow, models of which you can see at any time at the Solaris Museum."

A chorus of shrill, piping laughter emanated from the brass cylinder. The professor waited until the merriment had subsided and then continued:

"I beg of you, gentlemen, do not smile. This was merely one of the many similar quaint superstitions existing in that age.

"But a real scientist, Professor K122B62411Male, again attacked the problem in the twenty-fifth century. Since the cow was now extinct, he could not waste his valuable time experimenting with fermented cow lacteal fluid. He discovered the old γ-rays of Radium—the rays which you physicists will remember are not deflected by a magnetic field—were really composed of two sets of rays, which he termed the δ rays and the ϵ rays. These last named

rays—only when isolated—completely devitalized all colon-bacilli which lay in their path, without in the least affecting the integrity of any interposed organic cells. The great result, as many of you already know, was that the life of man was extended to nearly two hundred years. That, I state unequivocally, was a great century for the human race.

"But I spoke of another happening—one, perhaps, of more interest than importance. I referred to the bank account of John Jones the fortieth. It, gentlemen, had grown to such a prodigious sum that a special bank and board of directors had to be created in order to care for, and reinvest it. By scanning the following notation, you will perceive the truth of my statement:

2521	600 years	$47,900,000

"By the year 2621 A. D., two events of stupendous importance took place. There is scarcely a man in this class who has not heard of how Professor P222D29333Male accidentally stumbled upon the scientific fact that the effect of gravity is reversed upon any body which vibrates perpendicularly to the plane of the ecliptic with a frequency which is an even multiple of the logarithm of 2 of the Naperian base 'e.' At once, special vibrating cars were constructed which carried mankind to all planets. That discovery of Professor P222D29333-Male did nothing less than open up seven new territories to our inhabitants; namely: Mercury, Venus, Mars, Jupiter, Saturn, Uranus, and Neptune. In the great land rush that ensued, thousands who were previously poor became rich.

"But, gentlemen, land, which so far had been constituted one of the main sources of wealth, was shortly to become valuable for individual golf links only, as it is today, on account of another scientific discovery.

"This second discovery was in reality, not a discovery, but the perfection of a chemical process, the principles of which had been known for many centuries. I am alluding to the construction of the vast reducing factories, one upon each planet, to which the bodies of all persons who have died on their respective planets are at once shipped by Aerial Express. Since this process is used today, all of you understand the methods employed; how each body is reduced by heat to its component constituents: hydrogen, oxygen, nitrogen, carbon, calcium, phosphorus, and so forth; how these separated constituents are stored in special reservoirs together with the components from thousands of other corpses; how these elements are then synthetically combined into food tablets for those of us who are yet alive—thus completing an endless chain from the dead to the living. Naturally then, agriculture and stock-raising ceased, since the food problem, with which man had coped from time immemorial, was solved. The two direct results were, first—that land lost the inflated values it had possessed when it was necessary for tillage, and second—that men were at last given enough leisure to enter the fields of science and art.

"And as to the John Jones Dollar, which now embraced countless industries and vast territory on the earth, it stood, in value:

2621	700 years	$912,000,000

"In truth, gentlemen, it now constituted the largest private fortune on the terrestrial globe. And in that year, 2621 A. D., there were thirteen generations yet to come, before John Jones the fortieth would arrive.

"To continue. In the year 2721 A. D., an important political battle was concluded in the Solar System Senate and House of Representatives. I am referring to the great controversy as to whether the Earth's moon was a sufficient menace to interplanetary navigation to warrant its removal. The outcome of the wrangle was that the question was decided in the affirmative. Consequently—

"But I beg your pardon, young men. I occasionally lose sight of the fact that you are not so well informed upon historical matters as myself. Here I am, talking to you about the moon, totally forgetful that many of you are puzzled as to my meaning. I advise all of you who have not yet attended the Solaris Museum on Jupiter, to take a trip there some Sunday afternoon. The Interplanetary Suburban Line runs trains every half hour on that day. You will find there a complete working model of the old satellite of the Earth, which, before it was destroyed, furnished this planet light at night through the crude medium of reflection.

"On account of this decision as to the inadvisability of allowing the moon to remain where it was, engineers commenced its removal in the year 2721. Piece by piece, it was chipped away and brought to the Earth in Interplanetary freight cars. These pieces were then propelled by Zoodolite explosive, in the direction of the Milky Way, with a velocity of 11,217 meters per second. This velocity, of course, gave each departing fragment exactly the amount of kinetic energy it required to enable it to overcome the backward pull of the Earth from here to infinity. I dare say those moon-hunks are going yet.

"At the start of the removal of the moon in 2721 A. D., the accumulated wealth of John Jones the fortieth, stood:

2721	800 years	$17,400,000,000

"Of course, with such a colossal sum at their command, the directors of the fund had made extensive investments on Mars and Venus.

By the end of the twenty-eighth century, or the year 2807 A. D., the moon had been completely hacked away and sent piecemeal into space, the job having required 86 years. I give, herewith, the result of John Jones's dollar, both at the date when the moon was completely removed and also at the close of the 900th year after its deposit:

2807	886 years	$219,000,000,000
2821	900 years	$332,000,000,000

"The meaning of those figures, gentlemen, as stated in simple language, was that the John Jones Dollar now comprised practically all the wealth on Earth, Mars, and Venus—with the exception of one university site on each planet, which was, of course, school property.

"And now I will ask you to advance with me to the year 2906 A. D. In this year the directors of the John Jones fund awoke to the fact that they were in a dreadful predicament. According to the agreement under which John Jones deposited his

Dollar away back in the year 1921, interest was to be compounded annually at three per cent. In the year 2900 A. D., the thirty-ninth generation of John Jones was alive, being represented by a gentleman named J664M42721Male, who was thirty years of age and engaged to be married to a young lady named T246M42652Female.

"Doubtless, you will ask, what was the predicament in which the directors found themselves. Simply this:

"A careful appraisement of the wealth on Neptune, Uranus, Saturn, Jupiter, Mars, Venus, and Mercury, and likewise Earth, together with an accurate calculation of the remaining heat in the Sun and an appraisement of that heat at a very decent valuation per calorie, demonstrated that the total wealth of the Solar System amounted to $6,309,525,241,362.15.

"But, unfortunately, a simple computation showed that if Mr. J664M42721Male married Miss T246M-42652Female, and was blessed by a child by the year 2921, which year marked the thousandth year since the deposit of the John Jones Dollar, then in that year there would be due the child, the following amount:

2921 1000 years $6,310,000,000,000

"It simply showed beyond all possibility of argument, that by 2921 A. D., we would be $474,-758,637.85 shy—that we would be unable to meet the debt to John Jones the fortieth.

"I tell you, gentlemen, the Board of Directors was frantic. Such wild suggestions were put forth as the sending of an expeditionary force to the nearest star in order to capture some other Solar System and thus obtain more territory to make up the deficit. But that project was impossible on account of the number of years that it would have required.

"Visions of immense law suits disturbed the slumber of those unfortunate individuals who formed the John Jones Dollar Directorship. But on the brink of one of the biggest civil actions the courts had ever known, something occurred that altered everything."

The professor again withdrew the tiny instrument from his vest pocket, held it to his ear and adjusted the switch. A metallic voice rasped: "Fifteen o'clock and fifty-two minutes—fifteen o'clock and fifty-two minutes—fift——" He replaced the instrument and went on with his talk.

"I must hasten to the conclusion of my lecture, gentlemen, as I have an engagement with Professor C122B24999Male of the University of Saturn at sixteen o'clock. Now, let me see; I was discussing the big civil action that was hanging over the heads of the John Jones Dollar directors.

"Well, this Mr. J664M42721Male, the thirty-ninth descendant of the original John Jones, had a lover's quarrel with Miss T246M42652Female, which immediately destroyed the probability of their marriage. Neither gave in to the other. Neither ever married. And when Mr. J664M42721Male died in 2946 A. D., of a broken heart, as it was claimed, he was single and childless.

"As a result, there was no one to turn the Solar System over to. Immediately, the Interplanetary Government stepped in and took possession of it. At that instant, of course, private property ceased. In the twinkling of an eye almost, we reached the true socialistic and democratic condition for which man had futilely hoped throughout the ages.

"That is all today, gentlemen. Class is dismissed."

One by one, the faces faded from the Visaphone.

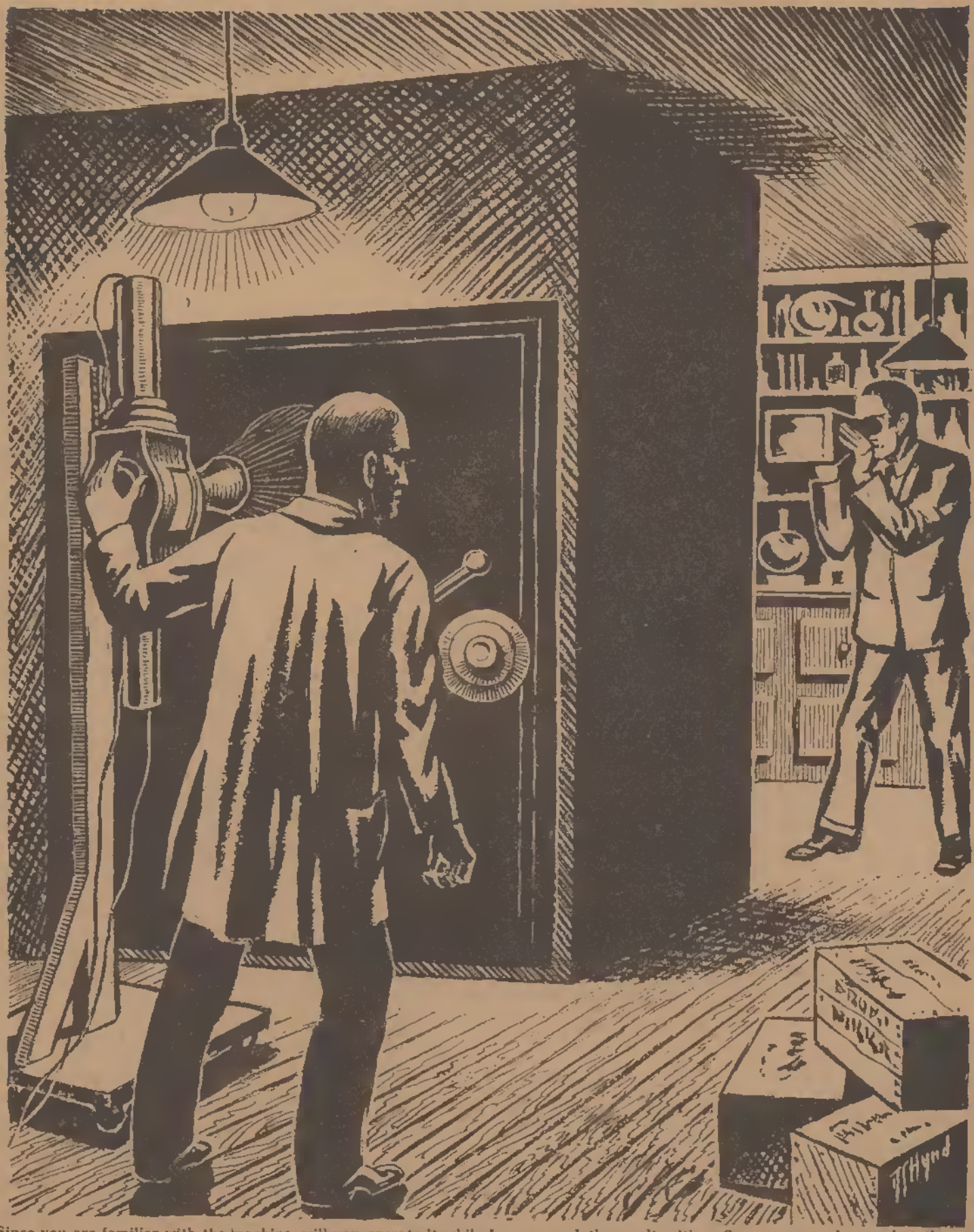
For a moment, the professor stood ruminating.

"A wonderful man, that old socialist, John Jones the first," he said softly to himself, "a far-seeing man, a bright man, considering that he lived in such a dark era as the twentieth century. But how nearly his well contrived scheme went wrong. Suppose that fortieth descendant had been born?"

THE END

The WHITE GOLD PIRATE

By Merlin Moore Taylor



"Since you are familiar with the machine, will you operate it while I go around the vault with a fluoroscope and see what the rays reveal? Keep moving it so that you cover all of the back wall where the cans are piled."

CHAPTER I

A Suspicious Offer by Telephone, for the Sale of Platinum to the Government

ROBERT GOODWIN, scientist, inventor and head of the great Chicago laboratories and experimental plant which bore his name, glared at the telephone on his desk. The ringing of its bell had interrupted him in the mental solution of a problem and it irritated him. In no pleasant frame of mind he took down the receiver and growled "Hello."

"Are you in the market for platinum?" inquired a man's voice, without preliminaries.

Goodwin started, and straightened up in his chair. For some months now he, in common with several thousand other persons in the United States, had been waiting quietly, but none the less eagerly, for someone to ask that very question.

There was no agitation or surprise in his voice, however, when he replied. "Undoubtedly we would be interested in the thing you mention," he said, "that is, if it is of good quality—and safe."

Rather neat and intriguing that, he thought, if his caller was indeed the man he suspected, the bold and resourceful platinum pirate for whom he and his fellow watchers had been so patiently waiting, the man who had set the expert man catchers of the United States Department of Justice by the ears.

The man was talking again, in a peculiar nasal drawl that reminded Goodwin of various Southern men he had known. "The stuff I've got is better than ninety-five per cent pure," he was saying. "I can let you have a hundred ounces now, up to a thousand later."

The scientist gasped. Platinum always is in demand by certain industries—for electric-light bulbs, motor-car ignition contacts, telephone and other electrical instruments, jewelry and dentistry—and every ounce is precious. Yet this man was offering, as a farmer offers eggs or butter, to let him have as much as a thousand ounces. It was staggering!

THE white gold in this amazing scientific detective tale is, of course, platinum, which is far more precious than gold. It is a story in which science is used at every angle to defeat the criminal—a plausible story, too, that sweeps you along with it until the final denouement. The X-ray episode is particularly interesting on account of its true scientific aspect.

We assure you a good half hour's reading in this story.

"It's kind of you to offer it to me," Goodwin said, successfully concealing his amazement and playing for time while he scribbled furiously upon a paper pad at his elbow. "Of course before I would enter upon negotiations for it I would insist upon making a test." He tore off the sheet of paper, upon which he had written "Platinum. Notify Barry," and waved it aloft to attract the attention of an assistant on the other side of the room.

"Certainly," the man on the other end of the wire was saying as the assistant leaped to Goodwin's side, took the paper and departed on a run. "You will want to make the test in your own place, of course. Suppose I send around enough of the stuff for that purpose?"

"And the price?" asked the scientist, hoping he could hold his caller on the line until that assistant made good on instructions given him long ago in case this very thing came up. Three minutes would be more than enough. Two would do in a pinch. He pictured what was going on in the office beyond the door to the laboratory. His assistant would be getting in touch with Barry, chief of the investigation bureau of the department of justice in Chicago. The telephone operator would be urging the girl at the central exchange to hurry with the tracing of the telephone from which the platinum salesman was talking.

"The price," said the high, nasal voice," is one hundred dollars an ounce, for one ounce or a thousand. Take it or let it alone."

"Oh, I'll take quite a bit," replied Goodwin, with one eye on the door through which his assistant would return. "The price is immaterial and a hundred dollars an ounce is reasonable enough, in view," he lowered his voice, "of the present scarcity. I suppose," he hesitated, "I suppose it is safe to handle?"

Looking For a Platinum Pirate

UPON that question and the way he had led up to it and said it, the scientist was staking a great deal. If, as he suspected, this was indeed the much-wanted platinum pirate he might be put off his guard if led to believe that Goodwin, wanting the "white gold" which was so hard to get, was not caring overly much where it came from.

"That," snapped the man, "is the second time you have expressed the hope that this stuff is 'safe.' It's not dynamite and it won't explode, if that's what you mean."

Was he really ignorant of conditions in the platinum market or was he trying to get Goodwin to be definite before committing himself? The scientist, with no time to think it over, chose to believe the latter and rose to what he believed a bait.

"I'll be frank with you," he said. "I want platinum, yes, but not so much that I can afford to have embarrassing questions asked if it is traced to me."

Apparently that was satisfactory. "You needn't let a fear of that worry you," came the reply. "This stuff comes from an unregistered claim my partner and I have been working. Naturally we haven't said anything about it, not wanting a mob of prospectors buzzing over the landscape. Shall I send you that sample?"

Goodwin glanced at his watch. The man was determined to have the conversation end quickly. Perhaps, though, he would hang on a bit longer. "Where is your claim?" he asked, ignoring the other's question about the sample. "I mean what part of the country, not its definite location, of course." He was purposely wordy, sparring for time.

"Canada. Ontario province. Way up beyond Parry Sound," was the curt reply. "How about the sample?"

"Send it," said Goodwin, as his assistant appeared

and gave him a smile and a nod. A clatter on the wire told him the man had hung up.

Goodwin leaned back in his chair with a sigh. He was satisfied now that his caller was indeed the clever, mysterious, uncatchable platinum pirate who so far had evaded every trap laid for him. The scientist was certain, too, that he had not alarmed the man. Rather, he believed that if anyone had slipped, in those few minutes' conversation, it had been his caller, for the man had lied and Goodwin had detected the lie.

Why hadn't he said the platinum came from Russia, once the greatest exporting country for the metal, but since the beginning of the war negligible? Or from Colombia, where a large find of platinum would not be surprising in view of the little really known about the South American republic's resources? Or from one of the Western states where it was known to be present? Why had he picked on Ontario and particularly the Parry Sound region? Why name Canada at all, when the dominion produces an average of only twenty-five troy ounces of platinum a year? The man was absolutely ignorant of the sources of platinum production, for Ontario, of all the Canadian provinces, never had been known to produce a single gram of the metal.

Goodwin shrugged his shoulders. "Oh, well," he said, preparing to return to his interrupted problem, "it's not my affair, but Barry's, now. Still—I'd like to go after that fellow in my own way."

CHAPTER II

Setting the Trap for the Suspected Thief; It Is Believed the Metal Has Been Stolen From the Government Vaults

"I SHOULD like to try and catch this fellow myself."

Goodwin, several hours later, was repeating his wish of the afternoon to Barry, when at the government man's invitation, the scientist had dropped in at the latter's office in the federal building. They were old friends, these two, the scientist and the detective, and Barry had availed himself of the other man's knowledge when first the platinum piracies had been assigned to the Chicago office by his chief in Washington.

"Why don't you have a go at it, then?" inquired the detective. "I believe in scientific methods in crime detection, of course, but I do not believe they have yet reached the stage where they can begin to supplant the tried and tested methods of Scotland Yard, Mulberry street or *Le Sureté* of Paris."

The scientist smiled. "There are Doubting Thomases in every day and age," he replied. "A few years back the deductive reasonings of such fictitious detectives as Sherlock Holmes, Lecoq and Dupin were greeted by flesh-and-blood sleuths as interesting, but impossible to carry out in real life. Today the exploits of those creatures born in authors' brains seem feeble when compared with what is accomplished along the same line by our best crime-detectors. Why not eliminate the human element as represented by detectives and their stool pigeons, with all of a human being's liability to err badly and often, and substitute the inventions and devices of science which cannot go wrong?"

"You would say that, of course, being a scientist yourself," retorted Barry. "I am not. I am a detective; not altogether a poor one, I hope. On this platinum piracy I have not shown results. After lying dormant for several months the case has bobbed up again. You have a chance to go after this chap according to science. I think I can catch him in my way. Let's make it a sporting proposition, the winner to enjoy a dinner at the Drake and an evening at the theater at the expense of the loser?"

Goodwin held out his hand. "You're on," he agreed. "We must not, however, lose sight of the fact that this fellow's capture is, after all, the main thing. Feeling that I may obtain information you could not possibly get in any other way, I'm going to stipulate that I shall keep you informed of my progress. On the other hand, I do not want to know what you find out."

Barry protested at first, but in the end he yielded. Goodwin would have it no other way.

It was undoubtedly a clever man—this man whom they were setting out to trap. His depredations were not such as to attract attention in the public prints, but in scientific and industrial circles he had caused a great deal of grief following the end of the war. Prior to 1914 the United States had found the available supply of platinum, while small, adequate for its needs.

Then the great World War. In a twinkling the United States became the greatest munitions producer in the world. In the making of high explosives, sulphuric acid is essential and in making sulphuric acid platinum is required. The demand for the metal went sky-high, and the supply dropped. Russia no longer produced any for export. The price for platinum was doubled, tripled, quadrupled.

Wise heads at Washington foresaw that inevitably the United States would be dragged into the maelstrom. Officials upon whom would devolve the making of munitions for the war department entered into competition with the private munitions-makers for what platinum was to be had. The government managed to get a lot of it and stored it away in great steel vaults, surrounded by concrete walls, at its explosives plants.

Nor did the government, which had maintained its reserve by appealing to its people's patriotism to refrain from ordering jewelry with platinum settings or teeth fillings of the precious metal, reduce its supply when peace came again.

Industry, struggling to get back on a normal basis and at the same time profit by the extravagance which marked the reaction from the war, found itself woefully short of the "white gold."

Wherever platinum was used, it began to disappear. Laboratories lost their crucibles and retorts of platinum, invaluable because of their high melting point and acid-resisting properties. Lump metal vanished mysteriously. The climax came when the Bureau of Standards at Washington was robbed of metal worth several thousand dollars.

Then the Department of Justice took a hand. Inquiries pointed to one man as the master mind of the platinum thefts. He had boldly counted on human nature to net him a fortune, too, and he guessed rightly. There were unscrupulous buyers enough

who took what he had to offer and did not question him as to where he had obtained it. The pirate was reaping thousands.

Overnight the platinum pirate ceased operations. Somehow he had learned that an organized hunt was being made for him and fled to cover. Against the day when, feeling himself safe, he would resume his nefarious peddling the department of justic enlisted the aid of chemical societies and the manufacturers in setting one of the most gigantic traps ever conceived.

Into every plant, every laboratory, every office where platinum was used the tentacles of the trap were led. Did any platinum thief, no matter how insignificant, broach the matter of a sale the authorities would know about it shortly.

The man who had telephoned Goodwin and nibbled at the bait the scientist set out was the first to be reported. If the amount of the metal, a thousand ounces, which he offered was any indication, he was the master mind who was sought. Only a thief of incredible daring and cleverness would have possession of that much metal.

Yet the men whom Barry dispatched at once to the office building from which the man had telephoned returned empty-handed and without a single clue. The telephone was located in a recently vacated office and any casual visitor in the building could have stepped in and made use of the instrument without attracting any notice.

This was just what the platinum pirate had done. Then he had vanished again into the jammed, crowded streets of a big city. There was nothing that the detectives could do but resume their patient, watchful waiting.

It was against this man that Robert Goodwin had taken up the gauntlet, armed only with his scientific knowledge.

CHAPTER III

A Sample of the Platinum Is Left for the Purchaser to Examine

GOODWIN was not surprised, on arriving at his laboratory the next morning, to find that during the night the promised sample of platinum had been delivered. It was plain that the pirate, in spite of his assertion that his metal was legitimately obtained, did not propose to take any chances. He had wrapped up a small cardboard box containing a few grams of the platinum, addressed it to Goodwin and hung it on the knob of the laboratory door where it would be seen by the first arrival.

The scientist handled the parcel as gingerly as if it had been a bomb. He removed the wraping carefully, scrutinized it closely, then laid it aside. With a pair of tweezers he lifted off the lid of the small box, tilted the box itself and dumped out the platinum. Then he dusted the sides, bottom and lid of the box with powdered graphite, smoothed it down with a brush of fine camel's hair and was delighted to find that several fairly distinct fingerprints stood out in bold relief. These photographed, he turned the plate over to his assistant to develop and dry and take off some prints.

Just as surely as if he had posed for his photograph, the pirate's carelessness in leaving the impressions of his fingers on that cardboard box had paved the way for his positive identification if ever he was caught. Perhaps he did not know he had been so careless. Possibly he had been lulled by Goodwin's deception in pretending to fear the platinum might be traced to his laboratory.

Somewhat jubilantly the scientist called up Barry and told him what he had obtained. "You're slow," said the government man. "We got his prints off that telephone he used yesterday."

Goodwin swore softly and hung up. Then he turned his attention to the sample of platinum. His first trained inspection revealed that the pirate was not skilled in metallurgy. He had mixed platinum as it had come from the ground with platinum sponge, the porous state of the metal after it has been converted through chemical processes. It might as well have been placarded with the information that it had been stolen from some laboratory.

To his most reliable chemist Goodwin entrusted the job of analyzing the samples. The man, when he had finished came back with surprise written in his face.

"This stuff is unbelievably good, sir," he said. "I find that it is more than ninety-nine per cent pure, with only slight traces of iridium and iron."

Goodwin took the figures and delved into the pigeonholes of memory for certain facts he knew were stored there. The composition of every stock of platinum of consequence in the country is a matter of general knowledge to those interested in the metal.

"There are only two places in the country where there would be as much as a thousand ounces of stuff as good as this," he said to himself after a bit. "One is the government plant at Nitro, West Virginia. The other is that Jackson plant on an island in the Mississippi river. The latter is the most likely. No, it's certain. I recall now that the platinum at Nitro had traces of palladium in it. This stuff was stolen from Jackson."

Barry, who dropped in during the day to see if anything had developed, was inclined to dispute it. "No loss of platinum has been reported from the Jackson plant," he insisted. "The government took a census about the time the investigations began and there were thirteen thousand ounces of the stuff there then. It had been converted into platinum sponge mostly and stored away in the vault in aluminum cans holding twenty-five ounces each."

"I'd be willing to wager it isn't there now, not all of it, at least," maintained Goodwin.

"It was there no longer than two months ago," retorted the government man. "At that time the plant was closed down, the platinum and other metals locked up in the vault and the vault itself sealed. That is, wax seals, stamped with the government eagle, were placed at frequent intervals on the cracks around the door. An army officer who is in charge of the place walks through the plant every day. Surely he would have noticed it if those seals had been broken. No such thing has been reported. Besides six watchmen are on duty in the plant at night and no stranger is permitted to land on the island during the day. It's evident you are wrong, old man."

Goodwin shook his head. "I'd have to see the

metal itself in the vault," he said. "The whole thing may turn upon that question, Barry. Once definitely established where the platinum came from, we would know where to begin our probing.

"Can't you get permission from the Washington officials for us to open the vault and look into it?"

"Certainly, although I warn you we'll have our trouble for our pains," was the reply. "It may take a day or two for the chief to cut the red tape and get that permit. In the meantime we can lay low and try to nab Mr. Pirate. I don't suppose you would object to letting a couple of my men loaf around here within sight and hearing of that telephone? I want them to be on hand in case the quarry makes the foolish move of coming in."

"Send them right along. If he should happen to be close to this place they might be able to catch him before he got away."

Barry left then and Goodwin called his assistant. "I will have two government operatives hanging around for awhile," he explained. "I want them to hear whatever is said if the platinum seller calls up again, so you might get an amplifier that can be hooked on to the telephone receiver and throw his voice out distinctly into the room. Then—"

He bent over and talked low and earnestly and in his eyes was the suspicion of a twinkle. The assistant nodded and went to work. The amplifier connected to the telephone, he wheeled up back of Goodwin's chair and directly facing the mouthpiece of the amplifier, a cabinet-like piece of furniture with a projecting funnel-shaped contrivance not unlike the sounding horn of an old-time graphophone.

"All set, sir," he reported.

"And here come Barry's men," said Goodwin. "Just in time, too, perhaps," as the shrill clamor of the telephone bell smote the air.

The assistant waited only for his superior's confirming nod to dash from the room. A moment later he was back and Goodwin, clapping his hand over the transmitter of the telephone, heard him call to the operatives: "He's talking from the Somerville Hotel—in the next block—from a private booth in the lobby."

CHAPTER IV

Some Detective Work à la Sherlock Holmes

"HOW did the test of the metal pan out?" asked the platinum peddler as soon as he had established that it was Goodwin and no other on the telephone.

"Perfectly satisfactory," was the reply. "I am ready to take one thousand ounces at the price you quoted."

There was a whistle, subdued but surprised, from the unknown. "That," he said, "is rather more than I expected you to buy. Of course I wouldn't be carrying that much around. Would delivery in a week or ten days do? I am sure I can have it here in that time."

"Suits me," replied Goodwin.

"I'll let you know when I get back," came crisply over the wire. "Meanwhile arrange to have the payment for it in cash, no bills over a hundred dollars. I'll make final arrangements later."

"Just a minute," said Goodwin, but he was too late. The other man had hung up. The conversation had lasted but little over a minute, not long enough for the detectives to have reached the hotel a block away.

Goodwin took from his pocket the paper in which the box containing the platinum sample had been wrapped, studied it thoughtfully for a few minutes, took a magnifying glass, laid it on the paper and went to work.

After working a while, he put on his hat and coat, left word he would be back within an hour and left the laboratory. When he returned he busied himself with microscope, chemicals and delicate instruments until long after the place was deserted. At last with a sigh he, too, prepared to go.

Half an hour later he was in Barry's private office. The government man was plainly out of humor and his greeting was curt.

"Missed him, of course," he said in answer to a question. "When my men got to the Somerville Hotel, two men were using the private telephone booths. They nailed both of them. One was a traveling salesman trying to buy a bottle of bootleg, the other a small-town banker talking to a chorus girl. Bah!"

His digust was so patent Goodwin roared with laughter.

"Go ahead and laugh," snapped Barry. "Without any sort of a description how could they be expected to find either hide or hair of him?"

"His hide will have to wait," retorted Goodwin, "but if his hair is of any use to you—here you are." He extracted an envelope from his pocket and, while Barry watched curiously, took out several blonde hairs, between three and four inches long, and held them out.

"What's the idea?" demanded the government man, making no effort to take them. "Is this a joke of some kind?"

"Joke!" echoed Goodwin, replacing the hairs in the envelope. "Hardly a joke, Barry. These are from the head of the man you want. To those who can see the story they tell, there is quite a lot to be learned from them."

"I'm blind," injected Barry. "At least, those hairs tell me nothing except that, if they came from his head, he has blonde hair like several million other men in this world. Have they whispered anything else to you?"

A Sherlock Holmes Characterization of the Criminal

GOODWIN smiled. "Plenty," he replied. "That the pirate is a man in his thirties, fair skinned, wears his hair brushed back from the forehead and rather long. Also he is tall, a neat dresser and left-handed."

Barry threw up his hands in mock surrender. "Don't shoot," he begged. "I'll come down. I have no way of disputing you, as you very well know, but how and where did you find out these things?"

"Principally at the Somerville Hotel, where for two days our man has occupied Room 205 under the name of I. L. Porter," was the reply. "No," as Barry shot to his feet, "It won't do any good to look for him there now. He had checked out before he called me the last time. By now he's far away. I could hazard a very good guess where he is bound

for, but that can wait. We can afford to let him have plenty of rope just now."

The government man sank back into his chair. "If you would start somewhere near the beginning!" he suggested. "I am only a detective. My brain cannot encompass your magic without a chart."

"There is no magic," said Goodwin earnestly. "First, take a look at this." He passed over the wrapper from the box in which the sample had reached him. "You will notice my name and address were written on a typewriter and that later, presumably after he had tied up the parcel, the sender took a pen and wrote the words 'Important and Personal' on it. Perhaps he wished to insure that the platinum would get to me properly. When he did that he furnished me with an important clue."

"His handwriting, yes," agreed Barry, "but caligraphy experts have been wrong so often, have been discredited so frequently in court—."

Goodwin stopped him with upraised hand. "You're right," he admitted, "but that has been because they have overlooked one feature of handwriting that is important. Only recently Dr. Locard of France has showed them the way. He has perfected a method of measuring handwriting and so classifying the angular inclinations, the interruptions and the angles' extent so that error has been almost entirely done away with. A man's handwriting as an identification method is almost on a par with the long-established fingerprint.

"For one thing, the forward slant of the letters told me that our man was left-handed. Then, Dr. Locard has shown that when the pen assumes a certain relation to the paper there is a tendency to hesitate, to lift the pen at certain stages in the writing of certain letters or certain phrases. This tendency differs according to the individual. No two of them write the same thing in exactly the same way. In examining the bit of handwriting with which our man favored me I particularly noticed the manner in which his capital 'I' and his capital 'P' were written, and how he hesitated, slightly lifted the pen, in linking 'o' and 'r' and 'e' and 'r'."

He whipped out a magnifying glass and held it for Barry to see. "You will be able to detect that much," Goodwin went on. "Naturally I, with more training and experience, see other fine details that, once I have them in mind, would loom up in my eyes like a sore thumb every time I saw the same man's hand-writing, if any of the letters or combination of letters I had seen before appeared."

"When and where did you see Mr. Pirate's writing again?" demanded the government man, keenly interested.

"On the hotel register of the Somerville," replied Goodwin. "I recognized it the moment my eyes, running down the signatures of the guests, alighted on it. Barry, when our man wrote down the name of 'I. L. Porter' on that register and later added 'Important and Personal' to the typewritten address on that parcel to me, he forged two stout links in the chain of identification. Notice that the same letters, the capitals 'I' and 'P' and the same combinations I pointed out before, 'o-r' and 'e-r,' appear in both. You have not seen the signature on the register. I have. The same man wrote it and addressed the parcel to me. Whether it is his right name or not I do not know. I doubt it. But the man whom we have been calling the platinum pirate has given us a name at last and that name is I. L. Porter."

CHAPTER V

The Clues Interpreted Give the Appearance of the Criminal

"YOU probably are wondering how I discovered this; why I went to the hotel at all," Goodwin resumed. "Science can point the way out to us, Barry, but we must take the road of our own accord. It struck me that our man might be a guest at the hotel. It was logical to suppose that, figuring I was going to buy platinum from him, he would want to be as close as possible in case he had to make an appointment with me, so that the sale might be effected in as short a time as possible. Even you would reason that way."

"Would and did," grinned Barry. "But it was like looking for a needle in a haystack. The Somerville has a number of guests, mostly men. Without any idea of what our man looked like, how were we to pick him out of the crowd?"

"Score one for science," was the reply. "Having identified my man as Porter, I had no difficulty in getting to the room he had occupied. The bird had flown. He had paid for it two days in advance when he came in and when he was ready to leave he simply walked down the steps one flight to the lobby and out the door.

"The maid had not yet been notified the room was vacated, for not even the office knew it. I'll say one thing for Porter. He left no betraying bits of paper, no clues that the criminal of fiction always provides for the detectives. But Porter left something he did not know. On the dresser scarf, where he had brushed his hair before the mirror, he dropped half a dozen hairs."

"Blonde, like that of several thousand men right here in Chicago," interjected Barry.

"But quite individual, if you know how to look for its characteristics. I do," retorted Goodwin. "From a single hair the scientific expert can determine several things about the person from whose head it came. Under the microscope the hair Porter so kindly left lying around told a good deal. Its texture showed it came from the head.

More Identification a la Sherlock Holmes

"ITS healthy condition revealed two things, that Porter is careful to brush it often, that his body is in good shape physically, that he still is a young man upon whom the deterioration of age has not begun its work—in the thirties, to be exact. The pigment, or coloring matter of the hair confirmed that. Not until a man has reached his full development is the color of his hair unchangeable. When age begins to touch him, even slightly, there is a similar change in the coloring of his hair. No such change was apparent in Porter's hair. It pointed to a fair-skinned, fully developed man, near the peak of his powers. Its length, the undulating curve of it, showed how he wore it."

"Surely, though, it did not tell you he was a tall man," cried Barry. "You mentioned that, you know."

"Science did not tell me that," admitted Goodwin. "It was the maid. Porter has acquired the British habit of putting his shoes outside a hotel room door, expecting them to be shined during the night. The maid saw his shoes. They were unusually long and narrow, indicating their owner was tall and not overly heavy. Moreover, they were not in need of much polishing. It is only the neat dresser who demands immaculate shoes, so I judged Porter is careful about his personal appearance."

"You verified this through the hotel attachés?" asked the government man.

"Tried to and ran up against a stone wall. The man had made absolutely no impression on any of them. They could not recall him at all."

Barry considered that thoughtfully. "He's British, then, in your opinion?" he asked.

"More likely a Southerner, who has lived in Canada," was the reply. "He is an American, all right, and his voice has a Southern drawl. I'm guessing at the Canada part for two reasons. One is the fact he put his shoes outside the door. The other that he gave Canada as the location of his fictitious unregistered mining claim."

"I see," said Barry.

"His is a voice that once heard, would be hard to forget," Goodwin went on. "There is something distinctive about it."

"I once arrested a man because he could not disguise his voice," interrupted Barry. "I had heard it only once, in pitch darkness at that, but when I heard it again I nabbed its owner. Convicted him, too. I should like to have heard Porter talk."

Goodwin tugged at his coat pocket and produced a package. "Ask and you shall receive," he said. "I present you with his voice. I shall not need it again."

"What's this thing?" Barry wanted to know, tearing off the paper and turning over in his hands the phonograph record he found. "You mean to say you got Porter to make a record of this voice of his?"

"Unwittingly, yes," replied the scientist. "I rigged up an amplifier to my telephone receiver to make his voice louder as it came over the wire and in front of the amplifier my assistant cranked a recording machine and embalmed Mr. Porter's peculiar tones on a wax record. He hardened the record later and there you are. Take it home and put it on your talking machine and amuse yourself, old man."

"Thanks," said Barry briefly, "I would, however, rather have him caged than to have his voice canned."

Goodwin chuckled, "Perhaps that will come later," he predicted. "One thing at a time, you know. You have his fingerprints, his description to some extent, his voice, his handwriting. Suppose you did have him. What good would it do unless you knew where his platinum came from? How would you prove it was stolen?"

"After what you have shown me this night I defer to you, Goodwin," returned the detective. "But I cannot believe that even as smart a thief as the platinum pirate could coolly get into the vault of the plant at Jackson, lift the government's platinum and not break the wax seals on the cracks of the doors of the vault. I think that when that permission I asked for comes and we open that vault at Jackson we shall find that for once your science has gone astray. I think that we shall find the platinum there in its aluminum containers. If we do," there was mockery in his voice, "I warn you I am going to laugh, Goodwin. So far, I haven't had a chance to do that. It's all been on your side."

"Why wait for permission?" asked the scientist.

"I dare not remove those seals without orders," was the reply. "It would mean my scalp."

"No need to do that," urged Goodwin. "You know the officer in charge at Jackson. He will permit us to visit the plant. I happen to know that there is an exceptionally well-equipped laboratory there. If it boasts an X-ray machine we can get a view of the interior of the vault and determine at once whether the cans are there, as you maintain, or whether they have been stolen, as I believe. What do you say?"

"What do I say?" cried Barry. "I say, 'Yes,' of course, and we will go to Jackson tomorrow."

CHAPTER VI

The Government Vault Is X-rayed by the Detectives

CAPTAIN THOMPSON, U. S. A., had found his job as custodian of the plant at Jackson an easy, but lonesome, one. However, having seen active service in the Signal Corps, he found it gave him an opportunity to exercise his hobby of scientific experimentation in the laboratory of the plant.

He welcomed Goodwin and Barry warmly. The government man he already knew. He had heard a great deal of the scientist and their mission brought into the routine of his daily life a thrill as seldom fell to his lot any more.

He laughed, however, when Goodwin voiced his belief that the supply of platinum under his charge had been tapped. "I hardly see how that could be possible," he said. "The metal is contained in five hundred odd aluminum cans, the door is locked and the vault is sealed, as Mr. Barry has told you. Most of my time on the island is spent in the laboratory adjoining."

"That is during the day," replied Goodwin. "Granted no thief would dare work on the vault then. But how about the nights?"

For the first time the captain's face assumed a worried look. "I do spend a great many nights on the mainland," he admitted. "But the laboratory building has a watchman all its own. Old Peter has been on duty there virtually ever since the plant was built. I'd stake my life on it he wouldn't be a party to anything crooked. And, then, no one could get into the vault unless he tampered with the seals. You will find them unbroken, just as they were the day they were put on. But, shucks, what's the use of standing here arguing about it. As Dr. Goodwin says, the little X-ray will tell in a minute whether the cans still are in the vault. There's a good machine in the laboratory. I'll have the electrician who is on the staff here take it into the vault room and get it ready. He's quite a handy

man, Elston is, and as enthusiastic an experimenter as I am."

He reached out a hand to press the signal button which would summon Elston when Goodwin interposed. "Suppose we do the job ourselves," he suggested. "No," as he observed the frown on the officer's forehead, "I'm not questioning Elston's integrity, but the fewer people we let in on this the better. You know that legally we have no right here. If only we three have a finger in it, it will go no farther."

Captain Thompson got up and took a ring of keys from his pocket. "Come on," he said and led the way into the laboratory adjoining his office, which in the days when the plant was in operation had been the headquarters of its superintendent.

"This," he said throwing open a door and revealing a spacious room, "is the experimental room and those doors you see lead into various other laboratories." He crossed to a great door of steel in the concrete walls, inserted a key in each of the three big padlocks which held it—near the top, the middle and the bottom—and, exerting his strength pulled it open on well-oiled hinges.

Investigation by the X-Ray

GOODWIN gazed curiously about the room into which the captain led the way. It was not large and from floor to ceiling the walls were hidden by stacks of boxes and cans neatly piled up. "Laboratory material as it came from the manufacturers and not unpacked before the plant was shut down," explained Captain Thompson. "If you will wait here I will wheel in the X-ray machine from the experimental room."

While they were waiting for Thompson and the machine, Goodwin and Barry strolled about the room and finally came to a stand in front of the massive door of the vault. The combination which guarded the vault's contents seemed to be an intricate one. Goodwin took the knob of the dial in his fingers and started to twirl it just as the officer returned.

"Be careful," called Thompson sharply. "You are likely to get a nasty shock if you turn the dial around to the figures which form the combination."

Goodwin nodded. "Electrical connections, eh?" he asked. "Not enough voltage to kill, but probably enough to knock a man down. I've seen it before, but it's easy to beat the game. Rubber gloves will do it."

"Certainly," agreed Thompson, "but gloves would act as an absolute bar to opening the combination by the sense of touch alone, and that and acute hearing would be the only way to open it without leaving betraying signs unless one knew the figures and the proper sequence that will open the door."

The scientist smiled. "You must have been reading a prospectus from the company that installed this protective system," he said. "This method is quite out-of-date. I tell you it is a continual battle between makers of safes and crackers of safes. As fast as some clever man devises some new protective method some equally clever thief invents a way to beat it. Even I would guarantee to open this thing, electricity and all, in short order."

"How?" demanded Barry, who had been listening intently but saying nothing.

"The same way that the man who looted this vault of its platinum contents did," smiled the scientist. "I would wear rubber gloves and use a voltmeter to tell me when the knob had been turned just far enough to permit the tumblers of the lock to drop into place."

"I see you are determined to hang on to your theory that the stolen platinum came from here," scoffed Barry. "You no doubt have observed that the wax seals are intact. There is your X-ray machine, Goodwin, all ready to shoot. Go ahead and settle the matter. Tell us if the platinum still is in there."

But the scientist had apparently not been listening to him. Goodwin's head was cocked toward the door by which they had entered from the experimental room. Captain Thompson had closed it behind him when he had wheeled in the X-ray apparatus.

"Someone," the scientist whispered, "is outside the door and very much interested in what we are doing, I think." With a finger to his lips to enjoin silence he tiptoed to the door and threw it open. But no one was there. The eavesdropper was gone.

"Captain," he said, returning. "You, I believe, are familiar with this machine. Will you operate it while Barry and I with a fluoroscope go around the vault and see what the rays reveal? Keep moving it so that you cover all of the back wall where the cans are piled."

A few minutes later Thompson heard them calling him and, shutting off the rays, left the vault room and joined them in the experimental room.

CHAPTER VII

It Is Ascertained that Platinum Has Been Taken From the Vault

"IT looks as if you were right and I wrong," admitted Goodwin to Barry. Through a fluoroscope they had examined the interior of the vault, as revealed by the X-ray. Certainly the faint, but none the less recognizable, outlines of the cans, containing the platinum were there, an orderly pile of them.

The scientist appeared more puzzled than crestfallen. Could he have been mistaken in thinking the stolen "white gold" had come from the Jackson plant? It did not seem possible. Analysis of the sample sent him by the pirate had pointed so conclusively to the source of his loot. Still the cans were in the vault. The X-ray proved that.

Abruptly he got up and, leaving the others, strode back into the vault room and looked around him. He could not have told what he was seeking. He looked carefully at the wax seals over the cracks of the door. So far as he could tell they had not been touched since some government official had affixed them. Yet there was no other way in which the vault could have been entered. The concrete walls were intact; the floor, examined from the basement below, presented a smooth, uncracked surface.

The three of them had been looking for signs that the thief, or thieves, had burrowed into the vault from the outside. That had been when the scientist had almost hypnotized the other two into

sharing his belief that the vault had been robbed, so very confident had he been.

"I must be wrong," he muttered. "Yet — how could I be?"

He resumed his restless wandering about the room. Then he decided he would sit down and concentrate upon the thing. At one side stood a small box, labeled by the manufacturer "aluminum containers." He would move that box around in front of the vault door and sit upon it and see if, by sheer will power, he could figure it out.

But the box, when he laid hands upon it, did not budge easily. Goodwin frowned, exerted a little more strength, found it still immovable. His mind, still wrestling with the problem of where he had been deceived, abruptly centered upon the box. If, as its label indicated, it contained aluminum containers, its weight should be inconsiderable. Yet it was heavy, decidedly so. He bent over to look at its nailed-on lid. Apparently the lid had at some time been pulled off and nailed on again. Empty nail holes gaped a half inch from the heads of the nails.

Why he did it Goodwin himself probably could not have told, but he picked up a hammer lying conviently near, and ripped off the board cover. The box, indeed, contained aluminum cans, but when he picked up one it was heavy. He pried off the lid.

The next minute he had dashed into the experimental room.

"Come here," he cried. "I was right after all. The vault has been robbed. The platinum is outside, at least four cans of it are, in a box labeled 'empty containers.'"

Captain Thompson was immediately in a state of great agitation and excitement. As custodian of the plant he could foresee trouble ahead for him when the time came for explanations and an accounting. He was determined to open every box in the place to see how much platinum there was.

Barry restrained him. "The capture of the thief is the first thing," he said, laying a hand upon the officer's arm. "I can sympathize with you, can understand your wanting to know the worst at once, old man, but to disturb these boxes is to warn the man we are after. We must leave them as they are for the present."

Voices on the Radio

RELUCTANTLY the captain yielded. He was nervous as they returned to the experimental room. He had just closed the door to the vault room and snapped its triple locks when a voice broke in on them.

"Jim!" it cried, "Jim!"

Yet not a person was to be seen. Except for themselves the room was empty. "Jim, Jim!" the voice kept on calling, apparently from the far side of the room. "Are you there, Jim?"

Goodwin grasped Barry by the shoulder. "That voice," he whispered, tense with excitement, "don't you recognize it from the record I made, Barry? It is Porter. The platinum pirate. I would know it in a million."

The government man laughed, shook off the hand and stared in the direction from which the voice was coming. "Porter, yes," he said, shortly. "But Porter, a mile away, fifty miles away, a hundred for all we know. He is talking by radio, to an accomplice, no doubt. While you were in the vault alone, Thompson here was showing me his radio receiving set. You interrupted us with your discovery of the platinum. Ah, he is gone," as the voice suddenly ceased its imperative calls for Jim, whoever he might be.

Goodwin leaped to the instrument, shouldering Barry aside. His hand seized the tuning knob, whirled it gently, manipulating it to first one wave-length, then another. The loud speaking device brought to their ears the whine of the static in the air, a bit of news bulletins being broadcast from some distant city, market quotations, two amateurs jamming the air with mere piffle.

"There's a chance, a bare chance," murmured Goodwin, tuning off from the lower wave-lengths upon which the amateurs and broadcasting stations work.

And at six hundred meters he caught the voice again, calling "Jim, Jim," then it was gone. He tuned in and tuned out at various wave-lengths catching the voice, losing it, catching it again.

"I'm on to him," he said. "He's running up and down, trying one length, then another, trying to locate Jim." Finally the scientist caught up with him again at six hundred and fifty meters. "Jim! Where are you, Jim?" he had said and instantly a second voice broke in: "All right. Here I am. If you would stick on one wave-length long enough for me to get tuned-in properly there wouldn't be any call for you to get excited."

Apparently Jim, whoever and wherever he was, was peeved. The high, nasal tones of the platinum pirate interrupted him. "I've been trying to get in touch with you for two days," he said. "I've got an order for a thousand."

Goodwin flashed a triumphant glance at Barry. The pirate had not been frightened off, then. He had fallen into the trap laid for him by the scientist. He was going to try to deliver that thousand ounces at a hundred dollars an ounce. But, if the scientist and the detective had their way and if Porter was planning on making a haul from the platinum in that vault yonder, he was due for the surprise of his life.

Through the radio Jim had given an exclamation of surprise. "A thousand!" he cried. "Why, man, if we get away with this we're fixed for life, rich. Gosh all fishhooks!"

"I thought so at first," said Thompson grimly. "I am positive now. Gentlemen, Jim is no other than Jim Elston, the electrician here. 'Gosh all fishhooks' is his favorite expression."

"Listen," cautioned Goodwin.

The pirate was talking again. "You will want to get a move on," he said. "I'll be on hand tomorrow night, same old way. Midnight. Goodbye."

CHAPTER VIII

Taking Finger Prints From a Bottle Which the Thief Had Used as a Missile

OLD PETER, night watchman in the building which housed the Jackson plant laboratories and experimental station, was found the next morning, with a fractured skull, lying half in and half out the door by which he would have quit

the place. Nearby was an empty quart bottle with a blood stain upon it, evidently the thing which had felled him. Beside the body the old man's dog, his constant companion, mounted guard and refused to be driven away by another watchman, who had discovered the injured man as he passed on the way to the house on the island in which all of the guards lived.

"We must get him over to the mainland to a hospital," said Captain Thompson, awakened by one of the guards with the news. "Get Jim Elston and tell him to make my motorboat ready. I will be along as soon as I dress."

When the captain appeared, however, he was not alone. At his invitation, after Goodwin had insisted upon first going to the mainland and making much use of the long distance telephone, Goodwin and Barry had spent the night at the captain's comfortable cottage near the plant.

Old Peter's dog had yielded to the captain's persuasiveness and permitted his master to be moved. It was as if the animal recognized the officer as a friend. "Why, the poor brute is hurt, too. Catch him, Elston, and bring him along."

The electrician had come up to report the motorboat in readiness. He stepped forward to pick up the animal. But the dog backed off, growled, bared his teeth and made one lightning snap at the man. "That's funny," remarked Captain Thompson, "he always seemed almost as fond of you as he was of Peter." In his steady blue eyes as he fixed them upon the electrician there was the cold glint of suspicion.

One of the other men took a hand then, and without fear the animal submitted to being picked up and borne to the boat in the wake of his unconscious master. Goodwin and Barry, in the scant clothing they had thrown on in the cottage, stood watching as the boat shot from the little wharf and headed across toward the mainland.

"I think," began the detective, "that our friend Jim probably knows more about how Old Peter was injured than anyone else around here. Thompson thinks so, too. Did you notice his remark that the dog always had seemed fond of Elston before?"

Goodwin nodded. "Apparently the old man was slugged by someone who afterwards hit or kicked the dog," he returned. "In view of what we heard over the radio yesterday, who more likely than Elston? Clearing the way for tonight, in my opinion. Anyhow, it ought not to be hard to prove it. Whoever wielded the bottle left his fingerprints, no doubt, and if the experiment room is open, I can quickly photograph them."

He picked up the bottle and disappeared into the building with Barry at his heels.

By one of the laboratory work-tables Goodwin paused, ran his eye quickly over the bottles, and picked up one labeled "Aluminum Dust." Barry silently watched as the scientist sprinkled the bottle with the powder. This was familiar ground to him, this bringing into relief the greasy prints of fingers left on an object. Goodwin carefully smoothed down the aluminum dust with a soft brush and examined critically the whorls and loops that appeared.

"Good thing that chap first picked the bottle up by the body instead of the neck," he commented "Gives us a perfect set of prints. Now we'll go into the darkroom and photograph them."

"The darkroom," echoed Barry. "I thought light, not darkness, was essential in photography."

"Not in this instance," replied the scientist, picking up from Captain Thompson's desk an unexposed roll of camera film. "Come on." He led the way into the darkroom in one corner, turned on the ruby lamp, and asked the detective to shut the door.

"Now," his voice went on, "I am unrolling the film and rolling it about the body of the bottle. I am holding it in place with a bit of adhesive tape at top and bottom. We are ready now for the exposure. First, though, I am wrapping the bottle up in a heavy black cloth, leaving only the mouth open. Here goes!"

A match flared up in the darkness and was plunged into the mouth of the bottle where it spluttered, burned for a second, and was extinguished by the scientist's breath blown into the bottle. "Thank goodness, developer and hypo are ready." Goodwin was speaking again, and in the dim rays of the ruby lamp Barry could see that he was unrolling the film from the bottle.

For several minutes he worked in silence, his hands running the roll of film through the developer. Then he held it up, peered through it toward the lamp, and sighed with relief. "A perfect negative," he said, dropping the film in the hypo and wiping his hands. "You see, photographed in the ordinary way, we would be able to get only one or two finger prints on each negative. It would be necessary to turn the bottle for each print. This way, the film wrapped around the bottle records all the prints at once and on one negative."

"Wonders never cease," commented Barry as they started back for the cottage to dress more fully and await Captain Thompson's return.

His companion chuckled. "My friend," he said, "you haven't seen anything yet. Unless I miss my guess I'll have one or two more tricks for you before this is over. I telephoned to my laboratories in Chicago last night and ordered quite a boxful of scientific stuff sent down to me."

"How's it going to get here?" was the doubtful query. "It's five hundred miles from here to Chicago."

"The only way it could get here in time to be of any use," answered the scientist. "An airplane carrying the box left Chicago at dawn. We'll find it waiting for us shortly after dinner at the flying field over on the mainland. A couple of hours is all I'll require to rig it up. Hello, here's Thompson coming back."

Old Peter was not dangerously hurt, the captain said, in reply to their questions, but he would be off duty for several days. "In the meanwhile," he added, "Jim Elston has volunteered to stand guard for him in the laboratory building. I figured you'd want him to have all the rope possible, if he is the pirate's confederate; so I consented and sent him off to his own cottage for the day to rest and sleep."

"Good stuff," applauded Goodwin, "it gets him out of my way, too. I saw him only for a moment when Old Peter was being taken off to the boat, but unless I am a poor judge of character this is about the last chance Elston is going to have to sleep

except behind the bars for some little time. Anyhow, to-night will tell, I'm hoping."

CHAPTER IX

Arrival of the Conspirators by the Air-Route. The Pursuit. The Airplane Disabled

MIDNIGHT.

The government plant at Jackson was wrapped in shadows and over it brooded a deep quiet, broken only by the gurgle and lap of the waters of the river as they slipped past the island.

Three figures silently stole out of the cottage of Captain Thompson, made their way to the vicinity of the laboratory building, and were merged with the darkness. Had one been able to see them he would have discovered them prostrate on the ground where they could command the main door to the building.

Thus ten minutes passed. Then faintly to their ears came the droning whine of a high-powered motor, beating swiftly and accurately on its many cylinders. Abruptly it was shut off, there was the swish of a heavy body rushing through the air above the heads of the concealed three and a huge shape, like a bird that soars with wings extended, circled smartly over the river, slid downward and, cutting the water sharply for fifty yards, came to rest near the shore of the island.

None of the three budged or spoke. The current bore the seaplane in until it gently nosed the bank and a man leaped ashore, busied himself for a few minutes, apparently turning the plane and making it secure with a rope, then stole up the pathway to the laboratory door.

Evidently his coming was expected, for the door swung open and he disappeared within.

"Stay here," commanded one of the three watchers as he rose and crept away in the direction of the seaplane. He clambered into the cockpit, fumbled briefly with a knowing hand among the intricacies under the instrument board, and rejoined the others.

"I disconnected his ignition," whispered Captain Thompson and sank back into his former position in the shadows. He was barely in time, too, for the laboratory door opened and this time two figures emerged, each bearing in his arms what appeared to be a heavy box. These they stowed away in the plane and returned, disappearing inside the building again.

"This is the time we nail them," came from one of the watchers. It was Barry, to whom had fallen the task of directing the capture. "Have your revolvers ready and have your hand on the switch, Goodwin."

Finding a Second Criminal

AGAIN the laboratory door opened, again the two figures emerged and made their way to the plane. Had there been eyes in the back of their heads, however, they would have seen the trio get to their feet and assume the position of runners waiting for the crack of the gun that would send them away.

"Now!" snapped Barry, and he and Captain Thompson dashed for the men at the plane. Instantly Goodwin pressed the switch in his hand and from the top of two nearby buildings giant searchlights burst into radiance, illuminating the scene as if it were day.

"Throw up your hands, quick," shouted the government detective, aiming his revolver.

The result was startling. One of the cornered men sprang upon the other. "Yes, you're caught, you damned thief," roared the voice of Jim Elston, the electrician. "I've got him, captain! I've got him!"

From the other, taken by surprise as he was, came a maddened cry in the high, nasal tones of the platinum pirate. "Take that, you double-crosser," he grated vindictively and, bringing his revolver down upon the electrician's head, he flung the electrician from him and sprang into the plane.

The three pursuers had closed in by now. They stood a few yards away, the muzzles of their weapons trained upon the man in the plane as he wildly sought to start its motor.

"It's no use, Porter," called Barry. "The wires are disconnected. Throw up your hands or you die."

With a cry that acknowledged defeat, the platinum pirate obeyed. A moment later the government man had climbed up beside him and snapped handcuffs upon his wrists.

Jim Elston still lay where he had fallen. From a wound on the head where the butt of the platinum pirate's revolver had crashed with terrific force in that momentary struggle the blood was trickling down and the unconscious man moaned softly.

"I hope he dies, the double-crosser," snarled Porter as he and his captor paused beside the inanimate form over which Goodwin and Thompson were feverishly working. But he got no rise from the others.

"We'd better get him to the hospital over on the mainland," said the army officer. "He'll live, probably, but he got a nasty crack. Funny, too, it's almost identical with the wound that put Old Peter out of action. Retribution, I would say."

So after a few minutes in the laboratory during which Goodwin took fingerprints of both Porter and Elston, the injured man was carried to the motorboat and made comfortable. Then the sullen prisoner was taken aboard and Barry and Captain Thompson set off for the mainland with them.

Goodwin declined to go. He had work to do, he said with a mysterious smile and turned back to the laboratory.

Dawn was breaking when, hollow-eyed and haggard, he gazed with satisfaction upon the result of his labors spread out on a table before him: A dozen negatives, developed and dried and a print of each; four sets of fingerprints, all classified; a talking machine record.

It was there that Barry and Thompson found him upon their return. Elston was conscious, the captain said, and insisted that as soon as he was able to talk he would explain his share in the affair so satisfactorily that instead of being a suspected accomplice, with a policeman on guard at his bedside, he would be hailed as a hero and crook-catcher.

"The way he jumped on Porter has almost convinced me that we were wrong in suspecting Jim," said the captain. "Yes, I know he helped him carry out the boxes containing the platinum, but he insists that it was all a part of his scheme to

trap the platinum thief and that he would explain it later."

"Criminals may hoodwink their captors with words," replied Goodwin with a smile, "but they cannot deceive the implacable and emotionless instruments of science."

But more than that he refused to explain.

CHAPTER X

The Intricate Plot Unravelled and the Guilt of the Conspirators Proved

JIM ELSTON, propped up in bed at the hospital to which he had been taken, greeted Barry, Goodwin, and Captain Thompson with a smile. For the stolid policeman who sat nearby he had only a scowl.

"I'm sorry that fellow got away," he said, apparently ignorant of Porter's capture. "He surprised me in the laboratory building, poked a gun in my face and threatened to kill me if I didn't help him. I had it all figured out to trap him in there on the next trip when you three broke in on the show. How did you get the word of what was going on, anyhow?"

Goodwin interrupted him. "I'm afraid you may not yet be in condition to talk, Elston," he said, not unkindly. "It would be better to let us take your blood pressure first." The electrician agreed cheerfully, and merely looked on curiously while his arm was tightly bandaged and connected up with a machine which an attendant had brought in.

"This, said Goodwin, speaking distinctly, "is a sphygmomanomoter." He joined in the laugh at the long word. "This stylus touching the chart here records on the paper whether the blood pressure goes up or down. It is a well-known fact that the various emotions—hate, fear and so on—affect the blood and a person who is telling a lie can be quickly detected by it. The effort of speaking an untruth sends the blood pressure up." His voice became rapid, excited. "Why, the stylus shows that is what is happening with you, Elston. What emotion is passing through your mind? Fear! You are afraid of what this machine may tell about you. Why, Elston? Because you have been planning to lie to us. You already have done so. Watch how your blood pressure is going up! No. Elston, you are not the hero you would make out, the watchman taken by surprise and forced at the gun's point to help a crook. You are the accomplice of the platinum pirate, Porter, who already is in a cell where you will join him shortly."

"No, no," muttered the electrician hoarsely. "You are wrong."

"Another lie, Elston," retorted the scientist calmly. "That one sent your pressure way up. Why man, I can tell you everything and just as it happened. When Porter called you on the radio (ah, that sent your pressure up again, as you thought of the complete set in your cottage) to let you know he was going to come last night after the metal, you made up your mind to slug Old Peter so you could take his place as watchman. Right again, eh? You hit him with the bottle, kicked and injured his dog because the poor brute resented the attack on his master.

"Last night as soon as you went on duty in the laboratory you opened the vault room locks with skeleton keys you had made. Then you got from behind the boxes in there an invention of your own for removing the wax seals from the vault without damaging them. You donned rubber gloves to protect you against the voltage that protected the combination. It was not the first time you had done this, Elston. You knew the figures that would open the lock. You turned to them quickly, swung open the door, removed the cans of platinum and substituted similar cans filled with moist dirt and mercury prepared in advance. At a quick glance it would look like platinum sponge. An examination would have shown the fraud. Then you relocked the vault, fused the wax seals back on, put the cans of platinum in the boxes, nailed them up again, and had only to wait until Porter arrived to take them away in his plane."

"It's a lie," shouted Elston, sending his blood pressure high again as he struggled to tear the bandage from his arm. But the policeman held him down upon the bed.

"Listen to this, then," said Goodwin, turning to a talking machine which the attendant had set on the table beside him. He adjusted the needle, turned on the starting mechanism. A whirr, then the record became distinct. A man was talking and with a start Barry recognized it as the voice of Porter. "We'll have to work fast, Jim," he was saying. "A thousand ounces is quite a bit, and I want to be on my way." Another voice, that of Elston himself, interrupted: "Go slow, we'll take out a box apiece of this mercury and dirt first. There's been a couple of strangers snooping around here and they might be wise. If they are on to us, they'll be waiting outside. If they stop us, you make a run for the plane. I'll stand fast and tell them a yarn of how you surprised me and—" Again the pirate was speaking: "I gotcha. You can tell them this fake stuff was in the room here and you made me believe it was real so I'd lay off the vault. We'll have money to burn soon, Jim. Spinelli has got a job in Goodwin's place—"

Here the record ran out.

"Elston, that's enough to show you we've got the goods on you. All the time you were talking, a dictaphone hidden in the vault room was carrying your words into the laboratory and transferring them to a record on a machine so sensitively adjusted that the vibrations of the human voice over the dictaphone started the mechanism. Here's some more evidence.

"Take a look at these pictures, a dozen of them. In the vault room I had hidden a new device—a 'silent watcher' it is called. Just as a seismograph records the vibrations of an earthquake, so the silent watcher began to quiver when you entered the room. Moreover, it was attached to a camera, another new invention, which began to take pictures when the silent watcher moved. Every three minutes while you worked on the vault, opening it, a plate was exposed and took your picture. Recognize yourself?"

He reached into his pocket and laid two more prints before the electrician. "Those, Elston, are

your fingerprints," said the scientist. "One set I got off the bottle with which Old Peter was slugged, the other I took from your fingers last night while you were unconscious. They tally exactly, just as Porter's fingerprints tally exactly with others we obtained in Chicago, of a man who offered to sell me platinum and later sent me a sample. Now Elston what are you going to do?"

The Final Confession

FOR a moment the electrician, gazing at the pictures, was silent. Then—"I'm going to tell the truth and your machine there will prove it. This fellow Spinelli used to be a chemist at the plant here. His job was to convert the platinum into sponge. He lost out when the plant was closed and he could get only temporary jobs in other laboratories all over the country. Finally he got the idea of stealing the platinum wherever he was employed and he had to have someone to sell it for him. I don't know where he picked up this fellow Porter. He was an American from somewhere down South who had been living in Canada and joined the aviation forces during the war. But he did something, showed the white feather, I think, and was in disgrace and down and out afterwards. He's crooked, all right, and he and Spinelli cooked up the scheme to get the platinum from Jackson and well, I guess you know the rest. They got to me, promised me great big money if I'd help them, and I fell."

"I don't mind telling you Spinelli is under arrest, too," said Goodwin. "You see, I recognized the name when it popped up on that record. Spinelli has been working for me for several weeks and—"

"Are you Mr. Goodwin?" asked Elston, excitedly. "Because if you are I'll tell you something else. As soon as you had bought the platinum, which you would not have done unless you were crooked too, Spinelli was going to steal it back again."

The scientist whistled in surprise, and Barry laughed outright. "You see," Elston went on, "you couldn't have made a holler about it without getting yourself into trouble, too, for buying stuff you knew was stolen."

"Ah, Elston, you have told the truth now," cried Goodwin. "The blood pressure machine has shown only a normal flutter while you have talked."

Back again on the island for a needed rest before returning to Chicago, Barry and Goodwin were discussing the evidence which science had put into the detective's hands.

"There is one thing that still puzzles me," Barry said. "How did Elston get past those seals on the vaults?"

"Just a minute," replied the scientist. He disappeared, to return a moment later holding a common electric light cord with a socket. To the other end was attached a wooden fork in the shape of a "Y," like a boy's sling. Both the handle and the prongs had been hollowed to permit the wires which made up the cord to run through them. At their ends the wires were connected by a finer wire.

"When the current was turned on, this wire became very hot," explained the scientist. "It was easy to slide it behind the wax seals and pull them off intact. When the vault was closed again, the seals were easily fused back into place."

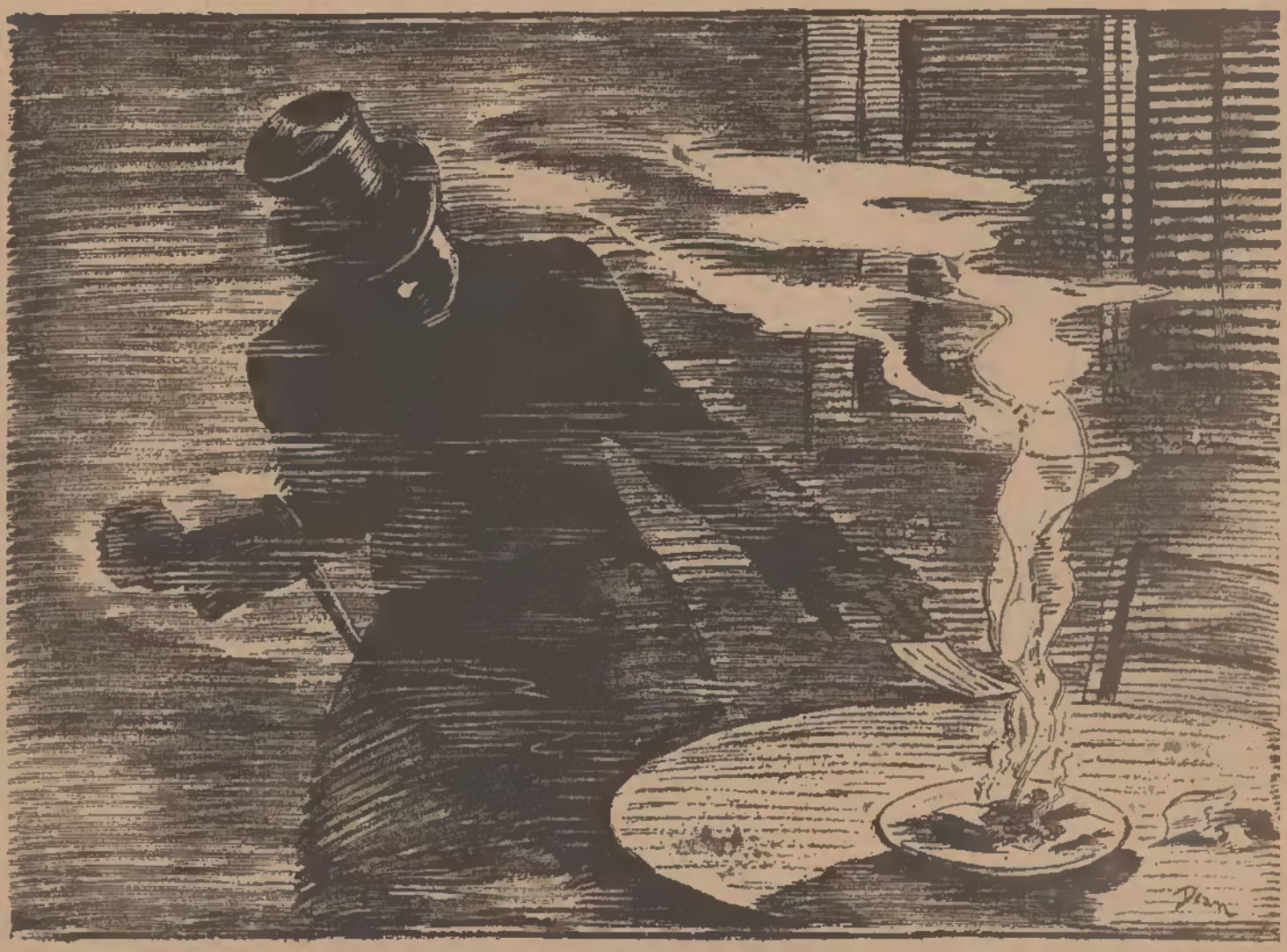
"Everything you have done has seemed simple," admitted Barry. "Yet I am still filled with admiration and surprise. Without you the platinum thefts would still be a mystery, the thieves uncaught. My methods did not have a chance to build up such a plain, incontrovertible case. When do we dine at the Drake and see that new show at the Cort?"

THE END.

The MAN in the ROOM

By Edwin Balmer and William B. MacHarg

Authors of "The Hammering Man," "The Eleventh Hour," etc.



"So, you were the man in the room Sunday night! You, to save the rascal, Harrison, the real thief, burned the raised notes, turned on the gas and left him to seem a suicide and a thief!"

"AMAZING, Trant."

"More than merely amazing! Face the fact, Dr. Reiland, and it is astounding, incredible, disgraceful! After five thousand years of civilization, our police and court procedures recognize no higher knowledge of men than the first Pharoah put into practice in Egypt before the pyramids were built!"

Young Luther Trant pushed impatiently back from Reiland's breakfast table and crossed one muscular leg awkwardly over the other. Awkwardly, and with the same rebellious impatience, he pushed his fingers through his thick red hair. His queerly mismated eyes—one more gray than blue, the other more blue than gray—flashed at his older companion earnestly. And under his right eye (the bluer one) a tiny birth-scar, usually almost indistinguishable, glowed dimly pink in his intenseness. On his knee Trant held the Chicago *Record-Herald*, and, as he went on, his finger followed the paragraphs.

"Listen! 'A man's body found in Jackson Park'; six suspects seen near the spot have been arrested. 'The Schlaack's abduction or murder'; three men under arrest for that since last Wednesday. 'The Lawton trial progresses'; with the likelihood that young Lawton will be declared innocent; eighteen months he has been in confinement—eighteen months of indelible association with criminals! And here's the big one: 'Sixteen men are held as suspected of complicity in the murder of Bronson, the prosecuting

AFTER you have read this absorbing tale, you will read with a great deal more interest, future newspaper accounts of people who commit suicide by inhaling illuminating gas. Who knows but that in some cases not suicide but murder was committed? How our scientific detective goes about solving this particular case, makes excellent reading.

attorney.' Did you ever hear of such a carnival of arrests? And put beside that the fact that for ninety-three out of every one hundred homicides no one is ever punished!"

The old professor turned his ruddy face, surmounted by the bald dome of his cranium, patiently toward his young companion. For some time Dr. Reiland had noted uneasily the growing restlessness of his brilliant but hot-headed young aid. But till he had let him go, Dr. Reiland meant to hold him in his psychological laboratory.

"Five thousand years of being civilized," Trant burst on, "and we still have the 'third degree!' We still confront a suspect with his crime, hoping he will 'flush' or 'lose color,' 'gasp' or 'stammer.' And if in the face of this crude test we find him prepared or hardened so that he can prevent the blood from suffusing his face, or too noticeably leaving it, if he inflates his lungs properly and controls his tongue when he speaks, we are ready to call him innocent. Is it not so, sir?"

"Yes," the old man nodded, patiently. "It is so, I fear. What then, Trant?"

"What, Dr. Reiland? Why, you and I and every psychologist in every psychological laboratory in this country and abroad have been playing with the answer for years! For years we have been measuring the effect of every thought, impulse and act in the human being. Daily I have been proving, as mere laboratory experiments to astonish a row of staring sophomores, that which—applied in courts and jails—would conclusively prove a man innocent in five minutes, or condemn him as a criminal on the evidence of his own uncontrollable reactions. And more than that, Dr. Reiland! Teach any detective what you have taught me, and if he has half the persistence in looking for the marks of crime on *men* that he has in tracing its marks on *things*, he can clear up half the cases that fill the jail in three days."

"And the other half within the week, I suppose, Trant?" The older man smiled at the other's enthusiasm.

"Dr. Reiland," returned Trant, more soberly, "you have taught me the use of the cardiograph, by which the effect upon the heart of every act and passion can be read as a physician reads the pulse chart of his patient, the pneumograph, which traces the minutest meaning of the breathing; the galvanometer, that wonderful instrument which, though a man hold every feature and muscle passionless as death, will betray him through the sweat glands in the palms of his hands. You have taught me—as a scientific experiment—how a man not found to stammer or hesitate, and in perfect control of his speech and faculties, must surely show through his thought associations, which he cannot know he is betraying, the marks that any important act and every crime must make indelibly upon his mind——"

"Associations?" Dr. Reiland interrupted him less patiently. "That is merely the method of the German doctors—Freud's method—used by Jung in Zurich to diagnose the causes of adolescent insanity."

"Precisely." Trant followed with his eyes the old professor who had risen and moved toward the window. "Merely the method of the German doctors! The method of Freud and Jung! Do you think that I, with that method, would not have known eighteen months ago that Lawton was innocent? Do you suppose that I could not pick out among those sixteen men the Bronson murderer? If ever such a problem comes to me I shall not take eighteen months to solve it. I will not take a week."

In spite of himself, Dr. Reiland's lips curled at this arrogant assertion. "We meet no such problems here, Trant," he said. He looked out into the quiet street of the university town. "The biggest questions we can give you to solve are such as this" —he pointed—" 'Why is a delicate girl like Margaret Lawrie running out at her front door a little after seven o'clock on this frosty morning without either hat or jacket?' "

"And that, too, I could solve," answered Trant. "But it will be unnecessary, since she seems to be coming here, and herself will tell us."

It was characteristic of him that before the door bell had stopped ringing or the servant had had time to answer, Trant had opened the door. On the girl's forehead, very white under the mass of her dark hair, in her wide gray eyes and in the tense lines of her straight mouth and rounded chin, he read at once the nervous anxiety of a highly-strung woman.

"Professor Reiland," she demanded, in a quick voice, "do you know where my father is?"

"My dear Margaret," the old man took her hand, which trembled violently, "you must not excite yourself this way."

"You do not know!" the girl cried excitedly. "I see it in your face. Dr. Reiland, father did not come home last night! He sent no word."

Reiland's face went blank. No one knew better than he how great was the break in Dr. Lawrie's habits that this fact implied, for the man was his dearest friend. Twenty years Dr. Lawrie had been treasurer of the university. In that time only three events—his marriage, the birth of his daughter, and his wife's death—had been allowed to interfere with the stern and rigorous routine into which he had welded his lonely life. So Reiland paled, and drew the trembling girl toward him.

"When did you see him last, Miss Lawrie?" Trant asked gently.

"Dr. Reiland, last night he went to his university office to work," she replied, as though the older man had spoken. "Sunday night. It was very unusual. All day he had acted so strangely. He looked so tired."

"Professor Reiland and I are just going to the campus," Trant spoke quickly, as the girl helplessly broke off. "We will stop at his office. Harrison can tell us what has called him away. There is not one chance in a thousand, Miss Lawrie, that anything has happened to him."

"Trant is right, my dear." Reiland had recovered himself. "Go home, and don't worry." He was slipping on his overcoat.

The tower clock of University Hall had just gone seven; and in front of them the building itself lifted its broad shape with its fifty windows on the east glimmering like great eyes in the early morning sun. Only, on three of these eyes the lids were closed

—the shutters of the Treasurer's Office were fastened. Trant could not remember ever before having seen the shutters closed on University Hall. They had stood open until, on many, the hinges had rusted solid. He glanced at Dr. Reiland, who shuddered, but straightened again, stiffly.

"There must be a gas leak," Trant commented, sniffing, as they entered the empty building. But the white-faced man beside him paid no heed, as they sped down the corridor.

ON both sides of them were doors with high, ground-glass transoms, and as they advanced toward the corridor door of Dr. Lawrie's office the smell of gas grew stronger. Dr. Reiland tried it; but Trant stooped to the keyhole and found it plugged with paper. He caught the transom bar, set his foot upon the knob and, drawing himself up, pushed against the transom. It resisted; but he pounded it in, and, as its glass panes fell tinkling, the fumes of illuminating gas burst out and choked him.

"A foot," he called down to his trembling companion, as he peered into the darkened room. "Some one on the lounge!"

Dropping down, he threw his strong shoulder vainly against the door. Reiland hurried to a recitation room across the corridor and dragged out a heavy table. Together they drove a corner of this against the lock; it broke, and as the door whirled back on its hinges the fumes of gas poured forth, stifling them and driving them back. Head lowered, Trant rushed in, threw up the three windows, one after the other, and beat open the shutters. He leaped upon the flat-topped desk under the gas fixtures in the center of the room and turned off the four jets from which the gas was pouring. Darting across the hall, he opened the windows of the room opposite.

At once the strong morning breeze eddied through the building, clearing the gas before it. It set doors swinging, and, unnoticed at the moment, while Dr. Reiland with tears streaming from his eyes knelt by the body of his lifelong friend, it lifted from a metal tray upon the desk scores of fragments of charred paper which scattered over the room, over the floor and furniture, over even the couch where the still figure lay, with its white face drawn and contorted.

Reiland arose and touched his old friend's hand, his voice breaking. "He has been dead for hours. Oh, Lawrie!"

Through the open windows the view embraced a dozen recitation halls and laboratories. The great buildings, so silent now, in a very few moments would be echoing to the tread of hundreds of students.

As the two men stood beside the dead body of him in whose charge had been all finances of this great institution, their eyes met, and in those of Trant was a silent question. Reddening and paling by turns, Reiland answered it, "No, Trant, nothing lies behind this death. Whether it was on purpose or by accident, no secret, no disgrace, drove him to it. That I know."

The young man's oddly mismated eyes glowed into his, questioningly. "We must get President Joslyn," he said.

While he was at the telephone, Dr. Reiland swept the fragments of glass across the sill, and closed the door and windows.

Already feet were sounding in the corridors; and the rooms about were fast filling before Trant made out the president's thin figure, an overcoat across its shoulders, bending against the wind as he hurried across the campus.

Dr. Joslyn's swift glance as Trant opened the door to him—a glance which, in spite of the student pallor of his high-boned face, marked the man of action—considered and comprehended all.

"Who laid Lawrie there?" he asked sharply after an instant.

"He laid himself there," Reiland softly replied. "It was there we found him."

Trant put his finger on a scratch on the wall paper made by the sharp corner of the davenport lounge; the corner was still white with plaster. Plainly, the lounge had been violently pushed out of its position, scratching the paper.

Dr. Joslyn's eyes passed on about the room, passed by Reiland's appeal, met Trant's direct look and followed it to the smaller desk beside the dead Treasurer's. He opened the door to his own office.

"When Mr. Harrison comes," he commanded, "tell him I wish to see him. The Treasurer's Office will not be opened this morning."

"Harrison is late," he commented, as he returned to the others. "He usually is here by seven-thirty." Harrison was Dr. Lawrie's secretary and assistant.

"Now give me the particulars," the president said, turning to Trant.

"They are all before you," Trant replied briefly. "The room was filled with gas. These four outlets of the fixture were turned full on. And besides," he touched now with his fingers four lava burner tips which lay upon the table, "these tips had been removed, probably with these pliers that lie beside them. Where the tool came from I do not know."

"They belong here," Joslyn answered, absently. "Lawrie had the tinkering habit." He opened a lower desk drawer, filled with tools and nails and screws, and dropped the nippers into it.

"The door was looked inside?" inquired the President.

"Yes, it is a spring lock," Trant answered.

Dr. Joslyn straightened, and his eyes met Reiland's almost sternly.

"Reiland," he demanded, "you have been closer to Lawrie than any other man. What was the cause of this?"

"I have been close to him," the old man answered bravely. "You and I, Joslyn, were almost his only friends. We, at least, should know there can have been no—real reason. Lawrie's life has been open as noonday."

"Yet he had been burning papers." The president pointed quietly to the metal tray.

Dr. Reiland winced.

"Some one had been burning papers," Trant softly interpolated.

"Some one?" The president looked up sharply.

"These ashes were all in the tray. I think," Trant

contented himself with answering. "They scattered when I opened the windows."

Joslyn lifted a stiletto letter-opener from the desk and tried to separate, so as to read, the carbonized ashes left in the tray. They fell into a thousand pieces.

Trant's eyes had registered all the room and now measured Joslyn and Dr. Reiland. They had ceased to be trusted men and friends of his as he incorporated them as definite elements in the problem. Suddenly he stooped before the couch, slipped his hand under the body, and drew out a crumpled paper. It was a recently canceled note for twenty thousand dollars drawn on the university regularly by Dr. Lawrie as Treasurer.

"What is the matter, Joslyn?" Dr. Reiland started up.

"A note. I cannot recollect its circumstances." The president stared at the paper. Suddenly his face whitened. "Where are Lawrie's keys?" He opened the desk drawer; but Trant went straight to the couch and took the keys from Lawrie's pocket.

Dr. Joslyn unlocked the vault at the foot of the couch and from a pile of books within took the top one.

"Reiland," he said, pitifully, "the trustees authorized this note for two thousand dollars, not twenty."

"But it has been canceled. See, he paid it! And these," he motioned to the ashes in the tray, "if these, too, were notes—raised, as you clearly accuse—he must have paid them. They were returned."

"Paid? Yes!" Dr. Joslyn's voice rang accusingly. "Paid from the University funds! See, Lawrie himself had entered them for their face amounts as he paid them. Here," he turned back a few pages swiftly, "they are entered for the amounts we authorized a few months ago. The total discrepancy exceeds one hundred thousand dollars!"

"Hush!" Reiland was upon him. "Hush."

The morning was advancing. The halls resounded with the tread of students passing to recitation rooms.

"Who filled this note out?" Trant had picked up the paper and asked this question suddenly.

"Harrison. It was the custom. The signature is Lawrie's, and the note is regular. Oh, there can be no doubt, Reiland!"

"No, no!" the old man objected. "James Lawrie was not a thief!"

"How else can it be? The tips taken from the fixture, the keyhole plugged with paper, the shutters—never closed before for ten years—fastened within, the door locked! Burned notes, the single one left signed in his own hand! Do you forget that the trustees meet to-morrow night and he then would have had to present his books? We must face it, Reiland; a suicide—a hundred thousand dollars short in his account!"

"Luther!" The old professor turned stretching out his hands to his young assistant. "Do you, too, believe this? It is not so! Oh, my boy, just before this terrible thing, you were telling me of the new training which could be used to clear the innocent and prove the guilty. I thought it braggadocio. I scoffed at your ideas. But if your words were truth, now prove them. Take this shame from this innocent man."

The young man sprang to his friend as he tottered. "Dr. Reiland, I *shall* clear him!" he promised wildly. "I shall prove, I swear, not only that Dr. Lawrie was not a thief, but—he was not even a suicide!"

"What madness is this, Trant," the president demanded impatiently, "when the facts are so plain before us?"

"So plain, Dr. Joslyn? Yes," the young man rejoined, "very plain indeed—the fact that *before* the papers were burned, *before* the gas was turned on or the tips taken from the fixture, *before* that door was slammed and the spring lock had fastened it from the outside—Dr. Lawrie was dead and was laid upon that lounge!"

"What? What—what, Trant?" Reiland and the president exclaimed together. But the young man addressed himself only to the president.

"You yourself, sir, before we told you how we found him, saw that Dr. Lawrie had not himself lain down, but had been laid upon the lounge. He is not light; some one almost dropped him there, since the edge of the lounge cut the plaster on the wall. The single note not burned lay under his body, where it could scarcely have escaped if the notes were burned first; where it would most surely have been overlooked if the body already lay there. Gas would not be pouring out during the burning, so the tips were probably taken off later. It must have struck you how theatric all this is, that some one has thought of its effect, that some one has arranged this room, and, leaving Lawrie dead, has gone away, closing the spring lock——"

"Luther!" Dr. Reiland had risen, his hands stretched out before him. "You are charging murder!"

"Wait!" Dr. Joslyn was standing by the window, and his eyes had caught the swift approach of a limousine automobile which, with its plate glass shimmering in the sun, was taking the broad sweep into the driveway. As it slowed before the entrance, the president swung back to those in the room.

"We two," he said, "were Lawrie's nearest friends—he had but one other. When you telephoned me this morning I called up Branower, simply asking him to meet me at the Treasurer's Office at once. He is coming now. Go down and prepare him, Trant. His wife is with him. She must not come up."

Trant hurried down without comment. Through the window of the car he could see the profile of a woman, and beyond it the broad, powerful face of a man, with sandy beard parted and brushed after a foreign fashion. Branower was the President of the Board of Trustees of the university, an office in which he had succeeded his father. At least half a dozen of the surrounding buildings had been erected by the elder Branower, and practically his entire fortune had been bequeathed to the university.

"Well, Trant, what is it?" the trustee asked. He had opened the door of the limousine and was preparing to descend.

"Mr. Branower," Trant replied, "Dr. Lawrie was found this morning dead in his office."

"Dead? This morning?" A muddy grayness appeared under the flush of Branower's cheeks. "Why!

I was coming to see him—even before I heard from Joslyn. What was the cause?"

"The room was filled with gas."

"Asphyxiation!"

"An accident?" the woman asked, leaning forward. Even as she whitened with the horror of this news, Trant found himself wondering at her beauty. Every feature was so perfect, so flawless, and her manner so sweet and full of charm that, at his first close sight of her, Trant found himself excusing and approving Branower's marriage. She was an unknown American girl, whom Branower had met in Paris and had brought back to reign socially over this proud university suburb where his father's friends and associates had had to accept her and—criticise.

"Dr. Lawrie asphyxiated," she repeated, "accidentally, Mr. Trant?"

"We—hope so, Mrs. Branower."

"There is no clew to the perpetrator?"

"Why, if it was an accident, Mrs. Branower, there was no perpetrator."

"Cora!" Branower ejaculated.

"How silly of me!" She flushed prettily. "But Dr. Lawrie's lovely daughter; what a shock to her!!"

Branower touched Trant upon the arm. After his first personal shock, he had become at once a trustee—the trustee of the University whose Treasurer lay dead in his office just as his accounts were to be submitted to the Board. He dismissed his wife hurriedly. "Now, Trant, let us go up."

President Joslyn met Branower's grasp mechanically and acquainted the president of the trustees, almost curtly, with the facts as he had found them.

"Short one hundred thousand dollars, Joslyn? It is suicide?" the president of the trustees was revolting at the charge.

"I can see no other solution," the President replied, "though Mr. Trant——"

"And I might have saved this!" The trustee's face had grown white as he looked down at the man on the couch. "Oh, Lawrie, why did I put you off to the last moment?"

He turned, fumbling in his pocket for a letter. "He sent this Saturday," he confessed, pitifully. "I should have come to him at once, but I could not suspect this."

Joslyn read the letter through with a look of growing conviction. It was in the clear hand of the dead treasurer. "This settles all," he said, decidedly, and he reread it aloud:

DEAR BRANOWER: I pray you, as you have pity for a man with sixty years of probity behind him facing dishonor and disgrace, to come to me at the earliest possible hour. Do not, I pray, delay later than Monday, I implore you.

JAMES LAWRIE.

DR. REILAND buried his face in his hands, and Joslyn turned to Trant. On the young man's face was a look of deep perplexity.

"When did you get that, Mr. Branower?" Trant asked, finally.

"He wrote it Saturday morning. It was delivered to my house Saturday afternoon. But I was motoring with my wife. I did not get it until I returned late Sunday afternoon."

"Then you could not have come much sooner."

"No; yet I might have done something if I had suspected that behind this letter was hidden not merely disgrace, but suicide."

"Disgrace, perhaps, but not suicide, Mr. Branower!" Trant interrupted curtly.

"What?"

"Look at his face. It is white and drawn. If asphyxiated, it would be blue, swollen. Before the gas was turned on he was dead—struck dead——"

"Struck dead? By whom?"

"By the man in this room last night! By the man who burned those notes, plugged the keyhole, turned on the gas, arranged the rest of these theatricals, and went away to leave Dr. Lawrie a thief and a suicide to—protect himself! Two men had access to the university funds, handled these notes! One lies before us; and the man in this room last night, I should say, was the other—" he glanced at the clock—"the man who at the hour of nine has not yet appeared at his office!"

"Harrison?" cried Joslyn and Reiland together.

"Yes, Harrison," Trant answered, stoutly. "I certainly prefer him for the man in the room last night."

"Harrison?" Branower repeated, contemptuously. "Impossible!"

"How impossible?" Trant asked, defiantly.

"Because Harrison, Mr. Trant," the president of the trustees rejoined, "was struck senseless at Elgin in an automobile accident Saturday noon. He has been in the Elgin hospital, scarcely conscious, ever since."

"How did you learn that, Mr. Branower?"

"I have helped many young men to positions here. Harrison was one. Because of that, I suppose, he filled in my name on the 'whom to notify' line of a personal identification card he carried. The hospital doctors notified me just as I was leaving home in my car. I saw him at the Elgin Hospital that afternoon."

Young Trant stared into the steady eyes of the president of the trustees. "Then Harrison could not have been the man in the room last night. Do you realize what that implies?" he asked, whitening. "I preferred, I said, to fix him as Harrison. That would keep both Dr. Lawrie from being the thief and any close personal intimate of his from being the man who struck him dead here last night. But with Harrison not here, the Treasurer himself must have been conscious of this crime," he struck the canceled note in his hand, "and been concealing it for—that close friend of his who came here with him. You see how very terribly it simplifies our problem? It was some one close enough to Lawrie to cause him to conceal the thing as long as he could, and some one intimate enough to know of the Treasurer's tinkering habits, so that, even in great haste, he could think at once of the gas nippers in Lawrie's private tool drawer. "Gentlemen," the young assistant tensely added, "I must ask you which of you three was the one in this room with Dr. Lawrie last night?"

"What!" The word in three different cadences

burst from their lips—amazement, anger, threat.

He lifted a shaking hand to stop them.

"I realize," he went on more quickly, "that, after having suggested one charge and having it shown false, I am now making a far more serious one, which, if I cannot prove it, must cost me my position here. But I make it now again, directly. One of you three was in this room with Dr. Lawrie last night. Which one? I could tell within the hour if I could take you successively to the psychological laboratory and submit you to a test. But, perhaps I need not. Before to-morrow night I hope to be able to tell the other two, for which of you Dr. Lawrie concerned himself with this crime, and who it was that in return struck him dead Sunday night and left him to bear a double disgrace as a suicide."

Without a backward look he burst from the room, and, running down the steps, left the campus.

At five o'clock that afternoon, when Trant rang the bell at Dr. Joslyn's door, he saw that Mr. Branower and Dr. Reiland had been taken into the president's private study before him.

"Dr. Reiland and Mr. Branower have come to hear the coroner's report to me," Joslyn explained. "Lawrie did not die from asphyxiation. An autopsy to-morrow will show the cause of his death. Obviously another person in the room."

"Not Harrison," Trant replied. "I have just come from Elgin, where, though I was not allowed to speak with him, I saw him in the hospital."

"You doubted if he was there?" Branower asked.

"I have traced the notes, too," the young man continued. "All were made out as usual, signed regularly by Dr. Lawrie and paid by him personally, upon maturity, from the university reserve. So I have made only more certain that the man in the room must have been one of Dr. Lawrie's closest friends. I came back and saw Margaret Lawrie."

Reiland's eyes filled with tears. "This terrible thing has prostrated poor Margaret," he said.

"I found it so," Trant rejoined. "Her memory is temporarily destroyed. I could make her comprehend little. Yet she has been told only of her father's death. Does that seem sufficient cause for such prostration? More likely it points to some guilty knowledge of her father's trouble and whom he was protecting. If so, her very condition makes it impossible for her to conceal those guilty associations under examination."

"Guilty associations?" Dr. Reiland rose, nervously.

"Yes; which I mean to discover in this case by the simple association of words—Freud's method."

"How? What do you mean?" Branower and Joslyn exclaimed.

"It is a method for getting at the concealed causes of mental disturbance. It is especially useful in diagnosing cases of insanity or mental breakdown from insufficiently known causes."

"We have a machine, the chronoscope," Trant continued, as the others waited, interrogatively, "which registers the time to a thousandth part of a second, if necessary. The German physicians merely speak a series of words which may arouse in the patient ideas that are at the bottom of his insanity. Those words which are connected with the trouble cause deeper feeling in the subject and are marked by longer intervals of time before the word in reply can be spoken. The nature of the word spoken by the patient often clears the causes for his mental agitation or prostration.

"In this case, if Margaret Lawrie had reason to believe that any one of you were closely associated with her father's trouble, the speaking of that one's name or the mentioning of anything connected with that one, must betray an easily registered and decidedly measureable disturbance."

"I have heard of this," Joslyn commented.

"Excellent," the president of the trustees agreed, "if Margaret's physician does not object."

"I have already spoken with him," Trant replied. "Can I expect you all at Dr. Lawrie's to-morrow morning when I test Margaret to discover the identity of the intimate friend who caused the crime charged to her father?"

Dr. Lawrie's three dearest friends nodded in turn.

Trant came early to set up the chronoscope in the spare bedroom next to Margaret Lawrie's on the second floor of the deceased treasurer's house.

The instrument somewhat resembled a brass dumb-bell very delicately poised upon an axle so that the lower part, which was heavier, could swing slowly back and forth like a pendulum. A light, sharp pointer paralleled this pendulum. The weight, when started, swung to and fro in the arc of a circle; the pointer swung beside it. But the pointer, after starting to swing, could be instantaneously stopped by an electro-magnet. This magnet was connected with a battery and wires led from it to the two instruments used in the test. The first pair of wires connected with two bits of steel which Trant, in conducting the test, would hold between his lips. The least motion of his lips to enunciate a word would break the electric circuit and start swinging the pendulum and the pointer beside it. The second pair of wires led to a sort of telephone receiver. When Margaret would reply into this, it would close the circuit and instantaneously the electro-magnet would clamp and hold the pointer. A scale along which the pointer travels would give, down to thousandths of a second, the time between the speaking of the suggesting word and the first associated word reply.

Trant had this instrument set up and tested before he had to turn and admit Dr. Reiland. Mr. Branower and President Joslyn soon joined them, and a moment after, a nurse entered supporting Margaret Lawrie. Dr. Reiland himself scarcely recognized her as the same girl who had come running into his breakfast room only the morning before. Her whole life had been centered on the father so suddenly taken away.

Trant nodded to the nurse, who withdrew. He looked to Dr. Reiland.

"Please be sure that she understands," he said, softly. The older man bent over the girl, who had been placed upon the bed.

"Margaret," he said tenderly, "we know you cannot speak well this morning, my dear, and that you cannot think very clearly. We shall not ask you to do much. Mr. Trant is merely going to say some words to you slowly, one word at a time; and we want you to answer—you need only speak very

gently—anything at all, any word at all, my dear, which you think of first. I will hold this little horn over you to speak into. Do you understand?"

The big eyes closed in assent. The others drew nervously nearer. Reiland took the receiving drum at the end of the second set of wires and held it before the girl's lips. Trant picked up the mouth metals attached to the starting wires.

"We may as well begin at once," Trant said, as he seated himself beside the table which held the chronoscope and took a pencil to write upon a pad of paper the words he suggested, the words associated and the time elapsing. Then he put his mouthpiece between his lips.

"Dress!" he enunciated clearly. The pendulum, released by the magnet, started to swing. The pointer swung beside it in an arc along the scale. "Skirt!" Miss Lawrie answered, feebly, into the drum at her lips. The current caught the pointer instantaneously, and Trant noted the result thus:

1, dress—2.7 seconds—skirt.

"Dog!" Trant spoke, and started the pointer again. "Cat!" the girl answered and stopped it. Trant wrote:

2, dog—2.6 seconds—cat.

A faint smile appeared on the faces of Mr. Branower and Dr. Joslyn, but Reiland knew that his young assistant was merely establishing the normal time of Margaret's associations through words without probable connection with any disturbance in her mind.

"Home," Trant said; and it was five and two-tenths seconds before he could write "father." Reiland moved, sympathetically, but the other men still watched without seeing any significance in the time extension. Trant waited a moment. "Money!" he said, suddenly. Dr. Reiland watched the swinging pointer tremblingly. But "purse" from Margaret stopped it before it had registered more than her normal time for innocent associations.

Money—2.7 seconds—purse.

"Note!" Trant said, suddenly; and "letter" he wrote again in two and six-tenths seconds.

Dr. Joslyn moved impatiently; and Trant brusquely pulled his chair nearer the table. The chair legs rasped on the hard-wood floor. Margaret shivered and, when Trant tried her with the next words, she merely repeated them. Dr. Joslyn moved again.

"Cannot you proceed, Trant?" he asked.

"Not unless we can make her understand again, sir," the young man answered. "But I think, Dr. Joslyn, if you would show her what we mean—not merely try to explain again—we might go on. I mean, when I say the next word, will you take the mouthpiece from Dr. Reiland and speak into it some different one?"

"Very well," the President agreed, impatiently, "if you think it will do any good."

"Thank you!" Trant replaced his mouthpieces. "October!" He named the month just ended. The pointer started. "Recitations!" the President answered in one and nine-tenths seconds.

"Thank you. Now for Miss Lawrie, Dr. Reiland!"

"Steal!" he tried; and the girl associated "iron" in two and seven-tenths seconds.

"Good!" Trant exclaimed. "If you will show her again, I think we can go ahead. "Fourteenth!" he said to the President. Joslyn replied "fifteenth" in precisely two seconds and passed the drum back. All watched Miss Lawrie. But again Trant rasped carelessly his chair upon the floor and the girl merely repeated the next words. Reiland was unable to make her understand. Joslyn tried to help. Branower shook his head skeptically. But Trant turned to him.

"Mr. Branower, you can help me, I believe, if you will take Dr. Joslyn's place. I beg your pardon, Dr. Joslyn, but I am sure your nervousness prevents you from helping now."

BRANOWER hesitated a moment, skeptically; then, smiling, acquiesced and took up the drum. Trant replaced his mouthpieces.

"Blow!" he said. "Wind!" Branower answered, quietly. Trant mechanically noted the time, two seconds, for all were intent upon the next trial with the girl.

"Books!" Trant said. "Library!" said the girl, now able to associate the different words, in her minimum time of two and a half seconds.

"I think we are going again," said Trant. "If you will keep on, Mr. Branower. Strike!" he exclaimed, to start the pointer. "Labor trouble," Branower returned in just under two seconds; and again he guided the girl. For "conceal" she answered "hide" at once. Then Trant tested rapidly this series:

Margaret, conceal—2.6—hide.
Branower, fall—2.1—autumn.
Margaret, thief—2.8—silver.
Branower, twenty-fifth—4:5—twenty-sixth.

"Joslyn!" Trant tried an intelligible test word suddenly. He had just suggested "thief" to the girl; now he named her father's friend, the president of the university. But "friend" she was able to associate in two and six-tenths seconds. Trant sank back and wrote this series without comment:

Margaret, Joslyn—2.6—friend.
Branower, wife—4.4—Cora.
Margaret, secret—2.7—Alice.

Trant glanced up, surprised, considered a moment, but then bowed to Mr. Branower to guide the girl again, saying "wound," to which he wrote the reply "no," after four and six-tenths seconds. Immediately Trant made the second direct and intelligible test.

"Branower!" he shot, suggestively, to the girl; but "friend" she was again able to associate at once. As the moment before the President of the Trustees had glanced at Joslyn, now the President of the University nodded to Branower. Trant continued his list rapidly:

Margaret, Branower—2.7—friend.
Branower, letter-opener—4.9—desk.

"Father!" Trant tried next. But from this there came no association, as the emotion was too deep. Trant, recognizing this, nodded to Mr. Branower to start the next test, and wrote:

Margaret, father—no association.
Branower, Harrison—5.3—Cleveland.
Margaret, university—2.5—study.
Branower, married—2.1—wife.

Margaret, expose—2.6—camera.
Branower, brother—4.9—sister.
Margaret, sink—2.7—kitchen.
Branower, collapse—4.8—balloon.

"Reiland!" Trant said to the girl at last. It was as if he had put off the trial for his own old friend as long as he could. Yet if anyone had been watching him, they would have noted now the quick flash of his mismated eyes. But all eyes were upon the swinging pointer of the chronoscope which, at the mention of her father's best and oldest friend in that way, Margaret was unable to stop. One full second it swung, two, three, four, five, six——

The young assistant in psychology picked up his papers and arose. He went to the door and called in the nurse from the next room. "That is all, gentlemen. Shall we go down to the study?"

"Well, Trant?" President Joslyn demanded impatiently, as the four filed into the room below, which had been Dr. Lawrie's. "You act as if you had discovered some clew. What is it?"

Trant was closing the door carefully, when a surprised exclamation made him turn.

"Cora!" Mr. Branower exclaimed; "you here? Oh! You came to see poor Margaret!"

"I couldn't stay home thinking of you torturing her so this morning!" The beautiful woman swept their faces with a glance of anxious inquiry.

"I told Cora something about our test, Joslyn," Branower explained, leading his wife toward the door. "You can go up to Margaret now, my dear."

She seemed to resist. Trant fixed his eyes upon her, speculatively.

"I see no reason for sending Mrs. Branower away if she wishes to stay and hear with us the results of our test which Dr. Reiland is about to give us." Trant turned to the old professor and handed him the sheets upon which he had written his record.

"Now, Dr. Reiland, please! Will you explain to us what these tell you?"

Dr. Joslyn's hands clenched and Branower drew toward his wife as Reiland took the papers and examined them earnestly. But the old professor raised a puzzled face.

"Luther," he appealed, "to me these show nothing! Margaret's normal association-time for innocent words, as you established at the start, is about two and one half seconds. She did not exceed that in any of the words with guilty associations which you put to her. From these results, I should say, it is scientifically impossible that she even knows her father is accused. Her replies indicate nothing unless—unless," he paused, painfully, "because she could associate nothing with my name you consider that implies——"

"That you are so close to her that at your name, as at the name of her father, the emotion was very deep, Dr. Reiland," the young man interrupted. "But do not look only at Margaret's associations! Tell us, instead, what Dr. Joslyn's and Mr. Branower's show!"

"Dr. Joslyn's and Mr. Branower's?"

"Yes! For they show, do they not—unconsciously, but scientifically and quite irrefutably—that Dr. Joslyn could not possibly have been concerned in any way with those notes, part of which were due and paid upon the fourteenth of October; but that Mr. Branower has a far from innocent association with them, and with the twenty-fifth of the month, on which the rest were paid!"

Trant swung toward the trustee. "So, Mr. Branower, you were the man in the room Sunday night! *You*, to save the rascal Harrison, your wife's brother and the real thief, struck Dr. Lawrie dead in his office, burned the raised notes, turned on the gas and left him to seem a suicide and a thief!"

For the second time within twenty-four hours, Trant astounded Dr. Reiland and the President of the University. But Branower laughed uglily.

"If you could not spare me, you might at least have spared my wife this last raving accusation! Come, Cora!" he commanded.

"I thought you might control yourself, Mr. Branower," Trant returned. "And when I saw your wife wished to stay I thought I might keep her to convince even President Joslyn. You see?" he quietly indicated Mrs. Branower as she fell, white and shaking, into a chair. "Do not think that I would have told it in this way if these facts were new to her. I was sure the only surprise to her would be that we knew them."

Branower bent to his wife; but she straightened and recovered.

"Mr. Branower," Trant continued then, "if you will excuse chance errors, I will make a fuller statement."

"I should say, first, that since you kept his relationship a secret, this Harrison, your wife's brother, was a rascal before he came here. Still you procured him his position in the Treasurer's Office, where he soon began to steal. It was very easy. Dr. Lawrie merely signed notes; Harrison made them out. He could make them out in erasable ink and raise them after they were signed, or in any other simple way. Suffice it that he did raise them and stole one hundred thousand dollars. When the notes were presented for payment, the matter was laid before you. You must have promised Dr. Lawrie to make up the loss, for he paid the notes and entered the payment in his books. Then the time came when the books must be presented for audit. Lawrie wrote that last appeal to you to put off the settlement no longer. But before the letter was delivered you and Mrs. Branower had hurried off to Elgin to see this Harrison, who was hurt. You got back Sunday evening and read Dr. Lawrie's note. You went to him; and, unable to make payment, there in his office you struck him dead——"

But Branower was upon him with a harsh cry. "You devil! You lie! I did not kill him!"

"With a blow? Oh, no! You raised no hand against him. But his heart was weak. At your refusal to carry out your promise, which meant his ruin, he collapsed before you—dead. Do you wish to continue the statement now yourself?"

The wife gathered herself. "It is not so! No!" she forbade, "no!" But Branower turned on President Joslyn a haggard face.

"Is this true?" the President demanded sternly. Branower buried his face in his hands.

"I will tell you all," he said quickly. "Harrison,

as this fellow found out somehow, is my wife's brother. He has always been reckless, wild; but she—Cora, do not stop me now—loved him and clung to him as—as a sister sometimes clings to such a brother. They were alone in the world, Joslyn. She married me only on condition that I save and protect him. He demanded a position here. I hesitated. His life had been one long scandal; but never before had he been dishonest with money. Finally I made it a condition to keep his relationship secret, and sent for him. I myself first discovered he had raised the notes. I went to Lawrie. He agreed to keep Harrison about the office until I could remove him quietly. He paid the notes from the university reserve, just raised, upon my promise to make it up. David had lost all speculating in stocks. I could not pay this tremendous amount in cash at once; but the books were to be audited. Lawrie, who had expected immediate repayment from me, would not even once present a false statement. In our agreement, his heart gave out—I did not know it was weak—and he collapsed in his chair—dead."

Dr. Reiland groaned, wringing his hands.

"Oh, Professor Reiland!" Mrs. Branower cried now. "He has not told all. I had followed him!"

"You followed him?" Trant cried. "Ah, of course!"

"I thought—I told him," the wife burst on, "this had happened by Providence to save David!"

"Then it was you who suggested to him to leave the stiletto letter-opener in Lawrie's hand as an evidence of suicide!"

Branower and his wife both stared at Trant in fresh terror.

"But you, Mr. Branower," Trant went on, "not being a woman with a precious brother to save, could not think of making a wound. You thought of the gas. Of course! It was her odd mental association of a perpetrator with the news of the suspected suicide that first aroused my suspicions."

He turned as though the matter were finished but met Dr. Joslyn's perplexed eyes. The end attained was plain but to the President of the University the road by which they had come was dark as ever. Branower had taken his wife into another room. He returned.

"Dr. Joslyn," said Trant, "it is scientifically impossible—as any psychologist will tell you—for a person who associates the first suggested idea in two and one half seconds, like Margaret, to substitute another without almost doubling the time interval.

"Observe Margaret's replies. 'Iron' followed 'steal' as quickly as 'cat' followed 'dog.' 'Silver,' the thing a woman first thinks of in connection with burglary, was the first association she had with 'thief.' I saw her innocence at once and continued questioning her to avoid a more formal examination of the others. I rasped my chair over the floor to disturb her nerves, and got you into the test.

"The first two tests of you, Dr. Joslyn, showed that you had no association with the notes. The date when half of them came due meant nothing to you. 'October' suggested only recitations and 'fourteenth' permitted you to associate simply the succeeding day in an entirely unsuspicious time. I substituted Mr. Branower. I had explained this system as getting results from persons with poor mental resistance. I had not mentioned it as even surer of results when the person tested is in full control of his faculties, even suspicious and trying to prevent betraying himself. Mr. Branower clearly thought he could guard himself from giving me anything. Now notice his replies.

"The twenty-fifth, the day most of the notes were due, meant so much that it took double the time, before he could drive out his first suspicious association, merely to say 'twenty-sixth.' I told you I suspected his wife was at least cognizant of something wrong. It took him twice the necessary time to say 'Cora' after 'wife' was mentioned. He gave the first association, but the chronoscope registered mercilessly that he had to think it over. 'Wound' then brought the remarkable association 'no' at the end of four and six-tenth seconds. There was no wound; but something had made it so that he had to think it over to see if it was suspicious. When I first saw that dagger letter-opener on Dr. Lawrie's desk, I thought that if a man were trying to make it seem suicide, he must at least have thought of using the dagger before the gas. Now note the next test, 'Harrison.' Any innocent man, not overdoing it, would have answered at once the name of the Harrison immediately in all our minds. Mr. Branower thought of him first, of course, and could have answered in two seconds. To drive out that and think of President Harrison so as to give a seemingly 'innocent' association, 'Cleveland,' took him over five seconds. I then went for the hold of this Harrison, probably, upon Mrs. Branower. I tried for it twice. The second trial, 'brother,' made him think again for five seconds, practically, before he could decide that sister was not a guilty word to give. As the first words 'blow' only brought 'wind' in two seconds and 'strike' suggested 'labor' at once, I knew he could not have struck Dr. Lawrie a blow; and my last words showed, indeed, that Lawrie probably collapsed before him. And I was done."

Dr. Joslyn was pacing the room with rapid steps. "It is plain. Branower, the university owes a great debt to your father. The autopsy will show conclusively that Dr. Lawrie died of heart failure. The other facts are private with ourselves. You can restore this money. Its absence I will reveal only to the trustees. I shall present to them at the same time your resignation from the Board."

He turned to Trant. "But this secrecy, young man, will deprive you of the reputation you might have gained through the really remarkable method you used through this investigation."

"It makes no difference," Trant answered, "if you will give me a short leave from the university. As I mentioned to Dr. Reiland yesterday, the prosecuting attorney of Chicago was murdered two weeks ago. Sixteen men—one of them surely guilty—are held; but the criminal cannot be picked among them. I wish to try the scientific psychology again. If I succeed, I shall resign and keep after crime—in the new way!"

THE END.

HICKS' INVENTIONS *with a* KICK

By Henry Hugh Simmons

The AUTOMATIC *Self-Serving* DINING TABLE

. . . a final, grand and wild rush the table made, carrying with it the ring of liquid tubes. Instantly a solid sheet of red-brown-yellow-black liquid covered the room. The remaining objects on the table were shot into the midst of our unfortunate selves, felling those that tried to rise from under that fierce red-hot liquid sheet.

"O'KEEFE, my boy, I am glad to see you!" said Hicks, giving me so hearty a slap on the shoulder that my artificial teeth dropped half an inch. I hate persons who cannot refrain from personal contact. "I am glad to see you! You are the very man I wished to meet this morning, O'Keefe. My house is only a few steps off. Let's go there and . . ."

"I am sorry, old man," said I in my iciest tone, "but I am really afraid that I can't accompany you this morning, for I have an important engagement at nine o'clock, and it's twenty minutes to nine now. Perhaps some other time. . . ."

I hardly had time to get peeved at myself for proffering that ancient gag before Hicks interrupted me. You simply can't finish a sentence with that man around. "Then put that engagement off until some other day," he replied, "for it is of great importance." Here he paused several seconds to let his words soak in. "In fact, it is of the greatest importance for me and for you, too, that you see what I have to show you."

Hicks had accosted me two or three times before, when he called himself a writer, only to drag me off into his private den and there read to me extracts from his "Essays on Practical Philosophy" for several hours at a time with an endurance bordering on callousness. Once he kept me there for seven hours at one stretch, reading to me his great book on "The Necessity of Regularity in Nutrition as an Aid to Longevity" while I missed lunch and was three hours late for supper. I protested then that I had urgent business on hand and tried to get out, at last resorting to downright violation of politeness. It didn't do any good. I had to stay there and listen to that confounded "Regularity in Nutrition" while I was getting ferocious with hunger. I merely mention this to explain to you why I gave him a cold reception. And I was already beginning to have a hunch, a kind of dark premonition, that I would not be able to wriggle out of it this time.

"Hicks," I said in desperation, "if you think that you can shanghai me again and read for nine hours on 'The Necessity of Regularity in Nutrition' or some other rotten subject while I miss my meals and nearly perish from hunger, I want to inform you that you are mistaken, that you are entirely, absolutely, completely off." There is no question, I can be firm when it becomes necessary.

In answer to this, Hicks merely laughed loudly and heartily. "You know, I must laugh about that myself, now, O'Keefe," he said. "That sure was funny that time, oh, oh, oh, oh, Gee," and he laughed again until tears started in his eyes. "But," and his mirth subsided and he grew serious, "but this time it's something entirely different. I have realized, O'Keefe, my boy, that the progress of mankind can never be achieved by words, and what," and here he eyed me questioningly, almost aggressively, "what but words are articles and books, and philosophy and all the rest of it? Undoubtedly you think them of the greatest importance; *you* believe that they are responsible for humanity's progress; you," and he pointed his forefinger at me, while his regard grew positively accusing, "you, and others like you, swear by them. But I have long ago given up all faith in them. It is deeds, not words, that make the world go round. Inventions, above everything, have placed the Modern World where it is. And seeing this and realizing at the same time that I was gifted by nature with a certain, I may say a considerable, if not unusual degree of inventiveness, I have bent my energies upon inventing, and, my boy, you shall yourself judge if I have not been successful."

Here Hicks slapped me on the shoulder and broke into a little snappy jig on the sidewalk. At first I thought he had lost what reason he might have had before, but presently he stopped his little dance and continued:

The Greatest Invention of the Decade

"O'KEEFE, it shall be your good fortune, this morning, to be the first outsider to see the full-sized working model of the greatest invention of this decade, the Hicks' Automatic Self-Serving Dining Table." As he pronounced these words, the inventor took a couple of steps back to better survey the effect.

"Automatic Self-Preserving . . ." I gasped.

"Self-Serving!" sternly corrected the inventor. "Self-Serving Dining Table."

"Self-Serving Dining Table," I stuttered mechanically, while my wits began to reel.

"You bet!" assured the genius. "Think of it, my boy, of having a dining table where you don't have to reach for anything or ask somebody to pass you something. Merely press a button, and presto! the dish you want is before you, within easy reach. You want a little more soup. Do you have to hand out your plate to a servant behind you who is liable to pour it down your neck and listens to the entire conversation all the time? Not so. With the Hicks' Automatic Self-Serving Dining Table all you do is press a button, turn a stop-cock—and there you are, your plate is full! Think of it, man! Isn't that worth seeing?"

WE take pleasure in presenting our new author with a most hilarious tale, which you will enjoy from beginning to end. When an inventor with a warped sense of humor begins to invent time-saving machines, you can always expect something that will tickle your risibilities.

The situation brought about by the present example of Hicks' Inventions belongs to that class and will afford you twenty minutes of genuine amusement.

I must admit that he had me going. I knew Hicks of old, but I had not expected that he would make such a complete change of front and try his hand at anything practical. I can assure you that I had my serious doubts about the feasibility and success of that Automatic Dining-Table, but my curiosity was aroused, and as I did not have anything of importance to do that morning, I decided to go along and see. Prevarication is a thing I hate. I had resorted to it only under pressure of circumstances when I told Hicks that I had an important engagement on. To save my face I had to go into a drug-store and talk for three minutes to myself over the phone cancelling that engagement, because that man insisted on going in, too, and

stood by while I talked to somebody that wasn't there and gave answers to questions I was not asked. I was in a sweat when I thought I had talked enough for the inventor's benefit.

Wonderful Details of the Apparatus

A FEW minutes' walk brought us to the house. We climbed two flights of stairs and the inventor led me into a small room which had the appearance of a kitchen, except that to one side, near the door to an adjoining room, there were ranged several vessels of large dimensions, together with what looked like a boiler for a steam engine. The remaining space was occupied by the tables, stoves, and other paraphernalia found in any other kitchen.

"This room," the inventor explained, "contains the power plant and storage vessels needed in connection with the Automatic Self-Serving Dining Table. Here," he continued, in the tone of a college professor expounding a lesson in chemistry to his class, and patted the boiler on the back, "we have a boiler for a 2 H.P. steam turbine of the newest design. I may mention that this engine is designed to run at a normal speed of three thousand revolutions per minute, with two hundred lbs. pressure in the boiler." He paused in his discourse to look me over in order to observe the effect of his words. I must confess that I was impressed, as the presence of a steam engine in a kitchen seemed to me, to say the least, an original idea.

"The engine," continued the inventor, "is necessary as a source of power for the Rotating Table. You may ask," and his tone became that of one willing to reply with patience to a layman's unimportant objections, "you may ask why, in choosing a source of power, I decided upon a steam engine? A steam engine, to the modern mind, is usually associated with rather backward ideas. Electricity is more convenient, gasoline more economical. In this case, however, I have given steam the preference because a steam-engine has a boiler, and a boiler is what I needed anyhow in order to get pressure for these air-tight storage vessels." Hicks smiled pleasedly as he thought of the nice reasoning he had employed.

"Some vessels," he went on, "will contain the hot liquids used on the table, such as boiling water, soups, tea, coffee, and chocolate. They are made out of boiler plate and entirely air-tight. This they must be because the liquid contained in them is to be under pressure. The reason for this again is to avoid having to place them high, which would be exceedingly inconvenient. As it is, you see that they are placed so that it is easy to manipulate them, the tops of them being no higher than an ordinary table."

How the Guest Operates the Machinery

WARMING to his subject, the inventor continued his discourse. "A further advantage of steam is that in addition to providing the necessary pressure it enables us to heat, without further expense, those liquids that are to be served hot. If a dynamo or a gasoline engine were employed, I would have to use an air-compressor to provide the necessary pressure and in addition a separate heating system to heat the liquids. By the use of a steam-engine the difficulty is solved and power, compression and heat are provided in one plant." I could see that Hicks was proud of this piece of ingenuity, and I admit that I was beginning to get impressed myself. It certainly seemed plausible, and it seemed simple.

"In vessels where hot liquids are kept, I accomplish the heating by running a coil of seamless drawn brass tubing through the liquid itself, thereby accomplishing direct heating,—the most economical form. On the other hand, where cool or cold liquids are kept, the tube carrying the steam from the engine-boiler ends above the level of the liquid. Thereby a minimum of heat is admitted, inasmuch as the induction of heat practically ceases when a pressure of fifty lbs. to the square inch is reached in the container."

Hicks pointed out to me where a tube leading from each container and also one from the boiler entered through the wall into the room beyond. Then he led the way to that other room, and pausing at the door-step, pointed at a suspicious-looking sort of a double-deck, circular table of large dimensions, with stop-cocks, levers, and various tubes about it in many places.

"There, O'Keefe, old man, you behold the wonder of the third decade of the Twentieth Century, the Hicks' Self-Serving Dining-Table!" It seemed to me that the inventor gained twelve inches in chest-circumference as he pronounced these words.

Hicks explained that the main steam line from the boiler, together with the other pipes, ran along under the floor and ascended through the center of the table. Kneeling under the table and bidding me do likewise, he pointed out to me that while the center table leg was stationary, the table itself was pivoted on a spindle and the spindle connected with a small, rotary-pumplike contrivance. This was the 2 H.P. rotary engine. Hicks showed me the use of the levers I had seen sticking up all around the table, explaining that any and all of one set operated the throttle which admitted or shut off the steam in the engine and thereby turned the table or let it stand at rest. Other levers there were besides these throttle levers, which operated the brake, so that the people seated at the table could stop it at any place they desired.

Preliminaries to the Festive Proceedings

THE table itself was large and otherwise much like any ordinary dining-table except that another, smaller table, was carried on it, like a sort of shelf. I was informed that this was merely in order to allow another set of dishes to be placed on it. On both tables I observed a number of what looked like small iron fences from an inch to three inches high.

"These are the holders for plates and dishes," said the inventor. "They are put there in order to prevent any of them from sliding away as a result of centrifugal force. And here," he paused and pointed at the spouts I had seen at first, "here is perhaps the most distinctive feature of the Hicks' Self-Serving Dining-Table, namely, my system of supplying liquid food. I believe the idea of piping soup, tea, coffee, or ice-water direct on to the din-

ing-table is rather novel. I believe that in introducing this feature, I have given the world something totally new and pregnant with large possibilities. This system of spouts is not, as you might think, stationary, but also revolves the same as the table." Seeing the look of doubt in my eyes, he took hold of one of the spouts, gave it a jerk, and I saw the whole array of spouts file past me swiftly and noiselessly. "I can tell you that to figure out how to make these spouts rotate and still keep a perfectly tight connection with the supply-pipe going to each was some job, but I did it. I may add that I have made these sliding connections particularly tight, making them stand a pressure of 300 lbs. per inch under actual test, while 200 lbs. is the maximum pressure they will ever have to stand."

I admit that I began to feel rather small before this man and I was sorry for having spoken so inconsiderately to him that morning. However, he seemed to have forgotten that.

"O'Keefe, old boy, I wanted to show *you* this, because, at the time of my misapplied efforts in literature, you listened to me with patience and your criticism was honest, inasmuch as you told me that my productions were rot." I stuttered a protest, but he would have none of it and went on:

"That was your opinion and I agree with you; that stuff *was* rot. But now I feel that I have entered the field belonging to me and I want you to be the first and only man to have seen my Self-Serving Table before its introduction to the public. And speaking of this, I want you to be present at that first introduction. On Wednesday of next week I shall give the initiating dinner of the Self-Serving Dining-Table to a very few selected friends. I want you to be present, and I want you to bring one of your friends or relatives along, some one on whom you would like to bestow a particular favor, for," he added modestly, "I believe that I am justified in designating this opportunity as a favor, since it regards an event of no inconsiderable importance in the annals of Modern Progress."

Assembling the Company

I THANKED him and went home. I was a bit dizzy at first, but I felt a better and a bigger man. That man Hicks surely was one who had hitherto missed his calling. Think of those ideas of his! It certainly took a mind to conceive of piping the soup right to your plate direct from the kitchen! And how he had it all figured out! Steam-engine! Throttle-levers! Fifty lbs. pressure in the liquid vessels! Direct Heating through Coils of Seamless Drawn Brass Tubing! That man certainly had the inventive genius. It immediately occurred to me to invite to the extra place accorded me my spinster aunt Zelinda. Perhaps I would have given the preference to Helen Borden, for she was the prettiest girl I knew and she seemed to take considerable interest in me, but I thought I ought to give aunt Zelinda the chance. I wasn't thinking of the money she had the intention of leaving me. It was a neat little sum, but I am not built that way. I only thought that aunt Zelinda being the older and also a relative of mine, I ought to give her the preference. Besides, aunt Zelinda took a great interest in all such things and I knew it would please her. I decided to bring her along.

On Wednesday of the following week, at the appointed hour of half-past six, a select company of eight persons assembled in the drawing-room of my friend, the inventor Hicks. There was, besides myself, his moneyed uncle, Mr. Jeremiah McQuincey, a widower. He was a shriveled little old man who looked so sour that you felt sure, in looking at him, that he could easily have held his own with a keg full of vinegar. There was Hicks' sister, a fat young matron of perhaps thirty-five, with her still fatter husband, Mr. W. D. Smith. I am not giving a fictitious name; his name really was Smith. There was also Hicks' grandmother, Mrs. Daniels; and there was another lone bachelor like myself, Tom Irvine, who had been a mutual schoolmate of Hicks and myself. Then, of course, there was my aunt Zelinda, and I.

The company being all assembled, the inventor rose. Dressed in his evening suit, with a large front of starched linen, he looked imposing. My aunt Zelinda could not take her eyes off him. "What a splendid-looking young man he is!" said she. "Any one can tell he is a writer, or an inventor, or something, seeing that wonderful forehead."

The man with that wonderful forehead addressed the company. In a few introductory words he explained to them that they were to take dinner to-night under unusual circumstances. He had, he said, informed them when he extended the invitation that he would show them his newest invention and his masterpiece. But he had not told them that they were to be helped to their dinner by the agency of that invention. Briefly he sketched the basic idea of the Self-Serving Dining-Table.

"And now," he finished, "let me demonstrate the principal working parts of my invention to you, as it were, on the ground."

Whereupon he conducted the party into the kitchen and showed them the steam-engine boiler and large fluid-food vessels, and discoursed on the advantages of his system in a manner similar to the one he had given me. I must say that the more I saw of that machinery, the more I was impressed. As for my aunt Zelinda, she was simply delighted at the idea. In fact, everyone was surprised except uncle Jeremiah, whose only reason for coming to his nephew's dinner was to save the money for a meal. Now be began to have misgivings as to whether he would get his money's worth with this new-fangled contraption. I mean the worth of the money he had figured on saving.

Some Introductory Remarks by the Inventor

THE real surprise, of course, awaited the party in the dining-room, where Hicks asked them to seat themselves at the table, while he explained and propounded its theory and practice, instructing them in the use of the throttle, the brake levers, and the liquid-food spouts, of which there were six, for hot-water, ice-water, tomato-soup, coffee, tea and cocoa.

On the table proper and in the second story, as

Mr. Smith called it, there was set forth an imposing and delectable array of dishes. On the top table there were dishes full of salads, gravies, vegetables, and similar preparations; on the outside, and on the inside, cakes, pies, tarts, and innumerable other delicacies. On the one below there were courses of fish, meat, game, oysters, in the front rank, and behind these there were dishes filled with wild and domestic fowl, chicken, duck, turkey and ten other kinds of juicy meat. In short, if there ever was a table set full of rich and racy things to eat, it was this table that was before us now.

The inventor concluded his discourse: "And besides saving time and trouble, this invention absolutely does away with the annoyance of a waiter. I have not had time to complete entirely the Hicks' Automatic Rubber Compartment Dish Remover, which takes away the dirty dishes, carrying them to the Hicks' Automatic Dish Washing Machine, which I shall erect in the kitchen. However, I shall ask you to simply slide the dishes into the slot back of them. There is ample space provided to hold the dishes accumulated during one meal."

Here he called our attention to an opening about three inches deep in the table back of our plates, which went on a gentle incline toward the center of it. He slid a dish down this incline. It disappeared without a noise. "Rubber mats," he explained, with a pleased smile. "One of them drops on each dish as it slides into place, and the next dish lands on a rubber mat. Cups go into a special compartment."

"So sure was I of the workability of my invention," resumed the inventor after a brief pause, "that I dismissed even the cook ten minutes ago. There is no cook in the kitchen, no waiter in the dining-room, there is not a servant about. There is no need. We shall be served to the King's taste, Ladies and Gentlemen, by the Hicks' Self-Serving Dining-Table."

Trouble Begins with the Tomato Soup

THE company was silent. For a while we sat dumfounded, awed by this man's mighty mind. Then, however, appetite and curiosity to see the table working got the better of us. The first course was to be soup.

"If each one of you will please pass this spout on to his neighbor you will see with what rapidity a dish otherwise so hard to handle will be served by my invention."

He passed the spout marked "Tomato Soup" to Uncle Jeremiah. The latter turned the quick-action stop-cock. The liquid struck the far incline of his soup-plate. It was under two hundred lbs. pressure to the square inch.

There is a natural law that the angle of incidence is equal to the angle of reflection. That law has never been known to fail of working. The tomato-soup, therefore, issued from the plate, in a broad streak, at the identical angle at which it hit the plate. Uncle Jeremiah's countenance was in line with that angle. In two seconds he was painted, painted like a Red Indian in front of a cigar-store; painted, with not an inch left out.

The company gasped, Augustus Hicks grew pale, for though he was his uncle's only nephew, he was afraid. For ten seconds McQuincey was unable to speak, and his nephew swiftly took advantage of this brief period to conduct him speedily out of the room. I was later informed that the profanity issuing from Uncle Jeremiah was appalling, but the bathroom swallowed it up. Hicks must have worked with the speed of desperation, for in ten minutes he reappeared with his uncle, freed from the disfiguring tomato-soup, but looking daggers alternately at his nephew and "the contraption," as he called it.

The inventor excused himself, saying that he was sorry he had not warned the company that the liquids were under such high pressure, and told them to open the stop-cocks by degrees. This being observed, the plates were filled swiftly and easily, and the meal started. The soup finished, the plates were slid down into the conveyor compartment. It worked like a clock.

Each person then helped himself to a fresh plate from four piles on the table, and Hicks asked Aunt Zelinda to be the first one to help herself to the fish. This was just opposite her. Aunt Zelinda opened the throttle. The effect was magic. The table suddenly shot round, making fourteen revolutions in ten seconds before even the inventor thought of applying his brake.

"Merely a little too much steam," explained Hicks. "If you will try it again, only moving the lever part way forward and applying the brake as soon as the fish is before you, you will have no trouble."

Aunt Zelinda did, and lo! the fish stopped before her. Then everybody else helped himself to his portion. A few did not get results the first time, but it was plainly to be seen, as we all agreed, that the Hicks' Self-Serving Dining-Table certainly did the work. It took a little experience, that was all.

As Things Quiet Down Trouble Begins Again

ICED tea was served with characteristic speed. It was wonderful how that steam-pressure worked when rightly applied. The plates were pushed into the receiver. They disappeared without a sound. It was remarkable. The next dish, an entrée, was proffered the guests by the servantless table. With phantom swiftness it traveled round, stopping in front of each one, passing on with startling alacrity to the next one. It was marvelous. The enthusiasm grew. Conversation waxed animated. The inventor was congratulated from all sides. Even the sour Uncle Jeremiah warmed up a little at the thought of his nephew's achievement. In fact, everybody was pleased, gratified and glad.

The fowl was finished and the meat course was ready to be served. It fell to Mr. Smith to be the first to start the table going. In his pleased excitement he pushed the throttle lever too far. The table instantly was on its swift way, making six revolutions before the first second was over. The inventor applied the brake. It only checked the speed of the table without bringing it to a standstill. It was still traveling round at a speed of one hundred and forty revolutions a minute.

"Pull back your throttle lever!" cried Hicks. Smith did so, but without result.

"The throttle has got stuck," moaned the inventor. "I'll have to extinguish the fire under the boiler, for the brake cannot hold the table against full steam pressure."

But before he had got to the door leading to the kitchen, there suddenly was heard a strange and ominous sound, a hissing sound, like that of a vicious snake. The inventor grew pale. "Lord help us!" said he. "The water must have got too low in the boiler and the pressure has risen so high that a seam has started to pull apart. It may explode at any moment. If you value your lives, keep away from that door!"

Irvine made for the only other door in the room. "Let's get out," he said. He took hold of the door-knob. Alas! it was locked. Someone had either withdrawn the key or it was on the other side. Instinctively I turned toward a window, only to remember even before I looked down that this was a third story apartment. The table had meanwhile increased its speed. It gathered more. I tried the brake, but in vain. There was a puff of smoke through the terrific friction. It was no use. The table, freed from the encumbrance of the brake, gathered more speed. The company had shrunk away, pale and agitated, against the wall, but nothing was happening so far. Those dishholders certainly did the work.

Disasters Accumulate as the Pressure Rises

THE table's speed mounted. We could hear that 2 H.P. rotary turbine hum and the gears sing as they revolved with demon haste. And then things began to leave that table, and when they did, they left it suddenly and with terrific force. A dish full of gravy gave way. It was hurled with precision and with force at the back of the neck of Mr. Smith; most of the contents disappeared down his collar. A large flat dish full of lobster salad next struck the inventor in the face and he sat down kerplunk, looking like an original South Sea Islander. I received a rare-done sirloin steak with full force in the region of the stomach. The white vest it spoiled was worth $19.75.

In the kitchen we could hear the ominous hissing of that boiler. The whine grew higher, indicating a further increase in the number of revolutions. One after another, the things that were on the table left it with the force of projectiles. The unfortunate Uncle Jeremiah happened to get in the way of a ten-pound ham as it was flying through the air. He received it in the stomach and fell as if shot. As he did he sat down in a mess of steaming hot brown gravy and turkey-dressing spilled there before.

The air was thick with missiles. Pieces of fish, plates, cups, knives, saucers, forks, spoons, gravy dishes with contents, chicken pie, pork sausages, steaks, green salads, bottles of Lea & Perrin's, pies, tarts, loaves of bread, plates of butter, boxes of pepper, salt and cinnamon, and a hundred other objects were flying through the air in vast numbers. That table certainly had been well supplied with everything. The guests were dodging this ammunition with an alacrity bordering on the superhuman. The men were cursing, the women shrieking. And still that table gathered speed, and at each new burst of speed there was another shower of hot and cold, of soft and hard, of large and small, of slick and sticky objects. The walls were painted with brown gravy, white gravy, red gravy; with various salads, vegetables and sauces. The floor was one sea of foods of every description. And still the whine grew higher, the speed greater.

All of a sudden there was a clicking, snapping, popping sound, and at the same time a dark red streak, a thin, hot, fierce streak of red pierced the air and hit the wall beyond. It was the tomato soup. The stop-cock had been forced off by the terrific pressure.

"Oh, good Lord!" shrieked the inventor, "the pressure is too high in those liquid vessels. Those stop-cocks—compression washers only—won't stand the pressure. . . ." he desisted, for a soft-boiled egg had been stopped in its mad flight by striking the inventor in the mouth; he fell over backward and landed with his shoulders where a large dish of honey had been spilled. There he stayed, stuck to the floor. The spout turned a little and played a stream of hot, rich, racy tomato soup against the wall behind him, from which it rebounded and struck the unfortunate inventor on the chin. It was so funny, that even I started to laugh, though the situation was dangerous and I had received four different plates of something on the chest and half a pound of butter behind the ears. I had no sooner started to laugh than my untimely mirth was quenched with a poached egg received on my left eye.

Poor Aunt Zelinda

AND then there was another "pop" and suddenly a stream of ice-water hit Aunt Zelinda under the jaw, knocking her over against the wall. When she came away her false hair did not come along, but remained adhering to the wall-paper, held there by a mess of very sticky candy that had landed there earlier in the fray.

The table broke into another burst of speed, and another hail of things, mostly sweet, began to fall among us, felling guests here and there like flies. The tarts, short-cakes, jellies, jams, marmalades, and other sweets were in this mass, because as I reasoned even then, it took more speed for the smaller top table to be subjectd to the same centrifugal force as the lower, larger table, whose rim moved more rapidly. As if these articles of confection were bound to go where they were needed, a strawberry short-cake landed on the sour visage of Jeremiah McQuincey at the same moment that a large jar of marmalade hit him in the stomach and a jelly burst under his ear. Jeremiah fell, like a soldier killed in battle.

The hissing continued, growing louder. "Pop!" went the hot tea stop-cock, and Irvine roared as the fierce stream played upon his solar plexus. "Pop!" went the cocoa stop-cock, and at the same moment Smith, who had just raised himself on his hands to get up, went down in a heap, painted fit to sing "Way down upon the Suwanee River" in the rôle of an original darkey. "Pop!" went the coffee stop-cock, and Mrs. Smith curled up and went down on the field of battle, and right after her that

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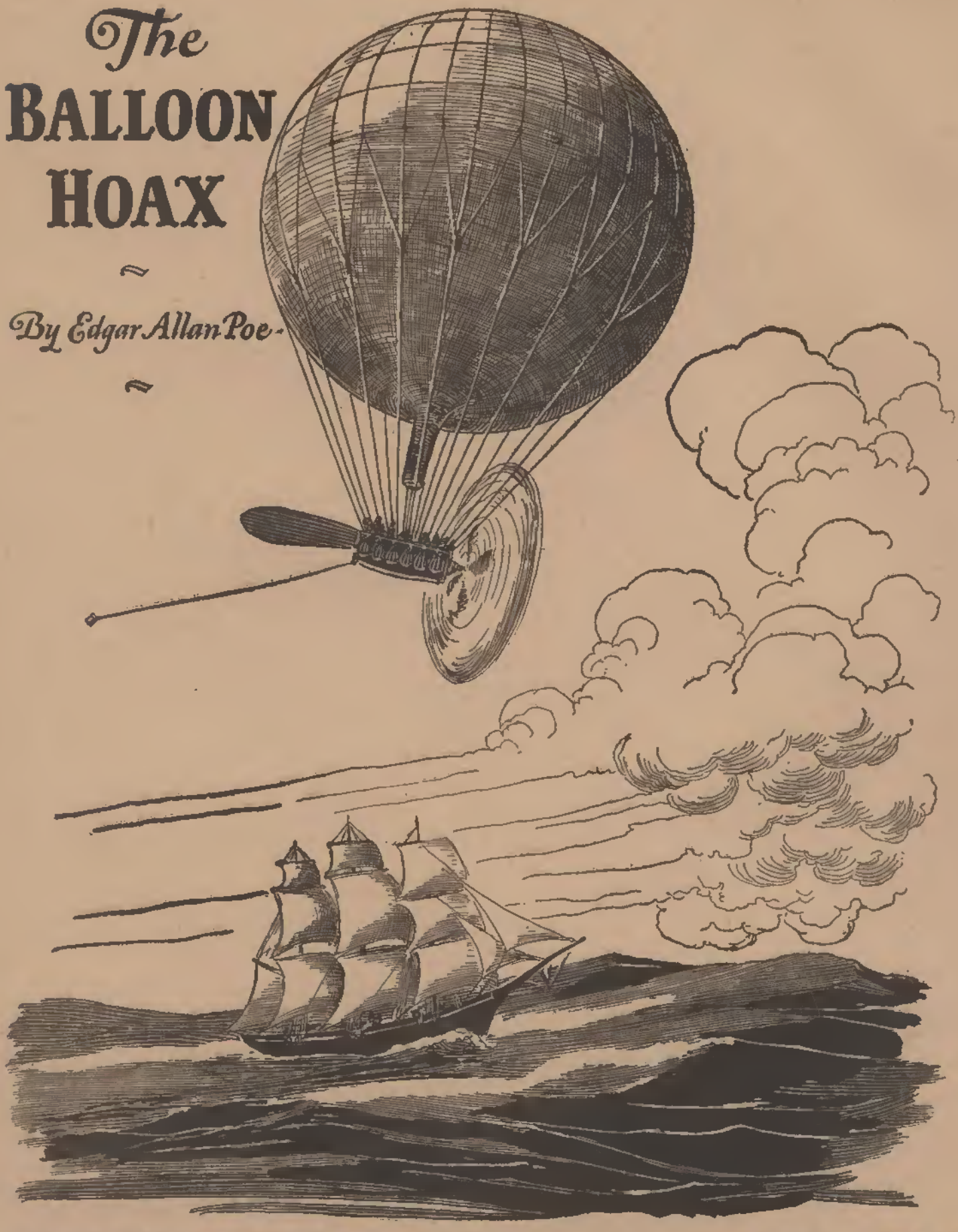
The BALLOON HOAX

By Edgar Allan Poe



We first threw out fifty pounds of ballast, and then wound up (by means of a windlass) so much of the rope as brought it quite clear of the sea. We perceived the effect of this manoeuvre immediately, in a vastly increased rate of progress; and, as the gale freshened, we flew with a velocity nearly inconceivable; the guide-rope flying out behind the car like a streamer from a vessel.

[Astounding News by Express, *via* Norfolk!—The Atlantic crossed in Three Days! Signal Triumph of Mr. Monck Mason's Flying Machine!—Arrival at Sullivan's Island, near Charleston, S. C., of Mr. Mason, Mr. Robert Holland, Mr. Henson, Mr. Harrison Ainsworth, and four others, in the Steering Balloon, "Victoria," after a Passage of Seventy-five Hours from Land to Land! Full Particulars of the Voyage!

The subjoined *jeu d' esprit* with the preceding heading in magnificent capitals, well interspersed with notes of admiration, was originally published, as matter of fact, in the New York *Sun*, a daily newspaper, and therein fully subserved the purpose of creating indigestible aliment for the *quidnuncs* during the few hours intervening between a couple of the Charleston mails. The rush for the "sole paper which had the news," was something beyond even the prodigious; and, in fact, if (as some assert) the "Victoria" *did* not absolutely accomplish the voyage recorded, it will be difficult to assign a reason why she *could* not have accomplished it.]

THE great problem is at length solved! The air, as well as the earth and ocean, has been subdued by science, and will become a common and convenient highway for mankind. *The Atlantic has been actually crossed in a balloon!* and this too without difficulty — without any great apparent danger—with thorough control of the machine—and in the inconceivably brief period of seventy-five hours from shore to shore! By the energy of an agent at Charleston, S. C., we are enabled to be the first to furnish the public with a detailed account of this most extraordinary voyage, which was performed between Saturday, the 6th instant, at 11 A. M., and 2 P. M., on Tuesday, the 9th instant, by Sir Everard Bringhurst; Mr. Osborne, a nephew of Lord Bentinck's; Mr. Monck Mason and Mr. Robert Holland, the well-known aëronauts; Mr. Harrison Ainsworth, author of "Jack Sheppard," etc; and Mr. Henson, the projector of the late unsuccessful flying machine—with two seamen from Woolwich—in all, eight persons. The particulars furnished below may be relied on as authentic and accurate in every respect, as, with a slight exception, they are copied *verbatim* from the joint diaries of Mr. Monck Mason and Mr. Harrison Ainsworth, to whose politeness our agent is also indebted for much verbal information respecting the balloon itself, its construction, and other matters of interest. The only alteration in the MS. received, has been made for the purpose of throwing the hurried account of our agent, Mr. Forsyth, into a connected and intelligible form.

THIS description of the flight across the Atlantic by balloon was originally published in the New York SUN and proved to be a real hoax. The New York SUN made, what for those days, was a tremendous success in the publication of the famous "Moon-Hoax." Edgar Allan Poe followed the "Moon-Hoax" with his story "The Balloon Hoax."

Some of Poe's biographers claim that he had very superficial knowledge. Nevertheless, we cannot fail to be impressed by the scope of his knowledge, as well as prophetic vision. In this story, however, there are one or two lapses. For instance, it is not clear why, when throwing out 50 pounds of ballast, they had to wind up a rope to get it above the sea. The guide-rope is described as "flying out behind the car like a streamer from a vessel, as they flew with a velocity nearly inconceivable." The wind which gives them this velocity, would also act upon the rope and thus prevent it from streaming out. Again—reaching South Carolina at 2 p. m., having started three days previously at 11 a. m., the time of the flight was put at 75 hours, thus making no allowance for the difference of time of about five hours, between England and South Carolina.

It is said that the Hoax deceived many people and there was a great demand for the SUN until the Charleston mail arrived.

The Balloon

TWO very decided failures, of late—those of Mr. Henson and Sir George Cayley—had much weakened the public interest in the subject of aërial navigation. Mr. Henson's scheme (which at first was considered very feasible even by men of science) was founded upon the principle of an inclined plane, started from an eminence by an extrinsic force, applied and continued by the revolution of impinging vanes, in form and number resembling the vanes of a windmill. But in all the experiments made with models at the Adelaide Gallery, it was found that the operation of these fans not only did not propel the machine, but actually impeded its flight. The only propelling force it ever exhibited was the mere *impetus* acquired from the descent of the inclined plane; and the *impetus* carried the machine farther when the vanes were at rest, than when they were in motion—a fact which sufficiently demonstrates their inutility; and in the absence of the propelling, which was also the *sustaining* power, the whole fabric would necessarily descend. This consideration led Sir George Cayley to think only of adapting a propeller to some machine having of itself an independent power of support—in a word, to a balloon; the idea, however, being novel, or original, with Sir George, only so far as regards the mode of its application to practice. He exhibited a model of his invention at the Polytechnic Institution. The propelling principle, or power, was here, also, applied to interrupted surfaces, or vanes, put in revolution. These vanes were four in number, but were found entirely ineffectual in moving the balloon, or in aiding its ascending power. The whole project was thus a complete failure.

It was at this juncture that Mr. Monck Mason (whose voyage from Dover to Weilburg in the balloon, "Nassau," occasioned so much excitement in 1837) conceived the idea of employing the principle of the Archimedean screw for the purpose of propulsion through the air—rightly attributing the failure of Mr. Henson's scheme, and of Sir George Cayley's, to the interruption of surface in the independent vanes. He made the first public experiment at Willis's Rooms, but afterward removed his model to the Adelaid Gallery.

Like Sir George Cayley's balloon, his own was an ellipsoid. Its length was thirteen feet six inches—height, six feet eight inches. It contained about three hundred and twenty cubic feet of gas, which, if pure hydrogen, would support twenty-one pounds upon its first inflation, before the gas has time to deteriorate or escape. The weight of the whole machine and apparatus was seventeen pounds—leaving about four pounds to spare. Beneath the centre of the balloon was a frame of light wood, about nine feet long, and rigged on to the balloon itself with a network in the customary manner. From this framework was suspended a wicker basket or car.

The screw consists of an axis of hollow brass tube, eighteen inches in length, through which, upon a semi-spiral inclined at fifteen degrees, pass a series of steel wire radii, two feet long, and thus projecting a foot on either side. These radii are connected at the outer extremities by two bands of flattened wire—the whole in this manner forming the framework of the screw, which is completed by a covering of oiled silk cut into gores, and tightened so as to present a tolerably uniform surface. At each end of its axis this screw is supported by pillars of hollow brass tube descending from the hoop. In the lower ends of these tubes are holes in which the pivots of the axis revolve. From the end of the axis which is next the car, proceeds a shaft of steel, connecting the screw with the pinion of a piece of spring machinery fixed in the car. By the operation of this spring, the screw is made to revolve with great rapidity, communicating a progressive motion on the whole. By means of the rudder, the machine was readily turned in any direction. The spring was of great power, compared with its dimensions, being capable of raising forty-five pounds upon a barrel of four inches diameter, after the first turn, and gradually increasing as it was wound up. It weighed, altogether, eight pounds six ounces. The rudder was a light frame of cane covered with silk, shaped somewhat like a battle door, and was about three feet long, and at the widest, one foot. Its weight was about two ounces. It could be turned *flat*, and directed upward or downward as well as to the right or left; and thus enabled the aëronaut to transfer the resistance of the air which in an inclined position it must generate in its passage, to any side upon which he might desire to act; thus determining the balloon in the opposite direction.

This model (which through want of time, we have necessarily described in an imperfect manner) was put in action at the Adelaide Gallery, where it accomplished a velocity of five miles per hour; although, strange to say, it excited very little interest in comparison with the previous complex machine of Mr. Henson—so resolute is the world to despise anything which carries with it an air of simplicity. To accomplish the great desideratum of aërial navigation, it was very generally supposed that some exceedingly complicated application must be made of some unusually profound principle in dynamics.

So well satisfied, however, was Mr. Mason of the ultimate success of his invention, that he determined to construct immediately, if possible, a balloon of sufficient capacity to test the question by a voyage of some extent—the original design being to cross the British Channel as before in the *"Nassau"* balloon. To carry out his views, he solicited and obtained the patronage of Sir Everard Bringhurst and Mr. Osborne, two gentlemen well known for scientific acquirements, and especially for the interest they have exhibited in the progress of aërostation. The project, at the desire of Mr. Osborne, was kept a profound secret from the public—the only persons entrusted with the design being those actually engaged in the construction of the machine, which was built (under the superintendence of Mr. Mason, Mr. Holland, Sir Everard Bringhurst, and Mr. Osborne) at the seat of the latter gentleman near Penstruthal in Wales. Mr. Henson, accompanied by his friend Mr. Ainsworth was admitted to a private view of the balloon, on Saturday last when the two gentlemen made final arrangements to be included in the adventure. We are not informed for what reason the two seamen were also included in the party—but, in the course of a day or two, we shall put our readers in possession of the minutest particulars respecting this extraordinary voyage.

The balloon is composed of silk, varnished with the liquid gum caoutchouc. It is of vast dimensions, containing more than 40,000 feet of gas; but as coal gas was employed in place of the more expensive and inconvenient hydrogen, the supporting power of the machine, when fully inflated, and immediately after inflation, is not more than about 2,500 pounds. The coal gas is not only much less costly, but is easily procured and managed.

For its introduction into common use for purpose of aërostation, we are indebted to Mr. Charles Green. Up to his discovery, the process of inflation was not only exceedingly expensive, but uncertain. Two, and even three days, have frequently been wasted in futile attempts to procure a sufficiency of hydrogen to fill a balloon, from which it had great tendency to escape owing to its extreme subtlety, and its affinity for the surrounding atmosphere. In a balloon sufficiently perfect to retain its contents of coal gas unaltered, in quality or amount, for six months, an equal quantity of hydrogen could not be maintained in equal purity for six weeks.

The supporting power being estimated at 2,500 pounds, and the united weights of the party amounting only to about 1,200, there was left a surplus of 1,300, of which again 1,200 was exhausted by ballast, arranged in bags of different sizes, with their respective weights marked upon them—by cordage, barometers, telescopes, barrels containing provision for a fortnight, water-casks, cloaks, carpet-bags, and various other indispensable matters, including a coffee-warmer, contrived for warming coffee by means of quick-lime, so as to dispense altogether with fire, if it should be judged prudent to do so. All these articles, with the exception of the ballast, and a few trifles, were suspended from the hoop overhead. The car is much smaller and lighter, in proportion, than the one appended to the model. It is formed of a light wicker, and is wonderfully strong, for so frail-looking a machine. Its rim is about four feet deep. The rudder is also very much larger, in proportion, than that of the model; and the screw is considerably smaller. The balloon is furnished, besides, with a grapnel, and a guide-rope; which latter is of the most indispensable importance. A few words, in explanation, will here be necessary for such of our readers as are not conversant with the details of aërostation.

As soon as the balloon quits the earth, it is subjected to the influence of many circumstances tending to create a difference in its weight; augmenting or diminishing its ascending power. For example, there may be a deposition of dew upon the silk, to the extent, even, of several hundred pounds; ballast has then to be thrown out, or the machine may descend. This ballast being discarded, and a clear sunshine evaporating the dew, and at the same time expanding the gas in the silk, the whole will again

rapidly ascend. To check this ascent, the only resource is (or rather *was*, until Mr. Green's invention of the guide-rope), the permission of the escape of gas from the valve; but, in the loss of gas, is a proportionate general loss of ascending power; so that, in a comparatively brief period, the best constructed balloon must nesessarily exhaust all its resources, and come to the earth. This was a great obstacle to voyages of length.

The guide-rope remedies the difficulty in the simplest manner conceivable. It is merely a very long rope which is suffered to trail from the car, and the effect of which is to prevent the balloon from changing its level in any material degree. If, for example, there should be a deposition of moisture upon the silk, and the machine begins to descend in consequence, there will be no necessity for discharging ballast to remedy the increase of weight, for it is remedied, or counteracted, in an exactly just proportion, by the deposit on the ground of just so much of the end of the rope as is necessary. If, on the other hand, any circumstances should cause undue levity, and consequent ascent, this levity is immediately counteracted by the additional weight of rope upraised from the earth. Thus, the balloon can neither ascend nor descend, except within very narrow limits, and its resources, either in gas or ballast, remain comparatively unimpaired. When passing over an expanse of water, it becomes necessary to employ small kegs of copper or wool, filled with liquid ballast of a lighter nature than water. These float and serve all the purposes of a mere rope on land. Another most important office of the guide-rope, is to point out the *direction* of the balloon. The rope *drags*, either on land or sea, while the balloon is free; the latter, consequently, is always in advance, when any progress whatever is made: a comparison, therefore, by means of the compass, of the relative positions of the two objects, will always indicate the *course*. In the same way, the angle formed by the rope with the vertical axis of the machine, indicates the *velocity*. When there is *no* angle—in other words, when the rope hangs perpendicularly, the whole apparatus is stationary; but the larger the angle, that is to say, the farther the balloon precedes the end of the rope, the greater the velocity; and the converse.

As the original design was to cross the British Channel, and alight as near Paris as possible, the voyagers had taken the precaution to prepare themselves with passports directed to all parts of the Continent, specifying the nature of the expedition, as in the case of the "*Nassau*" voyage, and entitling the adventurers to exemption from the usual formalities of office; unexpected events, however, rendered these passports superfluous.

The inflation was commenced very quietly at daybreak, on Saturday morning, the 6th instant, in the Court-Yard of Weal-Vor House, Mr. Osborne's seat, about a mile from Penstruthal, in North Wales; and at 7 minutes past 11, everything being ready for departure, the balloon was set free, rising gently but steadily, in a direction nearly South; no use being made, for the first half hour, of either the screw or rudder. We proceed now with the journal, as transcribed by Mr. Forsyth from the joint MSS. of Mr. Monck Mason, and Mr. Ainsworth. The body of the journal is given in the handwriting of Mr. Mason, and a P. S. is appended, each day, by Mr. Ainsworth, who has in preparation, and will shortly give the public, a more minute, and no doubt, a thrilling interesting account of the voyage.

The Journal

SATURDAY, April the 6th.—Every preparation likely to embarrass us, having been made over night, we commenced the inflation this morning at daybreak; but owing to a thick fog, which encumbered the folds of the silk and rendered it unmanageable, we did not get through before nearly eleven o'clock. Cut loose, then, in high spirits, and rose gently but steadily, with a light breeze at north, which bore us in the direction of the British Channel. Found the ascending force greater than we had expected; and as we arose higher and so got clear of the cliffs, and more in the sun's rays, our ascent became very rapid. I did not wish, however, to lose gas at so early a period of the adventure, and so concluded to ascend for the present. We soon ran out our guide-rope; but even when we had raised it clear of the earth, we still went up very rapidly. The balloon was unusually steady, and looked beautiful. In about ten minutes after starting, the barometer indicated an altitude of 15,000 feet. The weather was remarkably fine, and the view of the adjacent country—a most romantic one when seen from any point—was now especially sublime. The numerous deep gorges presented the appearance of lakes, on account of the dense vapors with which they were filled, and the pinnacles and crags to the southeast, piled in inextricable confusion, resembled nothing so much as the giant cities of Eastern fable. We were rapidly approaching the mountains in the south; but our elevation was more than sufficient to enable us to pass them in safety. In a few minutes we soared over them in fine style; and Mr. Ainsworth, with the seamen, were surprised at their apparent want of altitude when viewed from the car, the tendency of great elevation in a balloon being to reduce inequalities of the surface below, to nearly a dead level. At half-past eleven, still proceeding nearly south, we obtained our first view of Bristol Channel; and, in fifteen minutes afterward, the line of breakers on the coast appeared immediately beneath us, and we were fairly out at sea. We now resolved to let off enough gas to bring our guide-rope, with the buoys affixed, into the water. This was immediately done, and we commenced a gradual descent. In about twenty minutes our first buoy dipped, and at the touch of the second soon afterward, we remained stationary as to elevation. We were all now anxious to test the efficiency of the rudder and screw, and we put them both into requisition forthwith, for the purpose of altering our direction more to the eastward, and in a line for Paris. By means of the rudder we instantly effected the necessary change of direction, and our course was brought nearly at right angles to that of the wind; when we set in motion the spring of the screw, and were rejoiced to find it propel us readily as desired. Upon this we gave nine cheers, and dropped in the sea a bottle, enclosing a slip of parchment with a brief account of the principle of the invention. Hardly, however, had we done with our rejoicings, when an unforseen accident occurred

which discouraged us in no little degree. The steel rod connecting the spring with the propeller was suddenly jerked out of place, at the car end (by a swaying of the car through some movement of one of the two seamen we had taken up), and in an instant hung dangling out of reach, from the pivot of the axis of the screw. While we were endeavoring to regain it, our attention being completely absorbed, we became involved in a strong current of wind from the east, which bore us, with rapidly increasing force, toward the Atlantic. We soon found ourselves driving out to sea at the rate of not less, certainly, than fifty or sixty miles an hour, so that we came up with Cape Clear, at some forty miles to our north, before we had secured the rod, and had time to think what we were about. It was now that Mr. Ainsworth made an extraordinary, but, to my fancy, a by no means unreasonable or chimerical proposition, in which he was instantly seconded by Mr. Holland—viz.: that we should take advantage of the strong gale which bore us on, and in place of beating back to Paris, make an attempt to reach the coast of North America. After slight reflection I gave a willing assent to this bold proposition, which (strange to say) met with objection from the two seamen only. As the stronger party, however, we overruled their fears, and kept resolutely upon our course. We steered due west; but as the trailing of the buoys materially impeded our progress, and we had the balloon abundantly at command, either for ascent or descent, we first threw out fifty pounds of ballast, and then wound up (by means of a windlass) so much of the rope as brought it quite clear of the sea. We perceived the effect of this manœuvre immediately, in a vastly increased rate of progress; and, as the gale freshened, we flew with a velocity nearly inconceivable; the guide-rope flying out behind the car like a streamer from a vessel. It is needless to say that a very short time sufficed us to lose sight of the coast. We passed over innumerable vessels of all kinds, a few of which were endeavoring to beat up, but the most of them lying to. We occasioned the greatest excitement on board all—an excitement greatly relished by ourselves, and especially by our two men, who, now under the influence of a dram of Geneva, seemed resolved to give all scruple, or fear, to the wind. Many of the vessels fired signal guns; and in all we were saluted with loud cheers (which we heard with surprising distinctness) and the waving of caps and handkerchiefs. We kept on in this manner throughout the day with no material incident, and, as the shades of night closed around us, we made a rough estimate of the distance traversed. It could not have been less than five hundred miles, and was probably much more. The propeller was kept in constant operation, and, no doubt, aided our progress materially. As the sun went down, the gale freshened into an absolute hurricane, and the ocean beneath was clearly visible on account of its phosphorescence. The wind was from the east all night, and gave us the brightest omen of success. We suffered no little from cold, and the dampness of the atmosphere was most unpleasant; but the ample space in the car enabled us to lie down, and by means of cloaks and a few blankets, we did sufficiently well.

P.S. [by Mr. Ainsworth]. The last nine hours have been unquestionably the most exciting of my life. I can conceive nothing more sublimating than the strange peril and novelty of an adventure such as this. May God grant that we succeed! I ask not success for mere safety to my insignificant person, but for the sake of human knowledge and—for the vastness of the triumph. And yet the feat is only so evidently feasible that the sole wonder is why men have scrupled to attempt it before. One single gale such as now befriends us—let such a tempest whirl forward a balloon for four or five days (these gales often last longer) and the voyager will be easily borne, in that period, from coast to coast. In view of such a gale the broad Atlantic becomes a mere lake. I am more struck, just now, with the supreme silence which reigns in the sea beneath us, notwithstanding its agitation, than with any other phenomenon presenting itself. The waters give up no voice to the heavens. The immense flaming ocean writhes and is tortured uncomplainingly. The mountainous surges suggest the idea of innumerable dumb gigantic fiends struggling in impotent agony. In a night such as is this to me, a man *lives*—lives a whole century of ordinary life—nor would I forego this rapturous delight for that of a whole century of ordinary existence.

Sunday, the 7th.—[Mr. Mason's MS.] This morning the gale, by 10, had subsided to an eight or nine knot breeze (for a vessel at sea), and bears us, perhaps, thirty miles per hour, or more. It has veered, however, very considerably to the north; and now, at sundown, we are holding our course due west, principally by the screw and rudder, which answer their purposes to admiration. I regard the project as thoroughly successful, and the easy navigation of the air in any direction (not exactly in the teeth of a gale) as no longer problematical. We could not have made head against the strong wind of yesterday; but, by ascending, we might have got out of its influence, if requisite. Against a pretty stiff breeze, I feel convinced, we can make our way with the propeller. At noon, to-day, ascended to an elevation of nearly 25,000 feet, by discharging ballast. Did this to search for a more direct current, but found none so favorable as the one we are now in. We have an abundance of gas to take us across this small pond, even should the voyage last three weeks. I have not the slightest fear for the result. The difficulty has been strangely exaggerated and misapprehended. I can choose my current, and should I find *all* currents against me, I can make very tolerable headway with the propeller. We have no incidents worth recording. The night promises fair.

P.S. [By Mr. Ainsworth.] I have little to record except the fact (to me quite a surprising one) that, at an elevation equal to that of Cotopaxi, I experienced neither very intense cold, nor headache, nor difficulty of breathing; neither, I find, did Mr. Mason, nor Mr. Holland, nor Sir Everard. Mr. Osborne complained of constriction of the chest—but this soon wore off. We have flown at a great rate during the day, and we must be more than half way across the Atlantic. We have passed over some twenty or thirty vessels of various kinds, and all seem to be delightfully astonished. Crossing the ocean in a balloon is not so difficult a feat after all. *Omne ignotum pro magnifico. Mem.*: at 25,000 feet

elevation the sky appears nearly black, and the stars are distinctly visible; while the sea does not seem convex (as one might suppose) but absolutely and most unequivocally *concave.**

Monday the 8th.—[Mr. Mason's MS.] This morning we had again some little trouble with the rod of the propeller, which must be entirely remodeled, for fear of serious accident—I mean the steel rod, not the vanes. The latter could not be improved. The wind has been blowing steadily and strongly from the northeast all day; and so far fortune seems bent upon favoring us. Just before day, we were all somewhat alarmed at some odd noises and concussions in the balloon, accompanied with the apparent rapid subsidence of the whole machine. These phenomena were occasioned by the expansion of the gas, through increase of heat in the atmosphere, and the consequent disruption of the minute particles of ice with which the network had become encrusted during the night. Threw down several bottles to the vessels below. See one of them picked up by a large ship—seemingly one of the New York line packets. Endeavored to make out her name, but could not be sure of it. Mr. Osborne's telescope made it out something like "Atalanta." It is now 12 at night, and we are still going nearly west, at a rapid pace. The sea is peculiarly phosphorescent.

P.S. [By Mr. Ainsworth.] It is now 2 a.m., and nearly calm, as well as I can judge—but it is very difficult to determine this point, since we move *with* the air so completely. I have not slept since quitting Weal-Vor, but can stand it no longer, and must take a nap. We cannot be far from the American coast.

Tuesday the 9th.—[Mr. Ainsworth's MS.] *One p.m. We are in full view of the low coast of South Carolina.* The great problem is accomplished. We have crossed the Atlantic—fairly and *easily* crossed it in a balloon! God be praised! Who shall say that anything is impossible hereafter?

The Journal here ceases. Some particulars of the descent were communicated, however, by Mr. Ainsworth to Mr. Forsyth. It was nearly dead calm when the voyagers first came in view of the coast, which was immediately recognized by both the seamen, and by Mr. Osborne. The latter gentleman having acquaintances at Fort Moultrie, it was immediately resolved to descend in its vicinity. The balloon was brought over the beach (the tide being out and the sand hard, smooth, and admirably adapted for a descent), and the grapnel let go, which took firm hold at once. The inhabitants of the island and the fort thronged out, of course, to see the balloon; but it was with the greatest difficulty that any one could be made to credit the actual voyage—*the crossing the Atlantic.* The grapnel caught at 2 p.m., precisely; and thus the whole voyage was completed in seventy-five hours; or rather less, counting from shore to shore. No serious accident occurred. No real danger was at any time apprehended. The balloon was exhausted and secured without trouble; and when the MS. from which this narrative is compiled was despatched from Charleston, the party were still at Fort Moultrie. Their farther intentions were not ascertained; but we can safely promise our readers some additional information either on Monday or in the course of the next day at farthest.

This is unquestionably the most stupendous, the most interesting, and the most important undertaking, ever accomplished or even attempted by man. What magnificent events may ensue, it would be useless now to think of determining.

THE END.

**Note.*—Mr. Ainsworth has not attempted to account for this phenomenon, which, however, is quite susceptible of explanation. A line dropped from an elevation of 25,000 feet, perpendicularly to the surface of the earth (or sea), would form the perpendicular of a right angled triangle, of which the base would extend from the right angle to the horizon, and the hypothenuse from the horizon to the balloon.

But the 25,000 feet of altitude is little or nothing, in comparison with the extent of the prospect. In other words, the base and hypothenus of the supposed triangle would be so long when compared with the perpendicular, that the two former may be regarded as nearly parallel. In this manner the horizon of the aëronaut would appear to be *on a level* with the car. But, as the point immediately beneath him seems, and is, at a great distance below him, it seems, of course, also, at a great distance below the horizon. Hence the impression of *concavity;* and this impression must remain, until the elevation shall bear so great a proportion to the extent of prospect, that the apparent parallelism of the base and hypothenuse disappears—when the earth's real convexity must become apparent.

SUPERSTAR

Leland S. Copeland

Alpha of Orion, mammoth of the sky,
Dropping gold at evening, sparkling red and high;
    Blinking light at billions,
    Vast as suns by millions;
Far among the stars and rich in latent worth—
Greetings from a solar atom, wrinkled little earth!

Airy in your substance, hardly there at all,
You are moving madly—heed some secret call.
    Woven in your glories,
    Doze uncounted stories.
Life and hope and death, with love and loss and
        tears,
Sleep within your vapors, wait the throbbing years.

The LAND *that* TIME FORGOT

By Edgar Rice Burroughs

Together they went to the edge of the wood and looked up to see five red-robed creatures dropping slowly in ever-lessening spirals toward their little amphitheatre. With no attempt at concealment, they came, sure of their ability to overwhelm these two fugitives, and with the fullest measure of self-confidence they landed in the clearing, but a few yards from the man and the girl.

What Went Before

THE teller of this story discovers a quart thermos bottle turning and twisting in the surf off a small island on Cape Farewell at the southern extremity of Greenland. He rescues it and finds that it contains a manuscript, neatly written and tightly folded, which tells the following story:

A young American, with his Airedale, Nobs, while floating on a raft, apparently the lone survivors of a ship torpedoed by a German submarine, discovers a beautiful young girl, seemingly dead, floating on the sea. He rescues her, she returns to consciousness, and later they are both picked up by an English vessel. The ship sinks, but the crew, together with the two passengers, gain control of the submarine and the Germans.

Benson, who later confesses himself a traitor to the group, manipulates the compass so that they swerve far from their intended course and finally find themselves near an island, which they decide must be Caprona. On account of its tremendous cliffs, they cannot gain access to the interior. They discover a subterranean river, submerge and pass through it into an interior sea, where monstrous prehistoric Saurian reptiles are plentiful and dangerous in the warmer waters.

On landing, they meet with a band of beings resembling the Neanderthal man, who are scared off by the firing rifle. One is captured. They soon learn his language and find him helpful while they are building their camp.

Oil is discovered and the Germans start refining it. Later they surreptitiously return to the submarine and start for home with the oil, leaving the others stranded on the island.

Ahm, the Neanderthal man, tells of the "evolution" of his people—a process of graduation, whereby each one leaves his tribe and goes to the next one higher in the stage of development, "when the call comes." He too, expects some day to become a Galu—the highest stage, most nearly approximating the civilized man. One morning, while six of the men are out hunting, Ahm kidnaps Lys and takes her with him as his "she." Tyler starts out in search of her and comes upon another higher type Caspak tribe, in heated discussion about the possession of the "she." He fights to get her and is able to make some arrangement whereby he and Lys can stay there safely for a time.

While Tyler is out hunting, he gets lost, comes upon two tombstones marking the graves of two of his six companions and meets with many dangers from the wild beasts of Caspak. He finds his way again, only to return to a devastated country, strewn with the dead bodies of Caspakian men and women, killed in battle. He finds a hiding place on the cliffs, where he expects to stay alone until help comes. He hears a shot and sees Lys below. He rushes to her rescue, overcomes her pursuer and takes Lys to his cave. Thus ends Tyler's manuscript.

BOOK II tells in exciting detail, the story of a rescue party from California, headed by Thomas Billings, which comes to the island in a steam yacht. They have an airplane and Billings ascends over the cliffs in it to investigate. He crashes his plane among the trees, and so becomes a foot wanderer, out of reach of his companions. He saves Ajor, a beautiful Galu girl, from a bear, and they travel together, having many exciting adventures, being made captives and escaping, until finally Billings and Ajor with Nobs, whom he finds among the Kro-lu, or archers, ride toward the Galu country on a horse, which when pursued slips and throws Billings and Ajor into a quagmire. As the enemy approaches, Jor, the leader of the Galu country, and Ajor's father, comes with his warriors and with Billings' companions, who have managed to scale the rocks after many days of continuous labor. Tyler and Lys are also with them. They all go back to the Galu country, where they exchange stories of their experiences and then all the white people go back to America—all except Billings, who decides to stay with Ajor on the island. Thus ends the second book.

BOOK III

OUT OF TIME'S ABYSS

The Tale of Bradley

THIS is the tale of Bradley after he left Fort Dinosaur upon the west coast of the great lake that is in the center of the island.

Upon the fourth day of September, 1916, he set out with four companions, Sinclair, Brady, James, and Tippet, to search along the base of the barrier cliffs for a point at which they might be scaled.

Through the heavy Caspakian air, beneath the swollen sun, the five men marched northwest from Fort Dinosaur, now waist-deep in lush, jungle grasses starred with myriad gorgeous blooms, now across open meadow-land and parklike expanses and again plunging into dense forests of eucalyptus and acacia and giant arboreous ferns with feathered fronds waving gently a hundred feet above their heads.

About them upon the ground, among the trees and in the air over them moved and swung and soared the countless forms of Caspak's teeming life. Always were they menaced by some frightful thing and seldom were their rifles cool, yet even in the brief time they had dwelt upon Caprona they had become callous to danger, so that they swung along laughing and chatting like soldiers on a summer hike.

"This reminds me of South Clark Street," re-

marked Brady, who had once served on the traffic squad in Chicago; and as no one asked him why, he volunteered that it was "because it's no place for an Irishman."

"South Clark Street and heaven have something in common, then," suggested Sinclair. James and Tippet laughed, and then a hideous growl broke from a dense thicket ahead and diverted their attention to other matters.

"One of them behemoths of 'Oly Writ," muttered Tippet as they came to a halt and with guns ready awaited the almost inevitable charge.

"Hungry lot o' beggars, these," said Bradley; "always trying to eat everything they see."

For a moment no further sound came from the thicket. "He may be feeding now," suggested Bradley. "We'll try to go around him. Can't waste ammunition. Won't last forever. Follow me." And he set off at right angles to their former course, hoping to avert a charge. They had taken a dozen steps, perhaps, when the thicket moved to the advance of the thing within it, the leafy branches parted, and the hideous head of a gigantic bear emerged.

"Pick your trees," whispered Bradley. "Can't waste ammunition."

The men looked about them. The bear took a couple of steps forward, still growling menacingly. He was exposed to the shoulders now. Tippet took one look at the monster and bolted for the nearest tree; and then the bear charged. He charged straight for Tippet. The other men scattered for the various trees they had selected—all except Bradley. He stood watching Tippet and the bear. The man had a good start and the tree was not far away; but the speed of the enormous creature behind him was something to marvel at, yet Tippet was in a fair way to make his sanctuary when his foot caught in a tangle of roots and down he went, his rifle flying from his hand and falling several yards away. Instantly Bradley's piece was at his shoulder, there was a sharp report answered by a roar of mingled rage and pain from the carnivore. Tippet attempted to scramble to his feet.

"Lie still!" shouted Bradley. "Can't waste ammunition."

The bear halted in its tracks, wheeled toward Bradley and then back again toward Tippet. Again the former's rifle spit angrily, and the bear turned again in his direction. Bradley shouted loudly. "Come on, you behemoth of Holy Writ!" he cried. "Come on, you duffer! Can't waste ammunition." And as he saw the bear apparently upon the verge of deciding to charge him, he encouraged the idea by backing rapidly away, knowing that an angry beast will more often charge one who moves than one who lies still.

And the bear did charge. Like a bolt of lightning he flashed down upon the Englishman. "Now run!" Bradley called to Tippet and himself turned in flight toward a near-by tree. The other men, now safely ensconced upon various branches, watched the race with breathless interest. Would Bradley make it? It seemed scarcely possible. And if he didn't! James gasped at the thought. Six feet at the shoulder stood the frightful mountain of blood-mad flesh and bone and sinew that was bearing down with the speed of an express train upon the seemingly slow-moving man.

It all happened in a few seconds; but they were seconds that seemed like hours to the men who watched. They saw Tippet leap to his feet at Bradley's shouted warning. They saw him run, stooping to recover his rifle as he passed the spot where it had fallen. They saw him glance back toward Bradley, and then they saw him stop short of the tree that might have given him safety and turn back in the direction of the bear. Firing as he ran, Tippet raced after the great cave bear—the monstrous thing that should have been extinct ages before—ran for it and fired even as the beast was almost upon Bradley. The men in the trees scarcely breathed. It seemed to them such a futile thing for Tippet to do, and Tippet of all men! They had never looked upon Tippet as a coward—there seemed to be no cowards among that strangely assorted company that Fate had gathered together from the four corners of the earth—but Tippet was considered a cautious man. Overcautious, some thought him. How futile he and his little pop-gun appeared as he dashed after that living engine of destruction! But, oh, how glorious! It was some such thought as this that ran through Brady's mind, though articulated it might have been expressed otherwise, albeit more forcefully.

Just then it occurred to Brady to fire and he, too, opened upon the bear, but at the same instant the animal stumbled and fell forward, though still growling most fearsomely. Tippet never stopped running or firing until he stood within a foot of the brute, which lay almost touching Bradley and was already struggling to regain its feet. Placing the muzzle of his gun against the bear's ear, Tippet pulled the trigger. The creature sank limply to the ground and Bradley scrambled to his feet.

"Good work, Tippet," he said. "Mightily obliged to you—awful waste of ammunition, really."

And then they resumed the march and in fifteen minutes the encounter had ceased even to be a topic of conversation.

WE are now embarking upon the third and final installment of this most remarkable of stories. By this time you must agree with us that you have never read anything quite like it, quite so exciting. In the last installment we meet the far-famed Wieroos, a race not more impossible than the human race itself. That some such beings can exist somewhere in the universe is not at all beyond possibility. As a matter of fact, it is most probable.

If the former installments were remarkable, the conclusion is even more so.

The Hatchet-Men

FOR two days they continued upon their perilous way. Already the cliffs loomed high and forbidding close ahead without sign of break to encourage hope that somewhere they might be scaled. Late in the afternoon the party crossed a small stream of warm water upon the sluggishly moving surface of which floated countless millions of tiny green eggs surrounded by a light scum of the same color,

though of a darker shade. Their past experience of Caspak had taught them that they might expect to come upon a stagnant pool of warm water if they followed the stream to its source; but there they were almost certain to find some of Caspak's grotesque, manlike creatures. Already since they had disembarked from the U-33 after its perilous trip through the subterranean channel beneath the barrier cliffs had brought them into the inland sea of Caspak, had they encountered what had appeared to be three distinct types of these creatures. There had been the pure apes—huge, gorilla-like beasts—and those who walked a trifle more erect and had features with just a shade more of the human cast about them. Then there were men like Ahm, whom they had captured and confined at the fort—Ahm, the club-man. "Well-known club-man," Tyler had called him. Ahm and his people had knowledge of a speech. They had a language, in which they were unlike the race just inferior to them, and they walked much more erect and were less hairy; but it was principally the fact that they possessed a spoken language and carried a weapon that differentiated them from the others.

All of these peoples had proven belligerent in the extreme. In common with the rest of the fauna of Caprona the first law of nature as they seemed to understand it was to kill—kill—kill. And so it was that Bradley had no desire to follow up the little stream toward the pool near which were sure to be the caves of some savage tribe; but fortune played him an unkind trick, for the pool was much closer than he imagined, its southern end reaching fully a mile south of the point at which they crossed the stream, and so it was that after forcing their way through a tangle of jungle vegetation they came out upon the edge of the pool which they had wished to avoid.

Almost simultaneously there appeared south of them a party of naked men armed with clubs and hatchets. Both parties halted as they caught sight of one another. The men from the fort saw before them a hunting party laden with meat evidently returning to its caves or village. They were large men with features closely resembling those of the African negro though their skins were white. Short hair grew upon a large portion of their limbs and bodies, which still retained a considerable trace of apish progenitors. They were, however, a distinctly higher type than the Bo-lu, or club-men.

Bradley would have been glad to have averted a meeting; but as he desired to lead his party south around the end of the pool, and as it was hemmed in by the jungle on one side and the water on the other, there seemed no escape from an encounter.

On the chance that he might avoid a clash, Bradley stepped forward with upraised hand. "We are friends," he called in the tongue of Ahm, the Bo-lu, who had been held a prisoner at the fort; "permit us to pass in peace. We will not harm you."

At this the hatchet-met set up a great jabbering with much laughter, loud and boisterous. "No," shouted one, "you will not harm us, for we shall kill you. Come! We kill! We kill!" And with hideous shouts they charged down upon the Europeans.

"Sinclair, you may fire," said Bradley quietly. "Pick off the leader. Can't waste ammunition."

The Englishman raised his piece to his shoulder and took quick aim at the breast of the yelling savage leaping toward them. Directly behind the leader came another hatchet-man, and with the report of Sinclair's rifle both warriors lunged forward in the tall grass, pierced by the same bullet. The effect upon the rest of the band was electrical. As one man they came to a sudden halt, wheeled to the east and dashed into the jungle, where the men could hear them forcing their way in an effort to put as much distance as possible between themselves and the authors of this new and frightful noise that killed warriors at a great distance.

Both the savages were dead when Bradley approached to examine them, and as the Europeans gathered around, other eyes were bent upon them with greater curiosity than they displayed for the victims of Sinclair's bullet. When the party again took up the march around the southern end of the pool the owner of the eyes followed them—large, round eyes, almost expressionless except for a certain cold cruelty which glinted malignly from their pale gray irises.

Flying Beings and the Meat-Eaters

ALL unconscious of the stalker, the men came, late in the afternoon, to a spot which seemed favorable as a campsite. A cold spring bubbled from the base of a rocky formation which overhung and partially encircled a small inclosure. At Bradley's command, the men took up the duties assigned them—gathering wood, building a cook-fire and preparing the evening meal. It was while they were thus engaged that Brady's attention was attracted by the dismal flapping of huge wings. He glanced up, expecting to see one of the great flying reptiles of a bygone age, his rifle ready in his hand. Brady was a brave man. He had groped his way up narrow tenement stairs and taken an armed maniac from a dark room without turning a hair; but now as he looked up, he went white and staggered back.

"Gawd!" he almost screamed. "What is it?"

Attracted by Brady's cry the others seized their rifles as they followed his wide-eyed, frozen gaze, nor was there one of them that was not moved by some species of terror or awe. Then Brady spoke again in an almost inaudible voice. "Holy Mother protect us—it's a dragon!"

Bradley, always cool almost to indifference in the face of danger, felt a strange, creeping sensation run over his flesh, as slowly, not a hundred feet above them, the thing flapped itself across the sky, its huge, round eyes glaring down upon them. And until it disappeared over the tops of the trees of a near-by wood the five men stood as though paralyzed, their eyes never leaving the weird shape, and not one of them appearing to recall that he grasped a loaded rifle in his hands.

With the passing of the thing came the reaction. Tippet sank to the ground and buried his face in his hands. "Oh, Gord," he moaned. "Tyke me awy from this orful plice." Brady, recovered from the first shock, swore loud and luridly. He called upon all the saints to witness that he was unafraid and that anybody with half an eye could have seen that the creature was nothing more than "one av thim flyin' alligators" that they all were familiar with.

"Yes," said Sinclair with fine sarcasm, "we've saw so many of them with white shrouds on 'em."

"Shut up, you fool!" growled Brady. "If you know so much, tell us what it was after bein' then."

Then he turned toward Bradley. "What was it, sor, do you think?" he asked.

Bradley shook his head. "I don't know," he said. "It looked like a winged human being clothed in a flowing white robe. Its face was more human than otherwise. That is the way it looked to me; but what it really was I can't even guess, for such a creature is as far beyond my experience or knowledge as it is beyond yours. All that I am sure of is that whatever else it may have been, it was quite material—it was no ghost; rather just another of the strange forms of life which we have met here and with which we should be accustomed by this time."

Tippet looked up. His face was still ashy. "Yer cawn't tell me," he cried. "Hi seen hit. Blime, Hi seen hit. Hit was ha dead man flyin' through the hair. Didn't Hi see 'is heyes? Oh, Gord! Didn't Hi see 'em?"

"It didn't look like any beast or reptile to me," spoke up Sinclair. "It was lookin' right down at me when I looked up and I saw its face plain as I see yours. It had big round eyes that looked all cold and dead, and its cheeks were sunken in deep, and I could see its yellow teeth behind thin, tight-drawn lips—like a man who had been dead a long while, sir," he added, turning toward Bradley.

"Yes!" James had not spoken since the apparition had passed over them, and now it was scarce speech which he uttered—rather a series of articulate gasps. "Yes—dead—a—long—while. It—means something. It—came—for some—one. For one—of us. One—of—us is—goin'—to die. I'm goin' to die!" he ended in a wail.

"Come! Come!" snapped Bradley. "Won't do. Won't do at all. Get to work, all of you. Waste of time. Can't waste time."

His authoritative tones brought them all up standing, and presently each was occupied with his own duties; but each worked in silence and there was no singing and no bantering such as had marked the making of previous camps. Not until they had eaten and to each had been issued the little ration of smoking tobacco allowed after each evening meal, did any sign of a relaxation of taut nerves appear. It was Brady who showed the first signs of returning good spirits. He commenced humming "It's a Long Way to Tipperary" and presently to voice the words, but he was well into his third song before anyone joined him, and even then there seemed a dismal note in even the gayest of tunes.

A huge fire blazed in the opening of their rocky shelter that the prowling carnivora might be kept at bay; and always one man stood on guard, watchfully alert against a sudden rush by some maddened beast of the jungle. Beyond the fire, yellow-green spots of flame appeared, moved restlessly about, disappeared and reappeared, accompanied by a hideous chorus of screams and growls and roars as the hungry meat-eaters hunting through the night were attracted by the light or the scent of possible prey.

But to such sights and sounds as these the five men had become callous. They sang or talked as unconcernedly as they might have done in the barroom of some public-house at home.

Sinclair was standing guard. The others were listening to Brady's description of traffic congestion at the Rush Street bridge during the rush hour at night. The fire crackled cheerily. The owners of the yellow-green eyes raised their frightful chorus to the heavens. Conditions seemed again to have returned to normal. And then, as though the hand of Death had reached out and touched them all, the five men tensed into sudden rigidity.

The Constant Nervous Strain

ABOVE the nocturnal diapson of the teeming jungle sounded a dismal flapping of wings and overhead, through the thick night, a shadowy form passed across the diffused light of the flaring campfire. Sinclair raised his rifle and fired. An eerie wail floated down from above and the apparition, whatever it might have been, was swallowed by the darkness. For several seconds the listening men heard the sound of those dismally flapping wings lessening in the distance until they could no longer be heard.

Bradley was the first to speak. "Shouldn't have fired, Sinclair," he said; "can't waste ammunition." But there was no note of censure in his tone. It was as though he understood the nervous reaction that had compelled the other's act.

"I couldn't help it, sir," said Sinclair. "Lord, it would take an iron man to keep from shootin' at that awful thing. Do you believe in ghosts, sir?"

"No," replied Bradley. "No such things."

"I don't know about that," said Brady. "There was a woman murdered over on the prairie near Brighton—her throat was cut from ear to ear, and ——"

"Shut up," snapped Bradley.

"My gran'daddy used to live down Coppington wy," said Tippet. "They were a hold ruined castle on a 'ill near by, hand at midnight they used to see pale blue lights through the windows an' 'ear——"

"Will you close your hatch?" demanded Bradley. "You fools will have yourselves scared to death in a minute. Now go to sleep."

But there was little sleep in camp that night until utter exhaustion overtook the harassed men toward morning; nor was there any return of the weird creature that had set the nerves of each of them on edge.

The following forenoon the party reached the base of the barrier cliffs and for two days marched northward in an effort to discover a break in the frowning abutment that raised its rocky face almost perpendicularly above them, yet nowhere was there the slightest indication that the cliffs were scalable.

Disheartened, Bradley determined to turn back toward the fort, as he already had exceeded the time decided upon by Bowen Tyler and himself for the expedition. The cliffs for many miles had been trending in a northeasterly direction, indicating to Bradley that they were approaching the northern extremity of the island. According to the best of his calculations they had made sufficient easting during the past two days to have brought them to a point almost directly north of Fort Dinosaur and as nothing could be gained by retracing their steps

along the base of the cliffs he decided to strike due south through the unexplored country between them and the fort.

That night (September 9, 1916), they made camp a short distance from the cliffs beside one of the numerous cool springs that are to be found within Caspak, oftentimes close beside the still more numerous warm and hot springs which feed the many pools. After supper the men lay smoking and chatting among themselves. Tippet was on guard. Fewer night prowlers threatened them, and the men were commenting upon the fact that the farther north they had traveled the smaller the number of all species of animal life became, though it was still present in what would have seemed appalling plenitude in any other part of the world. The diminution in reptilian life was the most noticeable change in the fauna of northern Caspak. Here, however, were forms they had not met elsewhere, several of which were of gigantic proportions.

According to their custom all, with the exception of the man on guard, sought sleep early, and once disposed upon the ground for slumber, they were not long in finding it. It seemed to Bradley that he had scarcely closed his eyes when he was brought to his feet, wide awake, by a piercing scream which was punctuated by the sharp report of a rifle from the direction of the fire where Tippet stood guard. As he ran toward the man, Bradley heard above him the same uncanny wail that had set every nerve on edge several nights before, and the dismal flapping of huge wings. He did not need to look up at the white-shrouded figure winging slowly away into the night to know that their grim visitor had returned.

The muscles of his arm, reacting to the sight and sound of the menacing form, carried his hand to the butt of his pistol; but after he had drawn the weapon, he immediately returned it to its holster with a shrug.

"What for?" he muttered. "Can't waste ammunition." Then he walked quickly to where Tippet lay sprawled upon his face. By this time James, Brady and Sinclair were at his heels, each with his rifle in readiness.

"Is he dead, sir?" whispered James as Bradley kneeled beside the prostrate form.

A Dreadful Encounter and Death

BRADLEY turned Tippet over on his back and pressed an ear close to the other's heart. In a moment he raised his head. "Fainted," he announced. "Get water. Hurry!" Then he loosened Tippet's shirt at the throat and when the water was brought, threw a cupful in the man's face. Slowly Tippet regained consciousness and sat up. At first he looked curiously into the faces of the men about him; then an expression of terror overspread his features. He shot a startled glance up into the black void above and then burying his face in his arms began to sob like a child.

"What's wrong, man?" demanded Bradley. "Buck up! Can't play cry-baby. Waste of energy. What happened?"

"Wot 'appened, sir!" wailed Tippet. "Oh, Gord, sir! Hit came back. Hit came for me, sir. Right hit did, sir; strite hat me, sir; hand with long w'ite 'ands it clawed for me. Oh, Gord! Hit almost caught me, sir. Hi'm has good as dead; H'im a marked man; that's wot Hi ham. Hit was a-goin' for to carry me horf, sir."

"Stuff and nonsense," snapped Bradley. "Did you get a good look at it?"

Tippet said that he did—a much better look than he wanted. The thing had almost clutched him, and he had looked straight into its eyes—"dead heyes in a dead face," he had described them.

"Wot was it after bein', do you think?" inquired Brady.

"Hit was Death," moaned Tippet, shuddering, and again a pall of gloom fell upon the little party.

The following day Tippet walked as one in a trance. He never spoke except in reply to a direct question, which more often than not had to be repeated before it could attract his attention. He insisted that he was already a dead man, for if the thing didn't come for him during the day he would never live through another night of agonized apprehension, waiting for the frightful end that he was positive was in store for him. "I'll see to that," he said, and they all knew that Tippet meant to take his own life before darkness set in.

Bradley tried to reason with him, in his short, crisp way, but soon saw the futility of it; nor could he take the man's weapons from him without subjecting him to almost certain death from any of the numberless dangers that beset their way.

The entire party was moody and glum. There was none of the bantering that had marked their intercourse before, even in the face of blighting hardships and hideous danger. This was a new menace that threatened them, something that they couldn't explain; and so, naturally, it aroused within them superstitious fear which Tippet's attitude only tended to augment. To add further to their gloom, their way led through a dense forest, where, on account of the underbrush, it was difficult to make even a mile an hour. Constant watchfulness was required to avoid the many snakes of various degrees of repulsiveness and enormity that infested the wood; and the only ray of hope they had to cling to was that the forest would, like the majority of Caspakian forests, prove to be of inconsiderable extent.

Bradley was in the lead when he came suddenly upon a grotesque creature of Titanic proportions. Crouching among the trees, which here commenced to thin out slightly, Bradley saw what appeared to be an enormous dragon devouring the carcass of a mammoth. From frightful jaws to the tip of its long tail it was fully forty feet in length. Its body was covered with plates of thick skin which bore a striking resemblance to armor-plate. The creature saw Bradley almost at the same instant that he saw it and reared up on its enormous hind legs until its head towered a full twenty-five feet above the ground. From the cavernous jaws issued a hissing sound of a volume equal to the escaping steam from the safety-valves of half a dozen locomotives, and then the creature came for the man.

"Scatter!" shouted Bradley to those behind him; and all but Tippet heeded the warning. The man stood as though dazed, and when Bradley saw the other's danger, he too stopped and wheeling about sent a bullet into the massive body forcing its way

through the trees toward him. The shot struck the creature in the belly where there was no protecting armor, eliciting a new note which rose in a shrill whistle and ended in a wail. It was then that Tippet appeared to come out of his trance, for with a cry of terror he turned and fled to the left. Bradley, seeing that he had as good an opportunity as the others to escape, now turned his attention to extricating himself; and as the woods seemed dense on the right, he ran in that direction, hoping that the close-set boles would prevent pursuit on the part of the great reptile. The dragon paid no further attention to him, however, for Tippet's sudden break for liberty had attracted its attention; and after Tippet it went, bowling over small trees, uprooting underbrush and leaving a wake behind it like that of a small tornado.

Bradley, the moment he had discovered the thing was pursuing Tippet, had followed it. He was afraid to fire for fear of hitting the man, and so it was that he came upon them at the very moment that the monster lunged its great weight forward upon the doomed man. The sharp, three-toed talons of the forelimbs seized poor Tippet, and Bradley saw the unfortunate fellow lifted high above the ground as the creature again reared up on its hind legs, immediately transferring Tippet's body to its gaping jaws, which closed with a sickening, crunching sound as Tippet's bones cracked beneath the great teeth.

The Titan Slain

BRADLEY half raised his rifle to fire again and then lowered it with a shake of his head. Tippet was beyond succor—why waste a bullet that Caspak could never replace? If he could now escape the further notice of the monster it would be a wiser act than to throw his life away in futile revenge. He saw that the reptile was not looking in his direction, and so he slipped noiselessly behind the bole of a large tree and thence quietly faded away in the direction he believed the others to have taken. At what he considered a safe distance he halted and looked back. Half hidden by the intervening trees he still could see the huge head and the massive jaws from which protruded the limp legs of the dead man. Then, as though struck by the hammer of Thor, the creature collapsed and crumpled to the ground. Bradley's single bullet, penetrating the body through the soft skin of the belly, had slain the Titan.

A few minutes later, Bradley found the others of the party. The four returned cautiously to the spot where the creature lay and after convincing themselves that it was quite dead, came close to it. It was an arduous and gruesome job extricating Tippet's mangled remains from the powerful jaws, the men working for the most part silently.

"It was the work of the banshee all right," muttered Brady. "It warned poor Tippet, it did."

"Hit killed him, that's wot hit 'did, hand hit'll kill some more of us," said James, his lower lip trembling.

"If it was a ghost," interjected Sinclair, "and I don't say as it was; but if it was, why, it could take on any form it wanted to. It might have turned itself into this thing, which ain't no natural thing at all, just to get poor Tippet. If it had of been a lion or something else humanlike it wouldn't look so strange; but this here thing ain't humanlike. There ain't no such thing an' never was."

"Bullets don't kill ghosts," said Bradley, "so this couldn't have been a ghost. Furthermore, there are no such things. I've been trying to place this creature. Just succeeded. It's a tyrannosaurus. Saw picture of skeleton in magazine. There's one in New York Natural History Museum. Seems to me it said it was found in place called Hell Creek, somewhere in western North America. Supposed to have lived about six million years ago."

"Hell Creek's in Montana," said Sinclair. "I used to punch cows in Wyoming, an' I've heard of Hell Creek. Do you s'pose that there thing's six million years old?" His tone was skeptical.

"No," replied Bradley; "but it would indicate that the island of Caprona has stood almost without change for more than six million years."

The conversation and Bradley's assurance that the creature was not of supernatural origin helped to raise a trifle the spirits of the men; and then came another diversion in the form of ravenous meat-eaters attracted to the spot by their uncanny sense of smell which had apprised them of the presence of flesh, killed and ready for the eating.

It was a constant battle while they dug a grave and consigned all that was mortal of John Tippet to his last, lonely resting-place. Nor would they leave then; but remained to fashion a rude headstone from a crumbling out-cropping of sandstone and to gather a mass of the gorgeous flowers growing in such great profusion around them and heap the new-made grave with bright blooms. Upon the headstone Sinclair scratched in rude characters the words:

HERE LIES JOHN TIPPET
ENGLISHMAN
KILLED BY TYRANNOSAURUS
10 SEPT. A. D. 1916
R. I. P.

and Bradley repeated a short prayer before they left their comrade forever.

For three days the party marched due south through forests and meadow-land and great park-like areas where countless herbivorous animals grazed—deer and antelope and bos and the little *ecca*, the smallest species of Caspakian horse, about the size of a rabbit. There were other horses, too; but all were small, the largest being not above eight hands in height. Preying continually upon the herbivora were the meat-eaters, large and small—wolves, hyaenadons, panthers, lions, tigers, and bear as well as several large and ferocious species of reptilian life.

On September twelfth the party scaled a line of sandstone cliffs which crossed their route toward the south; but they crossed them only after an encounter with the tribe that inhabited the numerous caves which pitted the face of the escarpment. That night they camped upon a rocky plateau which was sparsely wooded with jarrah, and here once again they were visited by the weird, nocturnal apparition that had already filled them with a nameless terror.

The Effect of Caspak Horrors

AS on the night of September ninth, the first warning came from the sentinel standing guard over his sleeping companions. A terror-stricken cry punctuated by the crack of a rifle brought Bradley, Sinclair and Brady to their feet in time to see James, with clubbed rifle, battling with a white-robed figure that hovered on wide-spread wings on a level with the Englishman's head. As they ran, shouting, forward, it was obvious to them that the weird and terrible apparition was attempting to seize James; but when it saw the others coming to his rescue, it desisted, flapping rapidly upward and away, its long, ragged wings giving forth the peculiarly dismal notes which always characterized the sound of its flying.

Bradley fired at the vanishing menacer of their peace and safety; but whether he scored a hit or not, none could tell, though, following the shot, there was wafted back to them the same piercing wail that had on other occasions frozen their marrow.

Then they turned toward James, who lay face downward upon the ground, trembling as with ague. For a time he could not even speak, but at last regained sufficient composure to tell them how the thing must have swooped silently upon him from above and behind as the first premonition of danger he had received was when the long, claw-like fingers had clutched him beneath either arm. In the mêlée his rifle had been discharged and he had broken away at the same instant and turned to defend himself with the butt. The rest they had seen.

From that instant James was an absolutely broken man. He maintained with shaking lips that his doom was sealed, that the thing had marked him for its own, and that he was as good as dead, nor could any amount of argument or raillery convince him to the contrary. He had seen Tippet marked and claimed, and now he had been marked. Nor were his constant reiterations of this belief without effect upon the rest of the party. Even Bradley felt depressed, though for the sake of the others he managed to hide it beneath a show of confidence he was far from feeling.

And on the following day William James was killed by a saber-tooth tiger—September 13, 1916. Beneath a jarrah tree on the stony plateau on the northern edge of the Sto-lu country in the land that Time forgot, he lies in a lonely grave marked by a rough headstone.

Southward from his grave marched three grim and silent men. To the best of Bradley's reckoning they were some twenty-five miles north of Fort Dinosaur, and that they might reach the fort on the following day, they plodded on until darkness overtook them. With comparative safety fifteen miles away, they made camp at last; but there was no singing now and no joking. In the bottom of his heart each prayed that they might come safely through just this night, for they knew that during the morrow they would make the final stretch, yet the nerves of each were taut with strained anticipation of what gruesome thing might flap down upon them from the black sky, marking another for its own. Who would be the next?

As was their custom, they took turns at guard, each doing two hours and then arousing the next man. Brady had gone on from eight to ten, followed by Sinclair from ten to twelve, then Bradley had been awakened. Brady would stand the last guard from two to four, as they had determined to start the moment that it became light enough to insure comparative safety upon the trail.

The snapping of a twig aroused Brady out of a dead sleep, and as he opened his eyes, he saw that it was broad daylight and that at twenty paces from him stood a huge lion. As the man sprang to his feet, his rifle ready in his hand, Sinclair awoke and took in the scene in a single swift glance. The fire was out and Bradley was nowhere in sight. For a long moment the lion and the men eyed one another. The latter had no mind to fire if the beast minded its own affairs—they were only too glad to let it go its way if it would; but the lion was of a different mind.

Suddenly the long tail snapped stiffly erect, and as though it had been attached to two trigger fingers the two rifles spoke in unison, for both men knew this signal only too well—the immediate forerunner of a deadly charge. As the brute's head had been raised, his spine had not been visible; and so they did what they had learned by long experience was best to do. Each covered a front leg, and as the tail snapped aloft, fired. With a hideous roar the mighty flesh-eater lurched forward to the ground with both front legs broken. It was an easy accomplishment in the instant before the beast charged—after, it would have been well-nigh an impossible feat. Brady stepped close in and finished him with a shot in the base of the brain lest his terrific roaring should attract his mate or others of their kind.

Then the two men turned and looked at one another. "Where is Lieutenant Bradley?" asked Sinclair. They walked to the fire. Only a few smoking embers remained. A few feet away lay Bradley's rifle. There was no evidence of a struggle. The two men circled about the camp twice and on the last lap Brady stooped and picked up an object which had lain about ten yards beyond the fire—it was Bradley's cap. Again the two looked questioningly at one another, and then, simultaneously, both pairs of eyes swung upward and searched the sky. A moment later Brady was examining the ground about the spot where Bradley's cap had lain. It was one of those little barren, sandy stretches that they had found only upon this stony plateau. Brady's own footsteps showed as plainly as black ink upon white paper; but his was the only foot that had marred the smooth, windswept surface—there was no sign that Bradley had crossed the spot *upon the surface of the ground*, and yet his cap lay well toward the center of it.

Fort Dinosaur Again

BREAKFASTLESS and with shaken nerves the two survivors plunged madly into the long day's march. Both were strong, courageous, resourceful men; but each had reached the limit of human nerve endurance and each felt that he would rather die than spend another night in the hideous open of that frightful land. Vivid in the mind of each

was a picture of Bradley's end, for though neither had witnessed the tragedy, both could imagine almost precisely what had occurred. They did not discuss it—they did not even mention it—yet all day long the thing was uppermost in the mind of each and mingled with it a similar picture with himself as victim should they fail to make Fort Dinosaur before dark.

And so they plunged forward at reckless speed, their clothes, their hands, their faces torn by the retarding underbrush that reached forth to hinder them. Again and again they fell but it is to their credit that the one always waited and helped the other and that into the mind of neither entered a thought or the temptation to desert his companion —they would reach the fort together if both survived, or neither would reach it.

They encountered the usual number of savage beasts and reptiles; but they met them with a courageous recklessness born of desperation, and by virtue of the very madness of the chances they took, they came through unscathed and with the minimum of delay.

Shortly after noon they reached the end of the plateau. Before them was a drop of two hundred feet to the valley beneath. To the left, in the distance, they could see the waters of the great inland sea that covers a considerable portion of the area of the crater island of Caprona and at a little lesser distance to the south of the cliffs they saw a thin spiral of smoke arising above the tree-tops.

The landscape was familiar—each recognized it immediately and knew that that smoky column marked the spot where Dinosaur had stood. Was the fort still there, or did the smoke arise from the smoldering embers of the building they had helped to fashion for the housing of their party? Who could say!

Thirty precious minutes that seemed as many hours to the impatient men were consumed in locating a precarious way from the summit to the base of the cliffs that bounded the plateau upon the south, and then once again they struck off upon level ground toward their goal. The closer they approached the fort the greater became their apprehension that all would not be well. They pictured the barracks deserted or the small company massacred and the buildings in ashes. It was almost in a frenzy of fear that they broke through the final fringe of jungle and stood at last upon the verge of the open meadow a half-mile from Fort Dinosaur.

"Lord!" ejaculated Sinclair. "They are still there!" And he fell to his knees, sobbing.

Brady trembled like a leaf as he crossed himself and gave silent thanks, for there before them stood the sturdy ramparts of Dinosaur and from inside the inclosure rose a thin spiral of smoke that marked the location of the cook-house. All was well, then, and their comrades were preparing the evening meal!

Across the clearing they raced as though they had not already covered in a single day a trackless, primeval country that might easily have required two days by fresh and untired men. Within hailing distance they set up such a loud shouting that presently heads appeared above the top of the parapet and soon answering shouts were rising from within Fort Dinosaur. A moment later three men issued from the inclosure and came forward to meet the survivors and listen to the hurried story of the eleven eventful days since they had set out upon their expedition to the barrier cliffs. They heard of the deaths of Tippet and James and of the disappearance of Lieutenant Bradley, and a new terror settled upon Dinosaur.

Olson, the Irish engineer, with Whitely and Wilson constituted the remnants of Dinosaur's defenders, and to Brady and Sinclair they narrated the salient events that had transpired since Bradley and his party had marched away on September 4th. They told them of the infamous act of Baron Friedrich von Schoenvorts and his German crew who had stolen the *U-33*, breaking their parole, and steaming away toward the subterranean opening through the barrier cliffs that carried the waters of the inland sea into the open Pacific beyond; and of the cowardly shelling of the fort.

They told of the disappearance of Miss La Rue in the night of September 11th, and of the departure of Bowen Tyler in search of her, accompanied only by his Airedale, Nobs. Thus of the original party of eleven Allies and nine Germans that had constituted the company of the *U-33* when she left English waters after her capture by the crew of the English tug there were but five now to be accounted for at Fort Dinosaur. Benson, Tippet, James, and one of the Germans were known to be dead. It was assumed that Bradley, Tyler and the girl had already succumbed to some of the savage denizens of Caspak, while the fate of the Germans was equally unknown, though it might readily be believed that they had made good their escape. They had had ample time to provision the ship and the refining of the crude oil they had discovered north of the fort could have insured them an ample supply to carry them back to Germany.

CHAPTER II

WHEN Bradley went on guard at midnight, September 14th, his thoughts were largely occupied with rejoicing that the night was almost spent without serious mishap and that the morrow would doubtless see them all safely returned to Fort Dinosaur. The hopefulness of his mood was tinged with sorrow by recollection of the two members of his party who lay back there in the savage wilderness and for whom there would never again be a homecoming.

No premonition of impending ill cast gloom over his anticipations for the coming day, for Bradley was a man who, while taking every precaution against possible danger, permitted no gloomy forebodings to weigh down his spirit. When danger threatened, he was prepared; but he was not forever courting disaster, and so it was that when, about one o'clock in the morning of the fifteenth, he heard the dismal flapping of giant wings overhead, he was neither surprised nor frightened but fully prepared for an attack he had known might reasonably be expected.

The sound seemed to come from the south, and presently, low above the trees in that direction, the man made out a dim, shadowy form circling slowly

about. Bradley was a brave man, yet so keen was the feeling of revulsion engendered by the sight and sound of that grim, uncanny shape that he distinctly felt the goose flesh rise over the surface of his body; and it was with difficulty that he refrained from following an instinctive urge to fire upon the nocturnal intruder. Better, far better would it have been had he given in to the insistent demand of his subconscious mentor; but his almost fanatical obsession to save ammunition proved now his undoing, for while his attention was riveted upon the thing circling before him and while his ears were filled with the beating of its wings, there swooped silently out of the black night behind him another weird and ghostly shape. With its huge wings partly closed for the dive and its white robe fluttering in its wake, the apparition swooped down upon the Englishman.

So great was the force of the impact when the thing struck Bradley between the shoulders that the man was half stunned. His rifle flew from his grasp; he felt clawlike talons of great strength seize him beneath his arms and sweep him off his feet; and then the thing rose swiftly with him, so swiftly that his cap was blown from his head by the rush of air as he was borne rapidly upward into the inky sky and the cry of warning to his companions was forced back into his lungs.

The creature wheeled immediately toward the east and was at once joined by its fellow, who circled them once and then fell in behind them. Bradley now realized the strategy that the pair had used to capture him and at once concluded that he was in the power of reasoning beings closely related to the human race if not actually of it.

Past experience suggested that the great wings were a part of some ingenious mechanical device, for the limitations of the human mind, which is always loath to accept aught beyond its own little experience, would not permit him to entertain the idea that the creatures might be naturally winged and at the same time of human origin. From his position, Bradley could not see the wings of his captor, nor in the darkness had he been able to examine those of the second creature closely when it circled before him. He listened for the purr of a motor or some other telltale sound that would prove the correctness of his theory. However, he was rewarded with nothing more than the constant *flap-flap.*

The Captive of a Great Human Bird

PRESENTLY, far below and ahead, he saw the waters of the inland sea, and a moment later he was borne over them. Then his captor did that which proved beyond doubt to Bradley that he was in the hands of human beings who had devised an almost perfect scheme of duplicating, mechanically, the wings of a bird—the thing spoke to its companion and in a language that Bradley partially understood, since he recognized words that he had learned from the savage races of Caspak. From this he judged that they were human, and being human, he knew that they could have no natural wings—for who had ever seen a human being so adorned! Therefore their wings must be mechanical. Thus Bradley reasoned—thus most of us reason; not by what might be possible; but by what has fallen within the range of our experience.

What he heard them say was to the effect, that having covered half the distance, the burden would now be transferred from one to the other. Bradley wondered how the exchange was to be accomplished. He knew that those giant wings would not permit the creatures to approach one another closely enough to effect the transfer in this manner; but he was soon to discover that they had other means of doing it.

He felt the thing that carried him rise to a greater altitude, and below he glimpsed momentarily the second white-robed figure; then the creature above sounded a low call, it was answered from below, and instantly Bradley felt the clutching talons release him; gasping for breath, he hurtled downward through space.

For a terrifying instant, pregnant with horror, Bradley fell; then something swooped for him from behind, another pair of talons clutched him beneath the arms, his downward rush was checked within another hundred feet, and close to the surface of the sea he was again borne upward. As a hawk dives for a songbird on the wing, so this great, human bird had dived for Bradley. It was a harrowing experience, but soon over, and once again the captive was being carried swiftly toward the east, though to what fate he could not even guess.

It was immediately following his transfer in mid-air that Bradley made out the shadowy form of a large island far ahead, and not long after, he realized that this must be the intended destination of his captors. Nor was he mistaken. Three quarters of an hour from the time of his seizure his captors dropped gently to earth in the strangest city that human eye had ever rested upon. Just a brief glimpse of his immediate surroundings was vouchsafed Bradley before he was whisked into the interior of one of the buildings; but in that momentary glance he saw strange piles of stone and wood and mud fashioned into buildings of all conceivable sizes and shapes, sometimes piled high on top of one another, sometimes standing alone in an open courtway, but usually crowded and jammed together, so that there were no streets or alleys between them other than a few which ended almost as soon as they began. The principal doorways appeared to be in the roofs, and it was through one of these that Bradley was inducted into the dark interior of a low-ceiled room. Here he was pushed roughly into a corner where he tripped over a thick mat, and there his captors left him. He heard them moving about in the darkness for a moment, and several times he saw their large luminous eyes glowing in the dark. Finally these disappeared and silence reigned, broken only by the breathing of the creatures which indicated to the Englishman that they were sleeping somewhere in the same apartment.

It was now evident that the mat upon the floor was intended for sleeping purposes and that the rough shove that had sent him to it had been a rude invitation to repose. After taking stock of himself and finding that he still had his pistol and ammunition, some matches, a little tobacco, a can-

teen full of water and a razor, Bradley made himself comfortable upon the mat and was soon asleep, knowing that an attempted escape in the darkness without knowledge of his surroundings would be predoomed to failure.

When he awoke, it was broad daylight, and the sight that met his eyes made him rub them again and again to assure himself that they were really open and that he was not dreaming. A broad shaft of morning light poured through the open doorway in the ceiling of the room which was about thirty feet square, or roughly square, being irregular in shape, one side curving outward, another being indented by what might have been the corner of another building jutting into it, another alcoved by three sides of an octagon, while the fourth was serpentine in contour. Two windows let in more daylight, while two doors evidently gave ingress to other rooms. The walls were partially ceiled with thin strips of wood, nicely fitted and finished, partially plastered and the rest covered with a fine, woven cloth. Figures of reptiles and beasts were painted without regard to any uniform scheme here and there upon the walls. A striking feature of the decorations consisted of several engaged columns set in the walls at no regular intervals, the capitals of each supporting a human skull, the cranium of which touched the ceiling, as though the latter was supported by these grim reminders either of departed relatives or of some hideous tribal rite—Bradley could not but wonder which.

Yet it was none of these things that filled him with greatest wonder—no, it was the figures of the two creatures that had captured him and brought him hither. At one end of the room a stout pole about two inches in diameter ran horizontally from wall to wall some six or seven feet from the floor, its ends securely set in two of the columns. Hanging by their knees from this perch, their heads downward and their bodies wrapped in their huge wings, slept the creatures of the night before—like two great, horrid bats they hung, asleep.

A Curious Interview with the Wieroo

AS Bradley gazed upon them in wide-eyed astonishment, he saw plainly that all his intelligence, all his acquired knowledge through years of observation and experience were set at naught by the simple evidence of the fact that stood out glaringly before his eyes—the creatures' wings were not mechanical devices but as natural appendages, growing from their shoulder-blades, as were their arms and legs. He saw, too, that except for their wings the pair bore a strong resemblance to human beings, though fashioned in a most grotesque mold.

As he sat gazing at them, one of the two awoke, separated his wings to release his arms that had been folded across his breast, placed his hands upon the floor, dropped his feet and stood erect. For a moment he stretched his great wings slowly, solemnly blinking his large, round eyes. Then his gaze fell upon Bradley. The thin lips drew back tightly against yellow teeth in a grimace that was nothing but hideous. It could not have been termed a smile, and what emotion it registered the Englishman was at a loss to guess. No expression whatever altered the steady gaze of those large, round eyes; there was no color upon the pasty, sunken cheeks. A death's head grimaced as though a man long dead raised his parchment-covered skull from an old grave.

The creature stood about the height of an average man but appeared much taller from the fact that the joints of his long wings rose fully a foot above his hairless head. The bare arms were long and sinewy, ending in strong, bony hands with clawlike fingers—almost talonlike in their suggestiveness. The white robe was separated in front, revealing skinny legs and the further fact that the thing wore but the single garment, which was of fine, woven cloth. From crown to sole the portions of the body exposed were entirely hairless, and as he noted this, Bradley also noted for the first time the cause of much of the seeming expressionlessness of the creature's countenance—it had neither eye-brows nor lashes. The ears were small and rested flat against the skull, which was noticeably round, though the face was quite flat. The creature had small feet, beautifully arched and plump, but so out of keeping with every other physical attribute it possessed as to appear ridiculous.

After eyeing Bradley for a moment the thing approached him. "Where from?" it asked.

"England," replied Bradley, as briefly.

"Where is England and what?" pursued the questioner.

"It is a country far from here," answered the Englishman.

"Are your people *cor-sva-jo* or *cos-ata-lu*?"

"I do not understand you," said Bradley; "and now suppose you answer a few questions. Who are you? What country is this? Why did you bring me here?"

Again the sepulchral grimace. "We are Wieroos. Luata is our father. Caspak is ours. This, our country, is called Oo-oh. We brought you here for (literally) Him Who Speaks for Luata to gaze upon and question. He would know from whence you came and why; but principally if you be *cos-ata-lu*."

"And if I am not *cos*—whatever you call the bloomin' beast—what of it?"

The Wieroo raised his wings in a very human shrug and waved his bony claws toward the human skulls supporting the ceiling. His gesture was eloquent; but he embellished it by remarking, "And possibly if you are."

"I'm hungry," snapped Bradley.

The Wieroo motioned him to one of the doors which he threw open, permitting Bradley to pass out upon another roof on a level lower than that upon which they had landed earlier in the morning. By daylight the city appeared even more remarkable than in the moonlight, though less weird and unreal. The houses of all shapes and sizes were piled about as a child might pile blocks of various forms and colors. He saw now that there were what might be called streets or alleys, but they ran in baffling turns and twists, nor ever reached a destination, always ending in a dead wall where some Wieroo had built a house across them.

The City and the Skulls

UPON each house was a slender column supporting a human skull. Sometimes they were

at one corner of the roof, sometimes at another, or again they rose from the center or near the center, and the columns were of varying heights, from that of a man to those which rose twenty feet above their roofs. The skulls were, as a rule, painted—blue or white, or in combinations of both colors. The most effective were painted blue with the teeth white and the eye-sockets rimmed with white.

There were other skulls—thousands of them—tens, hundreds of thousands. They rimmed the eaves of every house. They were set in the plaster of the outer walls and at no great distance from where Bradley stood rose a round tower built entirely of human skulls. And the city extended in every direction as far as the Englishman could see.

All about him Wieroos were moving across the roofs or winging through the air. The sad sound of their flapping wings rose and fell like a solemn dirge. Most of them were appareled all in white like his captors; but others had markings of red or blue or yellow slashed across the front of their robes.

His guide pointed toward a doorway in an alley below them. "Go there and eat," he commanded, "and then come back. You cannot escape. If any question you, say that you belong to Fosh-bal-soj. There is the way." And this time he pointed to the top of a ladder which protruded above the eaves of the roof near-by. Then he turned and reentered the house.

Bradley looked about him. No, he could not escape—that seemed evident. The city appeared interminable, and beyond the city, if not a savage wilderness filled with wild beasts, there was the broad inland sea infested with horrid monsters. No wonder his captor felt safe in turning him loose in Oo-oh—he wondered if that was the name of the country or the city and if there were other cities like this upon the island.

Slowly he descended the ladder to the seemingly deserted alley which was paved with what appeared to be large, round cobblestones. He looked again at the smooth, worn pavement, and a rueful grin crossed his features—the alley was paved with skulls. "The City of Human Skulls," mused Bradley. "They must have been collectin' 'em since Adam," he thought, and then he crossed and entered the building through the doorway that had been pointed out to him.

Inside he found a large room in which were many Wieroos seated before pedestals the tops of which were hollowed out so that they resembled the ordinary bird drinking- and bathing-fonts so commonly seen on suburban lawns. A seat protruded from each of the four sides of the pedestals—just a flat board with a support running from its outer end diagonally to the base of the pedestal.

As Bradley entered, some of the Wieroos espied him, and a dismal wail arose. Whether it was a greeting or a threat, Bradley did not know. Suddenly from a dark alcove another Wieroo rushed out toward him. "Who are you?" he cried. "What do you want?"

"Fosh-bal-soj sent me here to eat," replied Bradley.

"Do you belong to Fosh-bal-soj?" asked the other.

"That appears to be what he thinks," answered the Engishman.

"Are you *cos-ata-lu?*" demanded the Wieroo.

"Give me something to eat or I'll be all of that," replied Bradley.

The Wieroo looked puzzled. "Sit here, *jaal-lu,*" he snapped, and Bradley sat down unconscious of the fact that he had been insulted by being called a hyena-man, an appellation of contempt in Caspak.

A Talk with a Wieroo

THE Wieroo had seated him at a pedestal by himself, and as he sat waiting for what was next to transpire, he looked about him at the Wieroos in his immediate vicinity. He saw that in each font was a quantity of food, and that each Wieroo was armed with a wooden skewer, sharpened at one end, with which they carried solid portions of food to their mouths. At the other end of the skewer was fastened a small clam-shell. This was used to scoop up the smaller and softer portions of the repast into which all four of the occupants of each table dipped impartially. The Wieroos leaned far over their food, scooping it up rapidly and with much noise, and so great was their haste that a part of each mouthful always fell back into the common dish; and when they choked, by reason of the rapidity with which they attempted to bolt their food, they often lost it all. Bradley was glad that he had a pedestal all to himself.

Soon the keeper of the place returned with a wooden bowl filled with food. This he dumped into Bradley's "trough," as he already thought of it. The Englishman was glad that he could not see into the dark alcove or know what were all the ingredients that constituted the mess before him, for he was very hungry.

After the first mouthful he cared even less to investigate the antecedents of the dish, for he found it peculiarly palatable. It seemed to consist of a combination of meat, fruits, vegetables, small fish and other undistinguishable articles of food all seasoned to produce a gastronomic effect that was at once baffling and delicious.

When he had finished, his trough was empty, and then he commenced to wonder who was to settle for his meal. As he waited for the proprietor to return, he fell to examining the dish from which he had eaten and the pedestal upon which it rested. The font was of stone worn smooth by long-continued use, the four outer edges hollowed and polished by the contact of the countless Wieroo bodies that had leaned against them for how long a period of time Bradley could not even guess. Everything about the place carried the impression of hoary age. The carved pedestals were black with use, the wooden seats were worn hollow, the floor of stone slabs was polished by the contact of possibly millions of naked feet and worn away in the aisles between the pedestals so that the latter rested upon little mounds of stone several inches above the general level of the floor.

Finally, seeing that no one came to collect, Bradley arose and started for the doorway. He had covered half the distance when he heard the voice of mine host calling him. "Come back, *jaal-lu,*" screamed the Wieroo; and Bradley did as he was

bid. As he approached the creature, which stood now behind a large, flat-topped pedestal beside the alcove, he saw lying upon the smooth surface something that almost elicited a gasp of astonishment from him—a simple, common thing it was, or would have been almost anywhere in the world but Caspak—a square bit of paper!

And on it, in a fine hand, written compactly, were many strange hieroglyphics! These remarkable creatures, then, had a written as well as a spoken language and besides the art of weaving cloth, possessed that of paper-making. Could it be that such grotesque beings represented the highest culture of the human race within the boundaries of Caspak? Had natural selection produced during the countless ages of Caspakian life a winged monstrosity that represented the earthly pinnacle of man's evolution?

Bradley had noted something of the obvious indications of a gradual evolution from ape to spearman as exemplified by the several overlapping races of Alalus, club-men and hatchet-men that formed the connecting links between the two extremes with which he had come in contact. He had heard of the Kro-lus and the Galus—reputed to be still higher in the plane of evolution—and now he had indisputable evidence of a race possessing refinements of civilization eons in advance of the spear-men. The conjectures awakened by even a momentary consideration of the possibilities involved became at once as wildly bizarre as the insane imaginings of a drug addict.

As these thoughts flashed through his mind, the Wieroo held out a pen of bone fixed to a wooden holder and at the same time made a sign that Bradley was to write upon the paper. It was difficult to judge from the expressionless features of the Wieroo what was passing in the creature's mind; but Bradley could not but feel that the thing cast a supercilious glance upon him as much as to say, "Of course, you do not know how to write, you poor, low creature; but you can make your mark."

Strange Adventures of the Captive

BRADLEY seized the pen and in a clear, bold hand wrote: "John Bradley, England." The Wieroo showed evidences of consternation as it seized the piece of paper and examined the writing with every mark of incredulity and surprise. Of course, it could make nothing of the strange characters; but it evidently accepted them as proof that Bradley possessed knowledge of a written language of his own, for following the Englishman's entry it made a few characters of its own.

"You will come here again just before Lua hides his face behind the great cliff," announced the creature, "unless before that you are summoned by Him Who Speaks for Luata, in which case you will not have to eat any more."

"Reassuring cuss," thought Bradley as he turned and left the building.

Outside were several of the Wieroos that had been eating at the pedestals within. They immediately surrounded him, asking all sorts of questions, plucking at his garments, his ammunition-belt and his pistol. Their demeanor was entirely different from what it had been within the eating-place and Bradley was to learn that a house of food was sanctuary for him, since the stern laws of the Wieroos forbade altercations within such walls. Now they were rough and threatening, as with wings half spread they hovered about him in menacing attitudes, barring his way to the ladder leading to the roof from whence he had descended; but the Englishman was not one to brook interference for long. He attempted at first to push his way past them, and then when one seized his arm and jerked him roughly back, Bradley swung upon the creature and with a heavy blow to the jaw felled it.

Instantly pandemonium reigned. Loud wails arose, great wings opened and closed with a loud, beating noise and many clawlike hands reached forth to clutch him. Bradley struck to right and left. He dared not use his pistol for fear that once they discovered its power he would be overcome by weight of numbers and relieved of possession of what he considered his trump card, to be reserved until the last moment that it might be used to aid in his escape, for already the Englishman was planning, though almost hopelessly, such an attempt.

A few blows convinced Bradley that the Wieroos were arrant cowards and that they bore no weapons, for after two or three had fallen beneath his fists the others formed a circle about him, but at a safe distance, and contented themselves with threatening and blustering, while those whom he had felled lay upon the pavement without trying to arise, the while they moaned and wailed in lugubrious chorus.

Again Bradley strode toward the ladder, and this time the circle parted before him; but no sooner had he ascended a few rungs than he was seized by one foot and an effort made to drag him down. With a quick backward glance the Englishman, clinging firmly to the ladder with both hands, drew up his free foot and with all the strength of a powerful leg planted a heavy shoe squarely in the flat face of the Wieroo that held him. Shrieking horribly, the creature clapped both hands to its face and sank to the ground while Bradley clambered quickly the remaining distance to the roof, though no sooner did he reach the top of the ladder than a great flapping of wings beneath him warned him that the Wieroos were rising after him. A moment later they swarmed about his head as he ran for the apartment in which he had spent the early hours of the morning after his arrival.

It was but a short distance from the top of the ladder to the doorway, and Bradley had almost reached his goal when the door flew open and Fosh-bal-soj stepped out. Immediately the pursuing Wieroos demanded punishment of the *jaal-lu* who had so grievously maltreated them. Fosh-bal-soj listened to their complaints and then with a sudden sweep of his right hand seized Bradley by the scruff of the neck and hurled him sprawling through the doorway upon the floor of the chamber.

So sudden was the assault and so surprising the strength of the Wieroo that the Englishman was taken completely off his guard. When he arose, the door was closed, and Fosh-bal-soj was standing over him, his hideous face contorted into an expression of rage and hatred.

"Hyena, snake, lizard!" he screamed. "You

would dare lay your low, vile, profaning hands upon even the lowliest of the Wieroos—the sacred chosen of Luata!"

Bradley was mad, and so he spoke in a very low, calm voice while a half-smile played across his lips; but his cold, gray eyes were unsmiling.

Fighting with the Wieroo

"WHAT you did to me just now," he said, "—I am going to kill you for that," and even as he spoke, he launched himself at the throat of Fosh-bal-soj. The other Wieroo that had been asleep when Bradley left the chamber had departed, and the two were alone. Fosh-bal-soj displayed little of the cowardice of those that had attacked Bradley in the alleyway; but that may have been because he had so slight opportunity, for Bradley had him by the throat before he could utter a cry and with his right hand struck him heavily and repeatedly upon his face and over his heart—ugly, smashing, short-arm jabs of the sort that take the fight out of a man in quick time.

But Fosh-bal-soj was of no mind to die passively. He clawed and struck at Bradley while with his great wings he attempted to shield himself from the merciless rain of blows, at the same time searching for a hold upon his antagonist's throat. Presently he succeeded in tripping the Englishman, and together the two fell heavily to the floor, Bradley underneath, and at the same instant the Wieroo fastened his long talons about the other's windpipe.

Fosh-bal-soj was possessed of enormous strength and he was fighting for his life. The Englishman soon realized that the battle was going against him. Already his lungs were pounding painfully for air as he reached for his pistol. It was with difficulty that he drew it from its holster, and even then, with death staring him in the face, he thought of his precious ammunition. "Can't waste it," he thought; and slipping his fingers to the barrel he raised the weapon and struck Fosh-bal-soj a terrific blow between the eyes. Instantly the clawlike fingers released their hold, and the creature sank limply to the floor beside Bradley, who lay for several minutes gasping painfully in an effort to regain his breath.

When he was able, he rose and leaned close over the Wieroo, lying silent and motionless, his wings drooping limply and his great, round eyes staring blankly toward the ceiling. A brief examination convinced Bradley that the thing was dead, and with the conviction came an overwhelming sense of the dangers which must now confront him; but how was he to escape?

His first thought was to find some means for concealing the evidence of his deed and then to make a bold effort to escape. Stepping to the second door he pushed it gently open and peered in upon what seemed to be a store room. In it was a litter of cloth such as the Wieroos' robes were fashioned from, a number of chests painted blue and white, with white hieroglyphics painted in bold strokes upon the blue and blue hieroglyphics upon the white. In one corner was a pile of human skulls reaching almost to the ceiling and in another a stack of dried Wieroo wings. The chamber was as irregularly shaped as the other and had but a single window and a second door at the further end, but was without the exit through the roof and, most important of all, there was no creature of any sort in it.

As quickly as possible Bradley dragged the dead Wieroo through the doorway and closed the door; then he looked about for a place to conceal the corpse. One of the chests was large enough to hold the body if the knees were bent well up, and with this idea in view Bradley approached the chest to open it. The lid was made in two pieces, each being hinged at an opposite end of the chest and joining nicely where they met in the center of the chest, making a snug, well-fitting joint. There was no lock. Bradley raised one half the cover and looked in. With a smothered "By Jove!" he bent closer to examine the contents—the chest was about half filled with an assortment of golden trinkets. There were what appeared to be bracelets, anklets and brooches of virgin gold.

Realizing that there was no room in the chest for the body of the Wieroo, Bradley turned to seek another means of concealing the evidence of his crime. There was a space between the chests and the wall, and into this he forced the corpse, piling the discarded robes upon it until it was entirely hidden from sight; but now how was he to make good his escape in the bright glare of that early Spring day?

He walked to the door at the far end of the apartment and cautiously opened it an inch. Before him and about two feet away was the blank wall of another building. Bradley opened the door a little farther and looked in both directions. There was no one in sight to the left over a considerable expanse of roof-top, and to the right another building shut off his line of vision at about twenty feet. Slipping out, he turned to the right and in a few steps found a narrow passageway between two buildings. Turning into this he passed about half its length when he saw a Wieroo appear at the opposite end and halt. The creature was not looking down the passageway; but at any moment it might turn its eyes toward him, when he would be immediately discovered.

A Beautiful Captive

TO Bradley's left was a triangular niche in the wall of one of the houses, and into this he dodged, thus concealing himself from the sight of the Wieroo. Beside him was a door painted a vivid yellow and constructed after the same fashion as the other Wieroo doors he had seen, being made up of countless narrow strips of wood from four to six inches in length laid on in patches of about the same width, the strips in adjacent patches never running in the same direction. The result bore some resemblance to a crazy patchwork quilt, which was heightened when, as in one of the doors he had seen, contiguous patches were painted different colors. The strips appeared to have been bound together and to the underlying framework of the door with gut or fiber and also glued, after which a thick coating of paint had been applied. One edge of the door was formed of a straight, round pole about two inches in diameter that protruded at top and bot-

tom, the projections sitting in round holes in both lintel and sill and forming the axle upon which the door swung. An eccentric disk upon the inside face of the door engaged a slot in the frame when it was desired to secure the door against intruders.

As Bradley stood flattened against the wall waiting for the Wieroo to move on, he heard the creature's wings brushing against the sides of the buildings as it made its way down the narrow passage in his direction. As the yellow door offered the only means of escape without detection, the Englishman decided to risk whatever might lie beyond it, and so, boldly pushing it in, he crossed the threshold and entered a small apartment.

As he did so, he heard a muffled ejaculation of surprise, and turning his eyes in the direction from whence the sound had come, he beheld a wide-eyed girl standing flattened against the opposite wall, an expression of incredulity upon her face. At a glance he saw that she was of no race of humans that he had come in contact with since his arrival upon Caprona—there was no trace about her form or features of any relationship to those low orders of men, nor was she appareled as they—or, rather, she did not entirely lack apparel as did most of them.

A soft hide fell from her left shoulder to just below her left hip on one side and almost to her right knee on the other, a loose girdle was about her waist, and golden ornaments such as he had seen in the blue-and-white chest encircled her arms and legs, while a golden fillet with a triangular diadem bound her heavy hair above her brows. Her skin was white as from long confinement within doors; but it was clear and fine. Her figure, but partially concealed by the soft deerskin, was all curves of symmetry and youthful grace, while her features might easily have been the envy of the most fêted of Continental beauties.

If the girl was surprised by the sudden appearance of Bradley, the latter was absolutely astounded to discover so wondrous a creature among the hideous inhabitants of the City of Human Skulls. For a moment the two looked at one another in unconcealed consternation, and then Bradley spoke, using, to the best of his poor ability, the common tongue of Caspak.

"Who are you," he asked, "and from where do you come? Do not tell me that you are a Wieroo."

"No," she replied, "I am no Wieroo." And she shuddered slightly as she pronounced the word. "I am a Galu; but who and what are you? I am sure that you are no Galu, from your garments; but you are like the Galus in other respects. I know that you are not of this frightful city, for I have been here for almost ten moons, and never have I seen a male Galu brought hither before, nor are there such as you and I, other than prisoners in the land of Oo-oh, and these are all females. Are you a prisoner, then?"

He told her briefly who and what he was, though he doubted if she understood, and from her he learned that she had been a prisoner there for many months; but for what purpose he did not then learn, as in the midst of their conversation the yellow door swung open and a Wieroo with a robe slashed with yellow entered.

At sight of Bradley the creature became furious. "Whence came this reptile?" it demanded of the girl. "How long has it been here with you?"

"It came through the doorway, just ahead of you," Bradley answered for the girl.

The Wieroo looked relieved. "It is well for the girl that this is so," it said, "for now only you will have to die." And stepping to the door the creature raised its voice in one of those uncanny, depressing wails.

The Englishman looked toward the girl. "Shall I kill it?" he asked, half drawing his pistol. "What is best to do?—I do not wish to endanger you."

Cos-ata-lo

THE Wieroo backed toward the door. "Defiler!" it screamed. "You dare threaten one of the sacred chosen of Luata!"

"Do not kill him," cried the girl, "for then there could be no hope for you. That you are here, alive, shows that they may not intend to kill you at all, and so there is a chance for you if you do not anger them; but touch him in violence and your bleached skull will top the loftiest pedestal of Oo-oh."

"And what of you?" asked Bradley.

"I am already doomed," replied the girl; "I am *cos-ata-lo*."

Cos-ata-lo. Cos-ata-lu! What did these phrases mean that they were so oft repeated by the denizens of Oo-oh? *Lu* and *lo*, Bradley knew to mean man and *woman; ata;* was employed variously to indicate life, eggs, young, reproduction and kindred subjects; *cos* was a negative; but in combination they were meaningless to the European.

"Do you mean they will kill you?" asked Bradley.

"I but wish that they would," replied the girl. "My fate is to be worse than death—in just a few nights more, with the coming of the new moon.

"Poor she-snake!" snapped the Wieroo. "You are to become sacred above all other shes. He Who Speaks for Luata has chosen you for himself. Today you go to his temple"—the Wieroo used a phrase meaning literally High Place—"where you will receive the sacred commands."

The girl shuddered and cast a sorrowful glance toward Bradley. "Ah," she sighed, "if I could but see my beloved country once again!"

The man stepped suddenly close to her side before the Wieroo could interpose and in a low voice asked her if there was no way by which he might encompass her escape. She shook her head sorrowfully. "Even if we escaped the city," she replied, "there is the big water between the island of Oo-oh and the Galu shore."

"And what is beyond the city, if we could leave it?" pursued Bradley.

"I may only guess from what I have heard since I was brought here," she answered; "but by reports and chance remarks I take it to be a beautiful land in which there are but few wild beasts and no men, for only the Wieroos live upon this island and they dwell always in cities of which there are three, this being the largest. The others are at the far end of the island, which is about three marches from end to end and at its widest point about one march."

From his own experience and from what the natives on the mainland had told him, Bradley knew that ten miles was a good day's march in Caspak,

owing to the fact that at most points it was a trackless wilderness and at all times travelers were beset by hideous beasts and reptiles that greatly impeded rapid progress.

The two had spoken rapidly but were now interrupted by the advent through the opening in the roof of several Wieroos who had come in answer to the alarm, it of the yellow slashing had uttered.

"This *jaal-lu*," cried the offended one, "has threatened me. Take its hatchet from it and make it fast where it can do no harm until He Who Speaks for Luata has said what shall be done with it. It is one of those strange creatures that Fosh-bal-soj discovered first above the Band-lu country and followed back toward the beginning. He Who Speaks for Luata sent Fosh-bal-soj to fetch him one of the creatures, and here it is. It is hoped that it may be from another world and hold the secret of the *cos-ata-lus*."

The Wieroos approached boldly to take Bradley's "hatchet" from him, their leader having indicated the pistol hanging in its holster at the Englishman's hip, but the first one went reeling backward against his fellows from a blow to the chin which Bradley followed up with a rush and the intention to clean up the room in record time; but he had reckoned without the opening in the roof. Two were down and a great wailing and moaning was arising when reinforcements appeared from above. Bradley did not see them; but the girl did, and though she cried out a warning, it came too late for him to avoid a large Wieroo who dived headforemost for him, striking him between the shoulders and bearing him to the floor. Instantly a dozen more were piling on top of him. His pistol was wrenched from its holster and he was securely pinioned down by the weight of numbers.

At a word from the Wieroo of the yellow slashing, who evidently was a person of authority, one left and presently returned with fiber ropes with which Bradley was tightly bound.

"Now bear him to the Blue Place of Seven Skulls," directed the chief Wieroo, "and one take the word of all that has passed to Him Who Speaks for Luata."

Each of the creatures raised a hand, the back against its face, as though in salute. One seized Bradley and carried him through the yellow doorway to the roof from whence it rose upon its widespread wings and flapped off across the roof-tops of Oo-oh with its heavy burden clutched in its long talons.

Below him Bradley could see the city stretching away to a distance on every hand. It was not as large as he had imagined, though he judged that it was at least three miles square. The houses were piled in indescribable heaps, sometimes to a height of a hundred feet. The streets and alleys were short and crooked and there were many areas where buildings had been wedged in so closely that no light could possibly reach the lowest tiers, the entire surface of the ground being packed solidly with them.

The colors were varied and startling, the architecture amazing. Many roofs were cup or saucer-shaped with a small hole in the center of each, as though they had been constructed to catch rain-water and conduct it to a reservoir beneath; but nearly all the others had the large opening in the top that Bradley had seen used by these flying men in lieu of doorways. At all levels were the myriad poles surmounted by grinning skulls; but the two most prominent features of the city were the round tower of human skulls that Bradley had noted earlier in the day and another and much larger edifice near the center of the city. As they approached it, Bradley saw that it was a huge building rising a hundred feet in height from the ground and that it stood alone in the center of what might have been called a plaza in some other part of the world. Its various parts, however, were set together with the same strange irregularity that marked the architecture of the city as a whole; and it was capped by an enormous saucer-shaped roof which projected far beyond the eaves, having the appearance of a colossal Chinese coolie hat, inverted.

The Wieroo bearing Bradley passed over one corner of the open space about the large building, revealing to the Englishman grass and trees and running water beneath. They passed the building and about five hundred yards beyond the creature alighted on the roof of a square, blue building surmounted by seven poles bearing seven skulls. This then, thought Bradley, is the Blue Place of Seven Skulls.

Over the opening in the roof was a grated covering, and this the Wieroo removed. The thing then tied a piece of fiber rope to one of Bradley's ankles and rolled him over the edge of the opening. All was dark below and for an instant the Englishman came as near to experiencing real terror as he had ever come in his life before. As he rolled off into the black abyss he felt the rope tighten about his ankle and an instant later he was stopped with a sudden jerk to swing pendulumlike, head downward. Then the creature lowered away until Bradley's head came in sudden and painful contact with the floor below, after which the Wieroo let loose of the rope entirely and the Englishman's body crashed to the wooden planking. He felt the free end of the rope drop upon him and heard the grating being slid into place above him.

CHAPTER III

HALF-STUNNED Bradley lay for a minute as he had fallen and then slowly and painfully wriggled into a less uncomfortable position. He could see nothing of his surroundings in the gloom about him until after a few minutes his eyes became accustomed to the dark interior when he rolled them from side to side in a survey of his prison.

He discovered himself to be in a bare room which was windowless, nor could he see any other opening than that through which he had been lowered. In one corner was a huddled mass that might have been almost anything from a bundle of rags to a dead body.

Almost immediately he had taken his bearings Bradley commenced working with his bonds. He was a man of powerful physique, and as from the first he had been imbued with a belief that the fiber ropes were too weak to hold him, he worked on with a firm conviction that sooner or later they would

part to his strainings. After a matter of five minutes he was positive that the strands about his wrists were beginning to give; but he was compelled to rest then from exhaustion.

As he lay, his eyes rested upon the bundle in the corner, and presently he could have sworn that the thing moved. With eyes straining through the gloom the man lay watching the grim and sinister thing in the corner. Perhaps his overwrought nerves were playing a sorry joke upon him. He thought of this and also that his condition of utter helplessness might still further have stimulated his imagination. He closed his eyes and sought to relax his muscles and his nerves; but when he looked again, he knew that he had not been mistaken—the thing had moved; now it lay in a slightly altered form and farther from the wall. It was nearer him.

With renewed strength Bradley strained at his bonds, his fascinated gaze still glued upon the shapeless bundle. No longer was there any doubt that it moved—he saw it rise in the center several inches and then creep closer to him. It sank and arose again—a headless, hideous, monstrous thing of menace. Its very silence rendered it the more terrible.

Bradley was a brave man; ordinarily his nerves were of steel; but to be at the mercy of some unknown and nameless horror, to be unable to defend himself—it was these things that almost unstrung him, for at best he was only human. To stand in the open, even with the odds all against him; to be able to use his fists, to put up some sort of defense, to inflict punishment upon his adversary—then he could face death with a smile. It was not death that he feared now—it was that horror of the unknown that is part of the fiber of every son of woman.

Closer and closer came the shapeless mass. Bradley lay motionless and listened. What was that he heard! Breathing? He could not be mistaken—and then from out of the bundle of rags issued a hollow groan. Bradley felt his hair rise upon his head. He struggled with the slowly parting strands that held him. The thing beside him rose up higher than before and the Englishman could have sworn that he saw a single eye peering at him from among the tumbled cloth. For a moment the bundle remained motionless—only the sound of breathing issued from it, then there broke from it a maniacal laugh.

Cold sweat stood upon Bradley's brow as he tugged for liberation. He saw the rags rise higher and higher above him until at last they tumbled upon the floor from the body of a naked man—a thin, a bony, a hideous caricature of man, that mouthed and mumbled and, wabbling upon its weak and shaking legs, crumpled to the floor again, still laughing—laughing horribly.

It crawled toward Bradley. "Food! Food!" it screamed. "There is a way out! There is a way out!"

Dragging itself to his side the creature slumped upon the Englishman's breast. "Food!" it shrilled as with its bony fingers and its teeth, it sought the man's bare throat.

"Food! There is a way out!" Bradley felt teeth upon his jugular. He turned and twisted, shaking himself free for an instant; but once more with hideous persistence the thing fastened itself upon him. The weak jaws were unable to send the dull teeth through the victim's flesh; but Bradley felt it gnawing, gnawing, gnawing, like a monstrous rat, seeking his life's blood.

The skinny arms now embraced his neck, holding the teeth to his throat against all his efforts to dislodge the thing. Weak as it was it had strength enough for this in its mad efforts to eat. Mumbling as it worked, it repeated again and again, "Food! Food! There is a way out!" until Bradley thought those two expressions alone would drive him mad.

And all but mad he was as with a final effort backed by almost maniacal strength he tore his wrists from the confining bonds and grasping the repulsive thing upon his breast hurled it halfway across the room. Panting like a spent hound Bradley worked at the thongs about his ankles while the maniac lay quivering and mumbling where it had fallen. Presently the Englishman leaped to his feet—freer than he had ever before felt in all his life, though he was still hopelessly a prisoner in the Blue Place of Seven Skulls.

In Prison with a Galu

WITH his back against the wall for support, so weak the reaction left him, Bradley stood watching the creature upon the floor. He saw it move and slowly raise itself to its hands and knees, where it swayed to and fro as its eyes roved about in search of him; and when at last they found him, there broke from the drawn lips the mumbled words: "Food! Food! There is a way out!" The pitiful supplication in the tones touched the Englishman's heart. He knew that this could be no Wieroo, but possibly once a man like himself who had been cast into this pit of solitary confinement with this hideous result that might in time be his fate, also.

And then, too, there was the suggestion of hope held out by the constant reiteration of the phrase, "There is a way out." Was there a way out? What did this poor thing know?

"Who are you and how long have you been here?" Bradley suddenly demanded.

For a moment the man upon the floor made no response, then mumblingly came the words. "Food! Food!"

"Stop!" commanded the Englishman—the injunction might have been barked from the muzzle of a pistol. It brought the man to a sitting posture, his hands off the ground. He stopped swaying to and fro and appeared to be startled into an attempt to master his faculties of concentration and thought.

Bradley repeated his questions sharply.

"I am An-Tak, the Galu," replied the man. "Luata alone knows how long I have been here—maybe ten moons, maybe ten moons three times"—it was the Caspakian equivalent of thirty. "I was young and strong when they brought me here. Now I am old and very weak. I am *cos-ata-lu*—that is why they have not killed me. If I tell them the secret of becoming *cos-ata-lu* they will take me out;

but how can I tell them that which Luata alone knows?"

"What is *cos-ata-lu?*" demanded Bradley.

"Food! Food! There is a way out!" mumbled the Galu.

Bradley strode across the floor, seized the man by his shoulders and shook him.

"Tell me," he cried, "what is *cos-ata-lu?*"

"Food!" whimpered An-Tak.

Bradley bethought himself. His haversack had not been taken from him. In it besides his razor and knife were odds and ends of equipment and a small quantity of dried meat. He tossed a small strip of the latter to the starving Galu. An-Tak seized upon it and devoured it ravenously. It instilled new life in the man.

"What is *cos-ata-lu?*" insisted Bradley again.

An-Tak tried to explain. His narrative was often broken by lapses of concentration during which he reverted to his plaintive mumbling for food and recurrence to the statement that there was a way out; but by firmness and patience the Englishman drew out piece-meal a more or less lucid exposition of the remarkable scheme of evolution that rules in Caspak. In it he found explanations of the hitherto inexplicable. He discovered why he had seen no babes or children among the Caspakian tribes with which he had come in contact; why each more northerly tribe evinced a higher state of development than those south of them; why each tribe included individuals ranging in physical and mental characteristics from the highest of the next lower race to the lowest of the next higher, and why the women of each tribe immersed themselves mornings for an hour or more in the warm pools near which the habitations of their people always were located; and, too, he discovered why those pools were almost immune from the attacks of carnivorous animals and reptiles.

He learned that all but those who were *cos-ata-lu* came up *cor-sva-jo*, or *from the beginning*. The egg from which they first developed into tadpole form was deposited, with millions of others, in one of the warm pools and with it a poisonous serum that the carnivora instinctively shunned. Down the warm stream from the pool floated the countless billions of eggs and tadpoles, developing as they drifted slowly toward the sea. Some became tadpoles in the pool, some in the sluggish stream and some not until they reached the great inland sea. In the next stage they became fishes or reptiles, An-Tak was not positive which, and in this form, always developing, they swam far to the south, where, amid the rank and teeming jungles, some of them evolved into amphibians. Always there were those whose development stopped at the fish stage, others whose development ceased when they became reptiles, while by far the greater proportion formed the food supply of the ravenous creatures of the deep.

Caspak Mysteries Explained

FEW indeed were those that eventually developed into baboons and then apes, which was considered by Caspakians the real beginning of evolution. From the egg, then, the individual developed slowly into a high form, just as the frog's egg develops through various stages from a fish with gills to a frog with lungs. With that thought in mind Bradley discovered that it was not difficult to believe in the possibility of such a scheme—there was nothing new in it.

From the ape the individual, if it survived, slowly developed into the lowest order of man—the Alu—and then by degrees to Bo-lu, Sto-lu, Band-lu, Kro-lu and finally Galu. And in each stage countless millions of other eggs were deposited in the warm pools of the various races and floated down to the great sea to go through a similar process of evolution; but in Caspak the scheme is much more inclusive, for it combines not only individual development but the evolution of species and genera. If an egg survives it goes through all the stages of development that man has passed through during the unthinkable eons since life first moved upon the earth's face.

The final stage, that which the Galus have almost attained and for which all hope—is *cos-ata-lu*, which, literally, means no-egg-man, or one who is born directly as are the young of the outer world of mammals. Some of the Galus produce *cos-ata-lu* and *cos-ata-lo* both; the Wieroos only *cos-ata-lu*—in other words all Wieroos are born male, and so they prey upon the Galus for their women and sometimes capture and torture the Galu men who are *cos-ata-lu* in an endeavor to learn the secret which they believe will give them unlimited power over all other denizens of Caspak.

No Wieroos come up from the beginning—all are born of Wieroo fathers and Galu mothers who are *cos-ata-lo*, and there are very few of the latter owing to the long and precarious stages of development. Seven generations of the same ancestor must come up from the beginning before a *cos-ata-lu* child may be born; and when one considers the frightful dangers that surround the vital spark from the moment it leaves the warm pool where it has been deposited to float down to the sea amid the voracious creatures that swarm the surface and the deeps and the almost equally unthinkable trials of its efforts to survive after it once becomes a land animal and starts northward through the horrors of the Caspakian jungles and forests, it is plainly a wonder that even a single babe has ever been born to a Galu woman.

Seven cycles it requires before the seventh Galu can complete the seventh danger-infested circle since its first Galu ancestor achieved the state of Galu. For ages before, the ancestors of this first Galu may have developed from a Band-lu or Bo-lu egg without ever once completing the whole circle—that is from a Galu egg, back to a fully developed Galu.

Bradley's head was whirling before he even commenced to grasp the complexities of Caspakian evolution; but as the truth slowly filtered into his understanding—as gradually it became possible for him to visualize the scheme, it appeared simple. In fact, it seemed even less difficult of comprehension than that with which he was familiar.

For several minutes after An-Tak ceased speaking, his voice having trailed off weakly into silence, neither spoke again. Then the Galu recommenced his, "Food! Food! There is a way out!" Bradley

tossed him another bit of dried meat, waiting patiently until he had eaten it, this time more slowly.

"What do you mean by saying there is a way out" he asked.

"He who died here just after I came, told me," replied An-Tak. "He said there was a way out, that he had discovered it but was too weak to use his knowledge. He was trying to tell me how to find it when he died. Oh, Luata, if he had lived but a moment more!"

"They do not feed you here?" asked Bradley.

"No, they give me water once a day—that is all."

"But how have you lived, then?"

"The lizards and the rats," replied An-Tak. "The lizards are not so bad; but the rats are foul to taste. However, I must eat them or they would eat me, and they are better than nothing; but of late they do not come so often, and I have not had a lizard for a long time. I shall eat though," he mumbled. "I shall eat now, for you cannot remain awake forever." He laughed, a cackling, dry laugh. "When you sleep, An-Tak will eat."

It was horrible. Bradley shuddered. For a long time each sat in silence. The Englishman could guess why the other made no sound—he awaited the moment that sleep should overcome his victim. In the long silence there was borne upon Bradley's ears a faint, monotonous sound as of running water. he listened intently. It seemed to come from far beneath the floor.

"What is that noise?" he asked. "That sounds like water running through a narrow channel."

"It is the river," replied An-Tak. "Why do you not go to sleep? It passes directly beneath the Blue Place of Seven Skulls. It runs through the temple grounds, beneath the temple and under the city. When we die they will cut off our heads and throw our bodies into the river. At the mouth of the river await many large reptiles. Thus do they feed. The Wieroos do likewise with their own dead, keeping only the skulls and wings. Come, let us sleep."

"Do the reptiles come up the river in the city?" asked Bradley.

"The water is too cold—they never leave the warm water of the great pool," replied An-Tak.

"Let us search for the way out," suggested Bradley.

An-Tak shook his head. "I have searched for it all these moons," he said. "If I could not find it, how would you?"

Bradley made no reply but commenced a diligent examination of the wall and floor of the room, pressing over each square foot and tapping with his knuckles. About six feet from the floor he discovered a sleeping-perch near one end of the apartment. He asked An-Tak about it, but the Galu said that no Wieroo had occupied the place since he had been incarcerated there. Again and again Bradley went over the floor and walls as high up as he could reach. Finally he swung himself to the perch, that he might examine at least one end of the room all the way to the ceiling.

Exploring His Prison

IN the center of the wall close to the top, an area about three feet square gave forth a hollow sound when he rapped upon it. Bradley felt over every square inch of that area with the tips of his fingers. Near the top he found a small round hole a trifle larger in diameter than his forefinger, which he immediately stuck into it. The panel, if such it was, seemed about an inch thick, and beyond it his finger encountered nothing. Bradley crooked his finger upon the opposite side of the panel and pulled toward him, steadily but with considerable force. Suddenly the panel flew inward, nearly precipitating the man to the floor. It was hinged at the bottom, and when lowered the outer edge rested upon the perch, making a little platform parallel with the floor of the room.

Beyond the opening was an utterly dark void. The Englishman leaned through it and reached his arm as far as possible into the blackness but touched nothing. Then he fumbled his haversack for a match, a few of which remained to him. When he struck it—An-Tak gave a cry of terror. Bradley held the light far into the opening before him and in its flickering rays saw the top of a ladder descending into a black abyss below. How far down it extended he could not guess; but that he should soon know definitely he was positive.

"You have found it! You have found the way out!" screamed An-Tak. "Oh, Luata! And now I am too weak to go. Take me with you! Take me with you!"

"Shut up!" admonished Bradley. "You will have the whole flock of birds around our heads in a minute, and neither of us will escape. Be quiet, and I'll go ahead. If I find a way out, I'll come back and help you, if you'll promise not to try to eat me up again."

"I promise," cried An-Tak. "Oh, Luata! How could you blame me? I am half crazed by hunger and long confinement and the horror of the lizards and the rats and the constant waiting for death."

"I know," said Bradley simply. "I'm sorry for you, old top. Keep a stiff upper lip." And he slipped through the opening, found a ladder with his feet, closed the panel behind him, and started downward into the darkness.

Below him rose more and more distinctly the sound of running water. The air felt damp and cool. He could see nothing of his surroundings and felt nothing but the smooth, worn sides and rungs of the ladder down which he felt his way cautiously lest a broken rung or a misstep should hurl him downward.

As he descended thus slowly, the ladder seemed interminable and the pit bottomless, yet he realized when at last he reached the bottom that he could not have descended more than fifty feet. The bottom of the ladder rested on a narrow ledge paved with what felt like large round stones, but what he knew from experience to be human skulls. He could not but marvel as to where so many countless thousands of the things had come from, until he paused to consider that the infancy of Caspak dated doubtlessly back into remote ages, far beyond what the outer world considered the beginning of earthly time. For all these eons the Wieroos might have been collecting human skulls from their enemies and their own dead—enough to have built an entire city of them.

Feeling his way along the narrow ledge, Bradley came presently to a blank wall that stretched out over the water swirling beneath him, as far as he could reach. Stooping, he groped about with one hand, reaching down toward the surface of the water, and discovered that the bottom of the wall arched above the stream. How much space there was between the water and the arch he could not tell, nor how deep the former. There was only one way in which he might learn these things, and that was to lower himself into the stream. For only an instant he hesitated, weighing his chances. Behind him lay almost certainly the horrid fate of An-Tak; before him nothing worse than a comparatively painless death by drowning. Holding his haversack above his head with one hand he lowered his feet slowly over the edge of the narrow platform. Almost immediately he felt the swirling of cold water about his ankles, and then with a silent prayer he let himself drop gently into the stream.

Great was Bradley's relief when he found the water no more than waist deep and beneath his feet a firm, gravel bottom. Feeling his way cautiously he moved downward with the current, which was not so strong as he had imagined from the noise of the running water.

A Long Blind Trail

BENEATH the first arch he made his way, following the winding curvatures of the right-hand wall. After a few yards of progress his hand came suddenly in contact with a slimy thing clinging to the wall—a thing that hissed and scuttled out of reach. What it was, the man could not know; but almost instantly there was a splash in the water just ahead of him and then another.

On he went, passing beneath other arches at varying distances, and always in utter darkness. Unseen denizens of this great sewer, disturbed by the intruder, splashed into the water ahead of him and wriggled away. Time and again his hand touched them and never for an instant could he be sure that at the next step some gruesome thing might not attack him. He had strapped his haversack about his neck, well above the surface of the water, and in his left hand he carried his knife. Other precautions there were none to take.

The monotony of the blind trail was increased by the fact that from the moment he had started from the foot of the ladder he had counted his every step. He had promised to return for An-Tak if it proved humanly possible to do so, and he knew that in the blackness of the tunnel he could locate the foot of the ladder in no other way.

He had taken two hundred and sixty-nine steps—afterward he knew that he should never forget that number—when something bumped gently against him from behind. Instantly he wheeled about and with knife ready to defend himself stretched forth his right hand to push away the object that now had lodged against his body. His fingers feeling through the darkness came in contact with something cold and clammy—they passed to and fro over the thing until Bradley knew that it was the face of a dead man floating upon the surface of the stream. With an oath he pushed his gruesome companion out into mid-stream to float on down toward the great pool and the awaiting scavengers of the deep.

At his four hundred and thirteenth step another corpse bumped against him—how many had passed him without touching he could not guess; but suddenly he experienced the sensation of being surrounded by dead bodies floating along with him, the profaning alien who dared intrude upon the waters of this river of the dead—a horrid escort, pregnant with dire forebodings and with menace.

Though he advanced very slowly, he tried always to take steps of about the same length; so that he knew that though considerable time had elapsed, yet he had really advanced no more than four hundred yards when ahead he saw a lessening of the pitch-darkness, and at the next turn of the stream his surroundings became vaguely discernible. Above him was an arched roof and on either hand walls pierced at intervals by apertures covered with wooden doors. Just ahead of him in the roof of the aqueduct was a round, black hole about thirty inches in diameter. His eyes still rested upon the opening when there shot downward from it to the water below the naked body of a human being which almost immediately rose to the surface again and floated off down the stream. In the dim light Bradley saw that it was a dead Wieroo from which the wings and head had been removed. A moment later another headless body floated past, recalling what An-Tak had told him of the skull-collecting customs of the Wieroo. Bradley wondered how it happened that the first corpse he had encountered in the stream had not been similarly mutilated.

The farther he advanced now, the lighter it became. The number of corpses was much smaller than he had imagined, only two more passing him before, at six hundred steps, or about five hundred yards, from the point he had taken to the stream, he came to the end of the tunnel and looked out upon sunlit water, running between grassy banks.

One of the last corpses to pass him was still clothed in the white robe of a Wieroo, blood-stained over the headless neck that it concealed.

Drawing closer to the opening leading into the bright daylight, Bradley surveyed what lay beyond. A short distance before him a large building stood in the center of several acres of grass and tree-covered ground, spanning the stream which disappeared through an opening in its foundation wall. From the large saucer-shaped roof and the vivid colorings of the various heterogeneous parts of the structure he recognized it as the temple past which he had been borne to the Blue Place of Seven Skulls.

To and fro flew Wieroos, going to and from the temple. Others passed on foot across the open grounds, assisting themselves with their great wings, so that they barely skimmed the earth. To leave the mouth of the tunnel would have been to court instant discovery and capture; but by what other avenue he might escape, Bradley could not guess, unless he retraced his steps up the stream and sought egress from the other end of the city. The thought of traversing that dark and horror-ridden tunnel for perhaps miles, he could not entertain—there must be some other way. Perhaps after dark he could steal through the temple grounds

and continue on downstream until he had come beyond the city; and so he stood and waited until his limbs became almost paralyzed with cold, and he knew that he must find some other plan for escape.

Another Encounter with a Wieroo

A HALF-FORMED decision to risk an attempt to swim under water to the temple was crystallizing in spite of the fact that any chance Wieroo flying about the stream might easily see him, when again a floating object bumped against him from behind and lodged across his back. Turning quickly he saw that the thing was what he had immediately guessed it to be—a headless and wingless Wieroo corpse. With a grunt of disgust he was about to push it from him when the white garment enshrouding it suggested a bold plan to his resourceful brain. Grasping the corpse by an arm he tore the garment from it and then let the body float downward toward the temple. With great care he draped the robe about him; the bloody blotch that had covered the severed neck he arranged about his own head. His haversack he rolled as tightly as possible and stuffed beneath his coat over his breast. Then he fell gently to the surface of the stream and lying upon his back floated downward with the current and out into the open sunlight.

Through the weave of the cloth he could distinguish large objects. He saw a Wieroo flap dismally above him; he saw the banks of the stream float slowly past; he heard a sudden wail upon the right-hand shore, and his heart stood still lest his ruse had been discovered; but never by a move of a muscle did he betray that aught but a cold lump of clay floated there upon the bosom of the water, and soon, though it seemed an eternity to him, the direct sunlight was blotted out, and he knew that he had entered beneath the temple.

Quickly he felt for bottom with his feet and as quickly stood erect, snatching the bloody, clammy cloth from his face. On both sides were blank walls and before him the river turned a sharp corner and disappeared. Feeling his way cautiously forward he approached the turn and looked around the corner. To his left was a low platform about a foot above the level of the stream, and upon this he lost no time in climbing, for he was soaked from head to foot, cold and almost exhausted.

As he lay resting on the skull-paved shelf, he saw in the center of the vault above the river another of those sinister round holes through which he momentarily expected to see a headless corpse shoot downward in its last plunge to a watery grave. A few feet along the platform a closed door broke the blankness of the wall. As he lay looking at it and wondering what lay beyond, his mind filled with fragments of many wild schemes of escape, it opened and a white-robed Wieroo stepped out upon the platform. The creature carried a large wooden basin filled with rubbish. Its eyes were not upon Bradley, who drew himself to a squatting position and crouched as far back in the corner of the niche in which the platform was set as he could force himself. The Wieroo stepped to the edge of the platform and dumped the rubbish into the stream. If it turned away from him as it started to retrace its steps to the doorway, there was a small chance that it might not see him; but if it turned toward him there was none at all. Bradley held his breath.

The Wieroo paused a moment, gazing down into the water, then it straightened up and turned toward the Englishman. Bradley did not move. The Wieroo stopped and stared intently at him. It approached him questioningly. Still Bradley remained as though carved of stone. The creature was directly in front of him. It stopped. There was no chance on earth that it would not discover what he was.

With the quickness of a cat, Bradley sprang to his feet and with all his great strength, backed by his heavy weight, struck the Wieroo upon the point of the chin. Without a sound the thing crumpled to the platform, while Bradley, acting almost instinctively to the urge of the first law of nature, rolled the inanimate body over the edge into the river.

Then he looked at the open doorway, crossed the platform and peered within the apartment beyond. What he saw was a large room, dimly lighted, and about the sides rows of wooden vessels stacked one upon another. There was no Wieroo in sight, so the Englishman entered. At the far end of the room was another door, and as he crossed toward it, he glanced into some of the vessels, which he found were filled with dried fruits, vegetables and fish. Without more ado he stuffed his pockets and his haversack full, thinking of the poor creature awaiting his return in the gloom of the Place of Seven Skulls.

When night came, he would return and fetch An-Tak this far at least; but in the meantime it was his intention to reconnoiter in the hope that he might discover some easier way out of the city than that offered by the chill, black channel of the ghastly river of corpses.

Beyond the farther door stretched a long passageway from which closed doorways led into other parts of the cellars of the temple. A few yards from the storeroom a ladder rose from the corridor through an aperture in the ceiling. Bradley paused at the foot of it, debating the wisdom of further investigation against a return to the river; but strong within him was the spirit of exploration that has scattered his race to the four corners of the earth. What new mysteries lay hidden in the chambers above? The urge to know was strong upon him though his better judgment warned him that the safer course lay in retreat. For a moment he stood thus, running his fingers through his hair; then he cast discretion to the winds and began the ascent.

A Duel with the Curved Sword Blades

IN conformity with such Wieroo architecture as he had already observed, the well through which the ladder rose continually varied in form and size, being now circular, now oval, rectangular or polyhedrical and occasionally canted at an angle from the perpendicular. At more or less regular stages it was pierced by apertures closed by doors, none of which he could open until he had climbed fully fifty feet from the river level. Here he discovered a

door already ajar opening into a large, circular chamber, the walls and floors of which were covered with the skins of wild beasts and with rugs of many colors; but what interested him most was the occupants of the room—a Wieroo, and a girl of human proportions. She was standing with her back against a column which rose from the center of the apartment from floor to ceiling—a hollow column about forty inches in diameter in which he could see an opening some thirty inches across. The girl's side was toward Bradley, and her face averted, for she was watching the Wieroo, who was now advancing slowly toward her, talking as he came.

Bradley could distinctly hear the words of the creature, who was urging the girl to accompany him to another Wieroo city. "Come with me," he said, "and you shall have your life; remain here and He Who Speaks for Luata will claim you for his own; and when he is done with you, your skull will bleach at the top of a tall staff while your body will feed the reptiles at the mouth of the River of Death. Even though you bring into the world a female Wieroo, your fate will be the same if you do not escape him, while with me you shall have life and food and none shall harm you."

He was quite close to the girl when she replied by striking him in the face with all her strength. "Until I am slain," she cried, "I shall fight against you all." From the throat of the Wieroo issued that dismal wail that Bradley had heard so often in the past—it was like a scream of pain smothered to a groan—and then the thing leaped upon the girl, its face working in hideous grimaces as it clawed and beat at her to force her to the floor.

The Englishman was upon the point of entering to defend her when a door at the opposite side of the chamber opened to admit a huge Wieroo clothed entirely in red. At sight of the two struggling upon the floor the newcomer raised his voice in a shriek of rage. Instantly the Wieroo who was attacking the girl leaped to his feet and faced the other.

"I heard," screamed he who had just entered the room. "I heard, and when He Who Speaks for Luata shall have heard—" He paused and made a suggestive movement of a forefinger across his throat.

"He shall not hear," returned the first Wieroo as, with a powerful motion of his great wings, he launched himself upon the red-robed figure. The latter dodged the first charge, drew a wicked-looking, curved blade from beneath its red robe, spread its wings and dived for its antagonist. Beating their wings, wailing and groaning, the two hideous things sparred for position. The white-robed one being unarmed sought to grasp the other by the wrist of its knife-hand and by the throat, while the latter hopped around on its dainty white feet, seeking an opening for a mortal blow. Once it struck and missed, and then the other rushed in and clinched, at the same time securing both the holds it sought. Immediately the two commenced beating at each other's heads with the joints of their wings, kicking with their soft, puny feet and biting, each at the other's face.

In the meantime the girl moved about the room, keeping out of the way of the duelists, and as she did so, Bradley caught a glimpse of her full face and immediately recognized her as the girl of the place of the yellow door. He did not dare intervene now until one of the Wieroo had overcome the other, lest the two should turn upon him at once, when the chances were fair that he would be defeated in so unequal a battle as the curved blade of the red Wieroo would render it, and so he waited, watching the white-robed figure slowly choking the life from him of the red robe. The protruding tongue and the popping eyes proclaimed that the end was near and a moment later the red robe sank to the floor of the room, the curved blade slipping from nerveless fingers. For an instant longer the victor clung to the throat of his defeated antagonist and then he rose, dragging the body after him, and approached the central column. Here he raised the body and thrust it into the aperture where Bradley saw it drop suddenly from sight. Instantly there flashed into his memory the circular openings in the roof of the river vault and the corpses he had seen drop from them to the water beneath.

As the body disappeared, the Wieroo turned and cast about the room for the girl. For a moment he stood eying her. "You saw," he muttered, "and if you tell them, He Who Speaks for Luata will have my wings severed while still I live and my head will be severed and I shall be cast into the River of Death, for thus it happens even to the highest who slay one of the red robe. You saw, and you must die!" he ended with a scream as he rushed upon the girl.

The Blue Room

BRADLEY waited no longer. Leaping into the room he ran for the Wieroo, who had already seized the girl, and as he ran, he stooped and picked up the curved blade. The creature's back was toward him as, with his left hand, he seized it by the neck. Like a flash the great wings beat backward as the creature turned, and Bradley was swept from his feet, though he still retained his hold upon the blade. Instantly the Wieroo was upon him. Bradley lay slightly raised upon his left elbow, his right arm free, and as the thing came close, he cut at the hideous face with all the strength that lay within him. The blade struck at the junction of the neck and torso and with such force as to completely decapitate the Wieroo, the hideous head dropping to the floor and the body falling forward upon the Englishman.

Pushing it from him he rose to his feet and faced the wide-eyed girl.

"Luata!" she exclaimed. "How came you here?"

Bradley shrugged. "Here I am," he said; "but the thing now is to get out of here—both of us."

The girl shook her head. "It cannot be," she stated sadly.

"That is what I thought when they dropped me into the Blue Place of Seven Skulls," replied Bradley. "Can't be done. I did it. —Here! You're mussing up the floor something awful, you." This last to the dead Wieroo as he stooped and dragged the corpse to the central shaft, where he raised it to the aperture and let it slip into the tube. Then

he picked up the head and tossed it after the body. "Don't be so glum," he admonished the former as he carried it toward the well, "smile!"

"But how can he smile?" questioned the girl, a half-puzzled, half-frightened look upon her face. "He is dead."

"That's so," admitted Bradley, "and I suppose he does feel a bit cut up about it."

The girl shook her head and edged away from the man—toward the door.

"Come!" said the Englishman. "We've got to get out of here. If you don't know a better way than the river, it's the river then."

The girl still eyed him askance. "But how could he smile when he was dead?"

Bradley laughed aloud. "I thought we English were supposed to have the least sense of humor of any people in the world," he cried; "but now I've found one human being who hasn't any. Of course you don't know half I'm saying; but don't worry, little girl; I'm not going to hurt you, and if I can get you out of here, I'll do it."

Even if she did not understand all he said, she at least read something in his smiling countenance —something which reassured her. "I do not fear you," she said; "though I do not understand all that you say even though you speak my own tongue; and use words that I know. But as for escaping"—she sighed—"alas, how can it be done?"

"I escaped from the Blue Place of Seven Skulls," Bradley reminded her. "Come!" And he turned toward the shaft and the ladder that he had ascended from the river. "We cannot waste time here."

The girl followed him; but at the doorway both drew back, for from below came the sound of some one ascending. Bradley tiptoed to the door and peered cautiously into the well; then he stepped back beside the girl. "There are half a dozen of them coming up; but possibly they will pass by this room."

"No," she said, "they will pass directly through this room—they are on their way to Him Who Speaks for Luata. We may be able to hide in the next room—there are skins there beneath which we may crawl. They will not stop in that room; but they may stop in this one for a short time—the other room is blue."

"What's that got to do with it?" demanded the Englishman.

"They fear blue," she replied. "In every room where murder has been done you will find blue—a certain amount for each murder. When the room is all blue, they shun it. This room has much blue; but evidently they kill mostly in the next room, which is now all blue."

"But there is blue on the outside of every house I have seen," said Bradley.

"Yes," assented the girl, "and there are blue rooms in each of those houses—when all the rooms are blue then the whole outside of the house will be blue as is the Blue Place of Seven Skulls. There are many such here."

"And the skulls with blue upon them?" inquired Bradley. "Did they belong to murderers?"

"They were murdered—some of them; those with only a small amount of blue were murderers—known murderers. All Wieroos are murderers. When they have committed a certain number of murders without being caught at it, they confess to Him Who Speaks for Luata and are advanced, after which they wear robes with a slash of some color—I think yellow comes first. When they reach a point where their entire robe is of yellow, they discard it for a white robe with a red slash, and when one wins a complete red robe, he carries such a long, curved knife as you have in your hand; after that comes the blue slash on a white robe, and then, I suppose, an all blue robe. I have never seen such a one."

As they talked in low tones they had moved from the room of the death shaft into an all blue room adjoining, where they sat down together in a corner with their backs against a wall and drew a pile of hides over themselves. A moment later they heard a number of Wieroos enter the chamber. They were talking together as they crossed the floor, or the two could not have heard them. Halfway across the chamber they halted as the door toward which they were advancing opened and a dozen others of their kind entered the apartment.

Bradley could guess all this by the increased volume of sound and the dismal greetings; but the sudden silence that almost immediately ensued he could not fathom, for he could not know that from beneath one of the hides that covered him protruded one of his heavy army shoes, or that some eighteen large Wieroos with robes either solid red or slashed with red and blue were standing gazing at it. Nor could he hear their stealthy approach.

The first intimation he had that he had been discovered was when his foot was suddenly seized, and he was yanked violently from beneath the hides to find himself surrounded by menacing blades. They would have slain him on the spot had not one clothed all in red held them back, saying He Who Speaks for Luata desired to see this strange creature.

As they led Bradley away, he caught an opportunity to glance back toward the hides to see what had become of the girl, and, to his gratification, he discovered that she still lay concealed beneath the hides. He wondered if she would have the nerve to attempt the river trip alone and regretted that now he could not accompany her. He felt rather all in, himself, more so than he had at any time since he had been captured by the Wieroo, for there appeared not the slightest cause for hope in his present predicament. He had even dropped the curved blade beneath the hides when he had been jerked so violently from their fancied security. It was almost in a spirit of resigned hopelessness that he quietly accompanied his captors through various chambers and corridors toward the heart of the temple.

CHAPTER IV

THE farther the group progressed, the more barbaric and the more sumptuous became the decorations. Hides of leopard and tiger predominated, apparently because of their more beautiful markings, and decorative skulls became more and more numerous. Many of the latter were mounted in precious metals and set with colored

stones and priceless gems, while thick upon the hides that covered the walls were golden ornaments similar to those worn by the girl and those which had filled the chests he had examined in the storeroom of Fosh-bal-soj, leading the Englishman to the conviction that all such were spoils of war or theft, since each piece seemed made for personal adornment, while in so far as he had seen, no Wieroo wore ornaments of any sort.

And also as they advanced the more numerous became the Wieroos moving hither and thither within the temple. Many now wore the solid red robes and those that were slashed with blue—a veritable hive of murderers.

At last the party halted in a room in which were many Wieroos who gathered about Bradley questioning his captors and examining him and his apparel. One of the party accompanying the Englishman spoke to a Wieroo that stood beside a door leading from the room. "Tell Him Who Speaks for Luata," he said, "that Fosh-bal-soj we could not find; but that in returning we found this creature within the temple, hiding. It must be the same that Fosh-bal-soj captured in the Sto-lu country during the last darkness. Doubtless He Who Speaks for Luata would wish to see and question this strange thing."

The creature addressed turned and slipped through the doorway, closing the door after it, but first depositing its curved blade upon the floor without. Its post was immediately taken by another, and Bradley now saw that at least twenty such guards loitered in the immediate vicinity. The doorkeeper was gone but for a moment, and when he returned, he signified that Bradley's party was to enter the next chamber; but first each of the Wieroos removed his curved weapon and laid it upon the floor. The door was swung open, and the party, now reduced to Bradley and five Wieroos, was ushered across the threshold into a large, irregularly shaped room in which a single, giant Wieroo, whose robe was solid blue, sat upon a raised dais.

The creature's face was white with the whiteness of a corpse, its dead eyes entirely expressionless, its cruel, thin lips tight-drawn against yellow teeth in a perpetual grimace. Upon either side of it lay an enormous, curved sword, similar to those with which some of the other Wieroos had been armed, but larger and heavier. Constantly its claw-like fingers played with one or the other of these weapons.

The walls of the chamber, as well as the floor, were entirely hidden by skins and woven fabrics. Blue predominated in all the colorations. Fastened against the hides were many pairs of Wieroo wings, mounted so that they resembled long, black shields. Upon the ceiling were painted in blue characters a bewildering series of hieroglyphics, and upon pedestals set against the walls or standing out well within the room were many human skulls.

As the Wieroos approached the figure upon the dais, they leaned far forward, raising their wings above their heads and stretching their necks as though offering them to the sharp swords of the grim and hideous creature.

"O Thou Who Speakest for Luata!" exclaimed one of the party. "We bring you the strange creature that Fosh-bal-soj captured and brought thither at thy command."

So this then was the godlike figure that spoke for divinity! This arch-murderer was the Caspakian representative of God on earth! His blue robe announced him the one and the seeming humility of his minions the other. For a long minute he glared at Bradley. Then he began to question him—from whence he came and how, the name and description of his native country, and a hundred other queries.

"Are you *cos-ata-lu?*" the creature asked.

Bradley replied that he was and that all his kind were, as well as every living thing in his part of the world.

"Can you tell me the secret?" asked the creature.

Bradley hesitated and then, thinking to gain time, replied in the affirmative.

"What is it?" demanded the Wieroo, leaning far forward and exhibiting every evidence of excited interest.

He Who Speaks for Luata

BRADLEY leaned forward and whispered: "It is for your ears alone; I will not divulge it to others, and then only on condition that you carry me and the girl I saw in the place of the yellow door near to that of Fosh-bal-soj back to her own country."

The thing rose in wrath, holding one of its swords above its head.

"Who are you to make terms for Him Who Speaks for Luata?" it shrilled. "Tell me the secret or die where you stand!"

"And if I die now, the secret goes with me," Bradley reminded him. "Never again will you get the opportunity to question another of my kind who knows the secret." Anything to gain time, to get the rest of the Wieroos from the room, that he might plan some scheme for escape and put it into effect.

The creature turned upon the leader of the party that had brought Bradley.

"Is the thing with weapons?" it asked.

"No," was the response.

"Then go; but tell the guard to remain close by," commanded the high one.

The Wieroos salaamed and withdrew, closing the door behind them. He Who Speaks for Luata grasped a sword nervously in his right hand. At his left side lay the second weapon. It was evident that he lived in constant dread of being assassinated. The fact that he permitted none with weapons within his presence and that he always kept two swords at his side pointed to this.

Bradley was racking his brain to find some suggestion of a plan whereby he might turn the situation to his own account. His eyes wandered past the weird figure before him; they played about the walls of the apartment as though hoping to draw inspiration from the dead skulls and the hides and the wings, and then they came back to the face of the Wieroo god, now working in anger.

"Quick!" screamed the thing. "The secret!"

"Will you give me and the girl our freedom?" insisted Bradley.

For an instant the thing hesitated, and then it grumbled "Yes." At the same instant Bradley saw two hides upon the wall directly back of the dais separate and a face appear in the opening. No change of expression upon the Englishman's countenance betrayed that he had seen aught to surprise him, though surprised he was for the face in the aperture was that of the girl he had but just left hidden beneath the hides in another chamber. A white and shapely arm now pushed past the face into the room, and in the hand, tightly clutched, was the curved blade, smeared with blood, that Bradley had dropped beneath the hides at the moment he had been discovered and drawn from his concealment.

"Listen, then," said Bradley in a low voice to the Wieroo. "You shall know the secret of *cosata-lu* as well as do I; but none other may hear it. Lean close—I will whisper it into your ear."

He moved forward and stepped upon the dais. The creature raised its sword ready to strike at the first indication of treachery, and Bradley stooped beneath the blade and put his ear close to the gruesome face. As he did so, he rested his weight upon his hands, one upon either side of the Wieroo's body, his right hand upon the hilt of the spare sword lying at the left of Him Who Speaks for Luata.

"This then is the secret of both life and death," he whispered, and at the same instant he grasped the Wieroo by the right wrist and with his own right hand swung the extra blade in a sudden vicious blow against the creature's neck before the thing could give even a single cry of alarm; then without waiting an instant Bradley leaped past the dead god and vanished behind the hides that had hidden the girl.

Wide-eyed and panting the girl seized his arm. "Oh, what have you done?" she cried. "He Who Speaks for Luata will be avenged by Luata. Now indeed must you die. There is no escape, for even though we reached my own country Luata can find you out."

"Bosh!" exclaimed Bradley, and then: "But you were going to knife him yourself."

"Then I alone should have died," she replied.

Bradley scratched his head. "Neither of us is going to die," he said; "at least not at the hands of any god. If we don't get out of here though, we'll die right enough. Can you find your way back to the room where I first came upon you in the temple?"

"I know the way," replied the girl; "but I doubt if we can go back without being seen. I came hither because I only met Wieroos who knew that I am supposed now to be in the temple; but you could go nowhere without being discovered."

The Rescue of the Girl

BRADLEY'S ingenuity had come up against a stone wall. There seemed no possibility of escape. He looked about him. They were in a small room where lay a litter of rubbish—torn bits of cloth, old hides, pieces of fiber rope. In the center of the room was a cylindrical shaft with an opening in its face. Bradley knew it for what it was. Here the arch-fiend dragged his victims and cast their bodies into the river of death far below. The floor about the opening in the shaft and the sides of the shaft were clotted thick with dried, dark brown substance that the Englishman knew had once been blood. The place had the appearance of having been a veritable shambles. An odor of decaying flesh permeated the air.

The Englishman crossed to the shaft and peered into the opening. All below was dark as pitch; but at the bottom he knew was the river. Suddenly an inspiration and a bold scheme leaped to his mind. Turning quickly he hunted about the room until he found what he sought—a quantity of the rope that lay strewn here and there. With rapid fingers he unsnarled the different lengths, the girl helping him, and then he tied the ends together until he had three ropes about seventy-five feet in length. He fastened these together at each end and without a word secured one of the ends about the girl's body beneath her arms.

"Don't be frightened," he said at length, as he led her toward the opening of the shaft. "I'm going to lower you to the river, and then I'm coming down after you. When you are safe below, give two quick jerks upon the rope. If there is danger there and you want me to draw you up into the shaft, jerk once. Don't be afraid—it is the only way."

"I am not afraid," replied the girl, rather haughtily Bradley thought, and herself climbed through the aperture and hung by her hands waiting for Bradley to lower her.

As rapidly as was consistent with safety, the man paid out the rope. When it was about half out, he heard loud cries and wails suddenly arise within the room they had just quitted. The slaying of their god had been discovered by the Wieroos. A search for the slayer would begin at once.

Lord! Would the girl never reach the river? At last, just as he was positive that searchers were already entering the room behind him, there came two quick tugs at the rope. Instantly Bradley made the rest of the strands fast about the shaft, slipped into the black tube and began a hurried descent toward the river. An instant later he stood waist deep in water beside the girl. Impulsively she reached toward him and grasped his arm. A strange thrill ran through him at the contact; but he only cut the rope from about her body and lifted her to the little shelf at the river's side.

"How can we leave here?" she asked.

"By the river," he replied; "but first I must go back to the Blue Place of Seven Skulls and get the poor devil I left there. I'll have to wait until after dark, though, as I cannot pass through the open stretch of river in the temple gardens by day."

"There is another way," said the girl. "I have never seen it; but often I have heard them speak of it—a corridor that runs beside the river from one end of the city to the other. Through the gardens it is below ground. If we could find an entrance to it, we could leave here at once. It is not safe here, for they will search every inch of the temple and the grounds."

"Come," said Bradley. "We'll have a look for it, anyway." And so saying he approached one of the

doors that opened out upon the damp skull-paved shelf. They found the corridor easily, for it paralleled the river, separated from it only by a single wall. It took them beneath the gardens and the city, always through inky darkness. After they had reached the other side of the gardens, Bradley counted his steps until he had retraced as many as he had taken coming down the stream; but though they had to grope their way along, it was a much more rapid trip than the former.

When he thought he was about opposite the point at which he had descended from the Blue Place of Seven Skulls, he sought and found a doorway leading out to the river; and then, still in the blackest darkness, he lowered himself into the stream and felt up and down upon the opposite side for the little shelf and the ladder. Ten yards from where he had emerged he found them, while the girl waited upon the opposite side.

To ascend to the secret panel was the work of but a minute. Here he paused and listened lest a Wieroo might be visiting the prison in search of him or the other inmate; but no sound came from the gloomy interior. Bradley could not but muse upon the joy of the man on the opposite side when he should drop down to him with food and a new hope for escape. Then he opened the panel and looked into the room. The faint light from the grating above revealed the pile of rugs in one corner; but if the man lay beneath them, he made no response to Bradley's low greeting.

Death of a Prisoner

THE Englishman lowered himself to the floor of the room and approached the rags. Stooping he lifted a corner of them. Yes, there was the man asleep. Bradley shook him—there was no response. He stooped lower and in the dim light examined An-Tak; then he stood up with a sigh. A rat leaped from beneath the coverings and scurried away. "Poor devil!" muttered Bradley.

He crossed the room to swing himself to the perch preparatory to quitting the Blue Place of Seven Skulls forever. Beneath the perch he paused. "I'll not give them the satisfaction," he growled. "Let them believe that he escaped."

Returning to the pile of rags he gathered the man into his arms. It was difficult work raising him to the high perch and dragging him through the small opening and thus down the ladder; but presently it was done, and Bradley had lowered the body into the river and cast it off. "Good-bye, old top!" he whispered.

A moment later he had rejoined the girl and hand in hand they were following the dark corridor upstream toward the farther end of the city. She told him that the Wieroos seldom frequented these lower passages, as the air here was too chill for them; but occasionally they came, and as they could see quite as well by night as by day, they would be sure to discover Bradley and the girl.

"If they come close enough," she said, "we can see their eyes shining in the dark—they resemble dull splotches of light. They glow, but do not blaze like the eyes of the tiger or the lion."

The man could not but note the very evident horror with which she mentioned the creatures. To him they were uncanny; but she had been used to them for a year almost, and probably all her life she had either seen or heard of them constantly.

"Why do you fear them so?" he asked. "It seems more than any ordinary fear of the harm they can do you."

She tried to explain; but the nearest he could gather was that she looked upon the Wieroo almost as supernatural beings. "There is a legend current among my people that once the Wieroo were unlike us only in that they possessed rudimentary wings. They lived in villages in the Galu country, and while the two peoples often warred, they held no hatred for one another. In those days each race came up from the beginning and there was great rivalry as to which was the higher in the scale of evolution. The Wieroo developed the first *cos-ata-lu:* but they were always male—never could they reproduce woman. Slowly they commenced to develop certain attributes of the mind which, they considered, placed them upon a still higher level and which gave them many advantages over us, seeing which they thought only of mental development—their minds became like the stars and the rivers, moving always in the same manner, never varying. They called this *tas-ad,* which means doing everything the right way, or, in other words, the Wieroo way. If foe or friend, right or wrong, stood in the way of *tas-ad,* then it must be crushed.

"Soon the Galus and the lesser races of men came to hate and fear them. It was then that the Wieroos decided to carry *tas-ad* into every part of the world. They were very warlike and very numerous, although they had long since adopted the policy of slaying all those among them whose wings did not show advanced development.

"It took ages for all this to happen—very slowly came the different changes; but at last the Wieroos had wings that they could use. But by reason of always making war upon their neighbors they were hated by every creature of Caspak, for no one wanted their *tas-ad,* and so they used their wings to fly to this island when the other races turned against them and threatened to kill them all. So cruel had they become and so bloodthirtsy that they no longer had hearts that beat with love or sympathy; but their very cruelty and wickedness kept them from conquering the other races, since they were also cruel and wicked to one another, so that no Wieroo trusted another.

"Always were they slaying those above them that they might rise in power and possessions, until at last came one more powerful than the others with a *tas-ad* all his own. He gathered about him a few of the most terrible Wieroos, and among them they made laws which took from all but these few Wieroos every weapon they possessed.

"Now their *tas-ad* has reached a high plane among them. They make many wonderful things that we cannot make. They think great thoughts, no doubt, and still dream of greatness to come, but their thoughts and their acts are regulated by ages of custom—they are all alike—and they are most unhappy."

As the girl talked, the two moved steadily along the dark passageway beside the river. They had advanced a considerable distance when there

sounded faintly from far ahead the muffled roar of falling water, which increased in volume as they moved forward until at last it filled the corridor with a deafening sound. Then the corridor ended in a blank wall; but in a niche to the right was a ladder leading aloft, and to the left was a door opening upon the river. Bradley tried the latter first and as he opened it, felt a heavy spray against his face. The little shelf outside the doorway was wet and slippery, the roaring of the water tremendous. There could be but one explanation—they had reached a waterfall in the river, and if the corridor actually terminated here, their escape was effectually cut off, since it was quite evidently impossible to follow the bed of the river and ascend the falls.

The Ladder

AS the ladder was the only alternative, the two turned toward it and, the man first, began the ascent, which was through a well similar to that which had led them to the upper floors of the temple. As he climbed, Bradley felt for openings in the sides of the shaft; but he discovered none below fifty feet. The first he came to was ajar, letting a faint light into the well. As he paused, the girl climbed to his side, and together they looked through the crack into a low-ceiled chamber in which were several Galu women and an equal number of hideous little replicas of the full-grown Wieroos with which Bradley was now quite familiar.

He could feel the body of the girl pressed close to his tremble as her eyes rested upon the inmates of the room, and involuntarily his arm encircled her shoulders as though to protect her from some danger which he sensed without recognizing.

"Poor things," she whispered. "This is their horrible fate—to be imprisoned here beneath the surface of the city with their hideous offspring whom they hate as they hate the fathers. A Wieroo keeps his children thus hidden until they are full-grown lest they be murdered by their fellows. The lower rooms of the city are filled with many such as these."

Several feet above was a second door beyond which they found a small room stored with food in wooden vessels. A grated window in one wall opened above an alley, and through it they could see that they were just below the roof of the building. Darkness was coming, and at Bradley's suggestion they decided to remain hidden here until after dark and then to ascend to the roof and reconnoiter.

Shortly after they had settled themselves they heard something descending the ladder from above. They hoped that it would continue on down the well and fairly held their breath as the sound approached the door to the storeroom. Their hearts sank as they heard the door open and from between cracks in the vessels behind which they hid saw a yellow-slashed Wieroo enter the room. Each recognized him immediately, the girl indicating the fact of her own recognition by a sudden pressure of her fingers on Bradley's arm. It was the Wieroo of the yellow slashing whose abode was the place of the yellow door in which Bradley had first seen the girl.

The creature carried a wooden bowl which it filled with dried food from several of the vessels; then it turned and quit the room. Bradley could see through the partially open doorway that it descended the ladder. The girl told him that it was taking the food to the women and the young below, and that while it might return immediately, the chances were that it would remain for some time.

"We are just below the place of the yellow door," she said. "It is far from the edge of the city; so far that we may not hope to escape if we ascend to the roofs here."

"I think," replied the man, "that of all the places in Oo-oh this will be the easiest to escape from. Anyway, I want to return to the place of the yellow door and get my pistol if it is there."

"It is still there," replied the girl. "I saw it placed in a chest where he keeps the things he takes from his prisoners and victims."

"Good!" exclaimed Bradley. "Now come, quickly." And the two crossed the room to the well and ascended the ladder a short distance to its top where they found another door that opened into a vacant room—the same in which Bradley had first met the girl. To find the pistol was a matter of but a moment's search on the part of Bradley's companion; and then, at the Englishman's signal, she followed him to the yellow door.

It was quite dark without as the two entered the narrow passage between two buildings. A few steps brought them undiscovered to the doorway of the storeroom where lay the body of Fosh-bal-soj. In the distance, toward the temple, they could hear sounds as of a great gathering of Wieroos—the peculiar, uncanny wailing rising above the dismal flapping of countless wings.

"They have heard of the killing of Him Who Speaks for Luata," whispered the girl. "Soon they will spread in all directions searching for us."

"And will they find us?"

"As surely as Lua gives light by day," she replied; "and when they find us, they will tear us to pieces, for only the Wieroos may murder—only they may practice *tas-ad*."

"But they will not kill you," said Bradley. "You did not slay him."

"It will make no difference," she insisted. "If they find us together they will slay us both."

"Then they won't find us together," announced Bradley decisively. "You stay right here—you won't be any worse off than before I came—and I'll get as far as I can and account for as many of the beggars as possible before they get me. Good-bye! You're a mighty decent little girl. I wish that I might have helped you."

"No," she cried. "Do not leave me. I would rather die. I had hoped and hoped to find some way to return to my own country. I wanted to go back to An-Tak, who must be very lonely without me; but I know that it can never be. It is difficult to kill hope, though mine is nearly dead. Do not leave me."

"An-Tak!" Bradley repeated. "You loved a man called An-Tak?"

"Yes," replied the girl. "An-Tak was away, hunting, when the Wieroo caught me. How he must have grieved for me! He also was *cos-ata-lu*, twelve

moons older than I, and all our lives we have been together."

Bradley remained silent. So she loved An-Tak. He hadn't the heart to tell her that An-Tak had died, or how.

The Murderers Are Abroad

AT the door of Fosh-bal-soj's storeroom they halted to listen. No sound came from within, and gently Bradley pushed open the door. All was inky darkness as they entered; but presently their eyes became accustomed to the gloom that was partially relieved by the soft starlight without. The Englishman searched and found those things for which he had come—two robes, two pairs of dead wings and several lengths of fiber rope. One pair of the wings he adjusted to the girl's shoulders by means of the rope. Then he draped the robe about her, carrying the cowl over her head.

He heard her gasp in astonishment when she realized the ingenuity and boldness of his plan; then he directed her to adjust the other pair of wings and the robe upon him. Working with strong, deft fingers she soon had the work completed, and the two stepped out upon the roof, to all intent and purpose genuine Wieroos. Besides his pistol, Bradley carried the sword of the slain Wieroo prophet, while the girl was armed with the small blade of the red Wieroo.

Side by side they walked slowly across the roofs toward the north edge of the city. Wieroos flapped above them and several times they passed others walking or sitting upon the roofs. From the temple still rose the sounds of commotion, now pierced by occasional shrill screams.

"The murderers are abroad," whispered the girl. "Thus will another become the tongue of Luata. It is well for us, since it keeps them too busy to give the time for searching for us. They think that we cannot escape the city, and they know that we cannot leave the island—and so do I."

Bradley shook his head. "If there is any way, we will find it," he said.

"There is no way," replied the girl.

Bradley made no response, and in silence they continued until the outer edge of roofs was visible before them. "We are almost there," he whispered.

The girl felt for his fingers and pressed them. He could feel hers trembling as he returned the pressure, nor did he relinquish her hand; and thus they came to the edge of the last roof.

Here they halted and looked about them. To be seen attempting to descend to the ground below would be to betray the fact that they were not Wieroos. Bradley wished that their wings were attached to their bodies by sinew and muscle rather than by ropes of fiber. A Wieroo was flapping far overhead. Two more stood near a door a few yards distant. Standing between these and one of the outer pedestals that supported one of the numerous skulls Bradley made one end of a piece of rope fast about the pedestal and dropped the other end to the ground outside the city. Then they waited.

It was an hour before the coast was entirely clear and then a moment came when no Wieroo was in sight. "Now!" whispered Bradley; and the girl grasped the rope and slid over the edge of the roof into the darkness below. A moment later Bradley felt two quick pulls upon the rope and immediately followed to the girl's side.

Across a narrow clearing they made their way and into a wood beyond. All night they walked, following the river upward toward its source, and at dawn they took shelter in a thicket beside the stream. At no time did they hear the cry of a carnivore, and though many startled animals fled as they approached, they were not once menaced by a wild beast. When Bradley expressed surprise at the absence of the fiercer beasts that are so numerous upon the mainland of Caprona, the girl explained the reason that is contained in one of their ancient legends.

"When the Wieroos first developed wings upon which they could fly, they found this island devoid of any life other than a few reptiles that live either upon land or in the water and these only close to the coast. Requiring meat for food the Wieroos carried to the island such animals as they wished for that purpose. They still occasionally bring them, and this with the natural increase keeps them provided with flesh."

"As it will us," suggested Bradley.

The first day they remained in hiding, eating only the dried food that Bradley had brought with him from the temple storeroom, and the next night they set out again up the river, continuing steadily on until almost dawn, when they came to low hills where the river wound through a gorge—it was little more than a rivulet now, the water clear and cold and filled with fish similar to brook trout though much larger. Not wishing to leave the stream the two waded along its bed to a spot where the gorge widened between perpendicular bluffs to a wooded acre of level land. Here they stopped, for here also the stream ended. They had reached its source—many cold springs bubbling up from the center of a little natural amphitheater in the hills and forming a clear and beautiful pool overshadowed by trees upon one side and bounded by a little clearing upon the other.

With the coming of the sun they saw they had stumbled upon a place where they might remain hidden from the Wieroos for a long time and also one that they could defend against these winged creatures, since the trees would shield them from an attack from above and also hamper the movements of the creatures should they attempt to follow them into the wood.

In the Open Country at Last

FOR three days they rested here before trying to explore the neighboring country. On the fourth, Bradley stated that he was going to scale the bluffs and learn what lay beyond. He told the girl that she should remain in hiding; but she refused to be left, saying that whatever fate was to be his, she intended to share it, so that he was at last forced to permit her to come with him. Through woods at the summit of the bluff they made their way toward the north and had gone but a short distance when the wood ended and before them they saw the waters of the inland sea and dimly in the distance the coveted shore.

The beach lay some two hundred yards from the

foot of the hill on which they stood, nor was there a tree or any other form of shelter between them and the water as far up and down the coast as they could see. Among other plans Bradley had thought of constructing a covered raft upon which they might drift to the mainland; but as such a contrivance would necessarily be of considerable weight, it must be built in the water of the sea, since they could not hope to move it even a short distance overland.

"If this wood was only at the edge of the water," he sighed.

"But it is not," the girl reminded him, and then: "Let us make the best of it. We have escaped from death for a time at least. We have food and good water and peace and each other. What more could we have upon the mainland?"

"But I thought you wanted to get back to your own country!" he exclaimed.

She cast her eyes upon the ground and half turned away. "I do," she said, "yet I am happy here. I could be little happier there."

Bradley stood in silent thought. "We have food and good water and peace and *each other!*" he repeated to himself. He turned then and looked at the girl, and it was as though in the days that they had been together this was the first time that he had really seen her. The circumstances that had thrown them together, the danger through which they had passed, all the weird and horrible surroundings that had formed the background of his knowledge of her had had their effect—she had been but the companion of an adventure; her self-reliance, her endurance, her loyalty, had been only what one man might expect of another, and he saw that he had unconsciously assumed an attitude toward her that he might have assumed toward a man. Yet there had been a difference—he recalled now the strange sensation of elation that had thrilled him upon the occasions when the girl had pressed his hand in hers, and the depression that had followed her announcement of her love for An-tak.

He took a step toward her. A fierce yearning to seize her and crush her in his arms, swept over him, and then there flashed upon the screen of recollection the picture of a stately hall set amidst broad gardens and ancient trees and of a proud old man with beetling brows—an old man who held his head very high—and Bradley shook his head and turned away again.

They went back then to their little acre, and the days came and went, and the man fashioned spear and bow and arrows and hunted with them that they might have meat, and he made hooks of fish-bone and caught fishes with wondrous flies of his own invention; and the girl gathered fruits and cooked the flesh and the fish and made beds of branches and soft grasses. She cured the hides of the animals he killed and made them soft by much pounding. She made sandals for herself and for the man and fashioned a hide after the manner of those worn by the warriors of her tribe and made the man wear it, for his own garments were in rags.

She was always the same—sweet and kind and helpful—but always there was about her manner and her expression just a trace of wistfulness, and often she sat and looked at the man when he did not know it, her brows puckered in thought as though she were trying to fathom and to understand him.

In the face of the cliff, Bradley scooped a cave from the rotted granite of which the hill was composed, making a shelter for them against the rains. He brought wood for their cook-fire which they used only in the middle of the day—a time when there was little likelihood of Wieroos being in the air so far from their city—and then he learned to bank it with earth in such a way that the embers held until the following noon without giving off smoke.

Always he was planning on reaching the mainland, and never a day passed that he did not go to the top of the hill and look out across the sea toward the dark, distant line that meant for him comparative freedom and possibly reunion with his comrades. The girl always went with him, standing at his side and watching the stern expression on his face with just a tinge of sadness on her own.

"You are not happy," she said once.

"I should be over there with my men," he replied. "I do not know what may have happened to them."

"I want you to be happy," she said quite simply; "but I should be very lonely if you went away and left me here."

He put his hand on her shoulder. "I would not do that, little girl," he said gently. "If you cannot go with me, I shall not go. If either of us must go alone, it will be you."

Her face lighted to a wondrous smile. "Then we shall not be separated," she said, "for I shall never leave you as long as we both live."

He looked down into her face for a moment and then: "Who was An-Tak?" he asked.

"My brother," she replied. "Why?"

And then, even less than before, could he tell her. It was then that he did something he had never done before—he put his arms about her and stooping, kissed her forehead. "Until you find An-Tak," he said, "I will be your brother."

She drew away. "I already have a brother," she said, "and I do not want another."

CHAPTER V

DAYS became weeks, and weeks became months, and the months followed one another in a lazy procession of hot, humid days and warm, humid nights. The fugitives saw never a Wieroo by day though often at night they heard the melancholy flapping of giant wings far above them.

Each day was much like its predecessor. Bradley splashed about for a few minutes in the cold pool early each morning and after a time the girl tried it and liked it. Toward the center it was deep enough for swimming, and so he taught her to swim—she was probably the first human being in all Caspak's long ages who had done this thing. And then while she prepared breakfast, the man shaved—this he never neglected. At first it was a source of wonderment to the girl, for the Galu men are beardless.

When they needed meat, he hunted, otherwise he busied himself in improving their shelter, making new and better weapons, perfecting his knowledge of the girl's language and teaching her to speak and

to write English—anything that would keep them both occupied. He still sought new plans for escape, but with ever-lessening enthusiasm, since each new scheme presented some insurmountable obstacle.

And then one day as a bolt out of a clear sky came that which blasted the peace and security of their sanctuary forever. Bradley was just emerging from the water after his morning plunge when from overhead came the sound of flapping wings. Glancing quickly up the man saw a white-robed Wieroo circling slowly above him. That he had been discovered he could not doubt since the creature even dropped to a lower altitude as though to assure itself that what it saw was a man. Then it rose rapidly and winged away toward the city.

For two days Bradley and the girl lived in a constant state of apprehension, awaiting the moment when the hunters would come for them; but nothing happened until just after dawn of the third day, when the flapping of wings apprised them of the approach of Wieroos. Together they went to the edge of the wood and looked up to see five red-robed creatures dropping slowly in ever-lessening spirals toward their little amphitheater. With no attempt at concealment they came, sure of their ability to overwhelm these two fugitives, and with the fullest measure of self-confidence they landed in the clearing but a few yards from the man and the girl.

Following a plan already discussed Bradley and the girl retreated slowly into the woods. The Wieroos advanced, calling upon them to give themselves up; but the quarry made no reply. Farther and farther into the little wood Bradley led the hunters, permitting them to approach ever closer; then he circled back again toward the clearing, evidently to the great delight of the Wieroos, who now followed more leisurely, awaiting the moment when they should be beyond the trees and able to use their wings. They had opened into semicircular formation now with the evident intention of cutting the two off from returning into the wood. Each Wieroo advanced with his curved blade ready in his hand, each hideous face blank and expressionless.

It was then that Bradley opened fire with his pistol—three shots, aimed with careful deliberation, for it had been long since he had used the weapon, and he could not afford to chance wasting ammunition on misses. At each shot a Wieroo dropped; and then the remaining two sought escape by flight, screaming and wailing after the manner of their kind. When a Wieroo runs, his wings spread almost without any volition upon his part, since from time immemorial he has always used them to balance himself and accelerate his running speed so that in the open they appear to skim the surface of the ground when in the act of running. But here in the woods, among the close-set boles, the spreading of their wings proved their undoing—it hindered and stopped them and threw them to the ground, and then Bradley was upon them threatening them with instant death if they did not surrender—promising them their freedom if they did his bidding.

"As you have seen," he cried, "I can kill you when I wish and at a distance. You cannot escape me. Your only hope of life lies in obedience. Quick, or I kill!"

The Wieroos stopped and faced him. "What do you want of us?" asked one.

The Submissive Wieroos

"THROW aside your weapons," Bradley commanded. After a moment's hesitation they obeyed.

"Now approach!" A great plan—the only plan—had suddenly come to him like an inspiration.

The Wieroos came closer and halted at his command. Bradley turned to the girl. "There is rope in the shelter," he said. "Fetch it!"

She did as he bid, and then he directed her to fasten one end of a fifty-foot length to the ankle of one of the Wieroos and the opposite end to the second. The creatures gave evidence of great fear, but they dared not attempt to prevent the act.

"Now go out into the clearing," said Bradley, "and remember that I am walking close behind and that I will shoot the nearer one should either attempt to escape—that will hold the other until I can kill him as well."

In the open he halted them. "The girl will get upon the back of the one in front," announced the Englishman. "I will mount the other. She carries a sharp blade, and I carry this weapon that you know kills easily at a distance. If you disobey in the slightest, the instructions that I am about to give you, you shall both die. That we must die with you, will not deter us. If you obey, I promise to set you free without harming you.

"You will carry us due west, depositing us upon the shore of the mainland—that is all. It is the price of your lives. Do you agree?"

Sullenly the Wieroos acquiesced. Bradley examined the knots that held the rope to their ankles, and finding them secure directed the girl to mount the back of the leading Wieroo, himself climbing upon the other. Then he gave the signal for the two to rise together. With loud flapping of the powerful wings the creatures took to the air, circling once before they topped the trees upon the hill and then taking a course due west out over the waters of the sea.

Nowhere about them could Bradley see signs of other Wieroos, nor of those other menaces which he had feared might bring disaster to his plans for escape—the huge, winged reptilia that are so numerous above the southern areas of Caspak and which are often seen, though in lesser numbers, farther north.

Nearer and nearer loomed the mainland—a broad, parklike expanse stretching inland to the foot of a low plateau spread out before them. The little dots in the foreground became grazing herds of deer and antelope and bos; a huge woolly rhinoceros wallowed in a mudhole to the right, and beyond, a mighty mammoth culled the tender shoots from a tall tree. The roars and screams and growls of giant carnivora came faintly to their ears. Ah, this was Caspak. With all its dangers and its primal savagery it brought a fullness to the throat of the Englishman as to one who sees and hears the familiar sights and sounds of home after a long absence. Then the Wieroos dropped swiftly downward to the flower-starred turf that grew almost to the water's edge, the fugitives slipped from their backs, and

Bradley told the red-robed creatures they were free to go.

When he had cut the ropes from their ankles they rose with that uncanny wailing upon their lips that always brought a shudder to the Englishman, and upon dismal wings they flapped away toward frightful Oo-oh.

When the creatures had gone, the girl turned toward Bradley. "Why did you have them bring us here?" she asked. "Now we are far from my country. We may never live to reach it, as we are among enemies who, while not so horrible, will kill us just as surely as would the Wieroos should they capture us, and we have before us many marches through lands filled with savage beasts."

"There were two reasons," replied Bradley. "You told me that there are two Wieroo cities at the eastern end of the island. To have passed near either of them might have been to have brought about our heads hundreds of the creatures from whom we could not possibly have escaped. Again, my friends must be near this spot—it cannot be over two marches to the fort of which I have told you. It is my duty to return to them. If they still live we shall find a way to return you to your people."

"And you?" asked the girl.

"I escaped from Oo-oh," replied Bradley. "I have accomplished the impossible once, and so I shall accomplish it again—I shall escape from Caspak."

He was not looking at her face as he answered her, and so he did not see the shadow of sorrow that crossed her countenance. When he raised his eyes again, she was smiling.

"What you wish, I wish," said the girl.

The German U-Boat

SOUTHWARD along the coast they made their way following the beach, where the walking was best, but always keeping close enough to trees to insure sanctuary from the beasts and reptiles that so often menaced them. It was late in the afternoon when the girl suddenly seized Bradley's arm and pointed straight ahead along the shore. "What is that?" she whispered. "What strange reptile is it?"

Bradley looked in the direction her slim forefinger indicated. He rubbed his eyes and looked again, and then he seized her wrist and drew her quickly behind a clump of bushes.

"What is it?" she asked.

"It is the most frightful reptile that the waters of the world have ever known," he replied. "It is a German U-boat!"

An expression of amazement and understanding lighted her features. "It is the thing of which you told me," she exclaimed, "—the thing that swims under the water and carries men in its belly!"

"It is," replied Bradley.

"Then why do you hide from it?" asked the girl. "You said that now it belonged to your friends."

"Many months have passed since I knew what was going on among my friends," he replied. "I cannot know what has befallen them. They should have been gone from here in this vessel long since, and so I cannot understand why it is still here. I am going to investigate first before I show myself. When I left, there were more Germans on the *U-33* than there were men of my own party at the fort, and I have had sufficient experience of Germans to know that they will bear watching—if they have not been properly watched since I left."

Making their way through a fringe of wood that grew a few yards inland the two crept unseen toward the U-boat which lay moored to the shore at a point which Bradley now recognized as being near the oil-pool north of Dinosaur. As close as possible to the vessel they halted, crouching low among the dense vegetation, and watched the boat for signs of human life about it. The hatches were closed—no one could be seen or heard. For five minutes Bradley watched, and then he determined to board the submarine and investigate. He had risen to carry his decision into effect when there suddenly broke upon his ear, uttered in loud and menacing tones, a volley of German oaths and expletives among which he heard *Englische Schweinhunde* repeated several times. The voice did not come from the direction of the U-boat; but from inland. Creeping forward Bradley reached a spot where, through the creepers hanging from the trees, he could see a party of men coming down toward the shore.

He saw Baron Friedrich von Schoenvorts and six of his men—all armed—while marching in a little knot among them were Olson, Brady, Sinclair, Wilson and Whitely.

Bradley knew nothing of the disappearance of Bowen Tyler and Miss La Rue, nor of the perfidy of the Germans in shelling the fort and attempting to escape in the *U-33;* but he was in no way surprised at what he saw before him.

The little party came slowly onward, the prisoners staggering beneath heavy cans of oil, while Schwartz, one of the German noncommissioned officers cursed and beat them with a stick of wood, impartially. Von Schoenvorts walked in the rear of the column, encouraging Schwartz and laughing at the discomfiture of the Britishers. Dietz, Heins, and Klatz also seemed to enjoy the entertainment immensely; but two of the men—Plesser and Hindle—marched with eyes straight to the front and with scowling faces.

Bradley felt his blood boil at sight of the cowardly indignities being heaped upon his men, and in the brief span of time occupied by the column to come abreast of where he lay hidden he made his plans, foolhardy though he knew them. Then he drew the girl close to him. "Stay here," he whispered. "I am going out to fight those beasts; but I shall be killed. Do not let them see you. Do not let them take you alive. They are more cruel, more cowardly, more bestial than the Wieroos."

The girl pressed close to him, her face very white. "Go, if that is right," she whispered; "but if you die, I shall die, for I cannot live without you."

He looked sharply into her eyes. "Oh!" he ejaculated. "What an idiot I have been! Nor could I live without you, little girl." And he drew her very close and kissed her lips. "Good-bye." He disengaged himself from her arms and looked

again in time to see that the rear of the column had just passed him. Then he rose and leaped quickly and silently from the jungle.

The Fight with the Germans

SUDDENLY von Schoenvorts felt an arm thrown about his neck and his pistol jerked from its holster. He gave a cry of fright and warning, and his men turned to see a half-naked white man holding their leader securely from behind and aiming a pistol at them over his shoulder.

"Drop those guns!" came in short, sharp syllables and perfect German from the lips of the newcomer. "Drop them or I'll put a bullet through the back of von Schoenvorts' head."

The Germans hesitated for a moment, looking first toward von Schoenvorts and then to Schwartz, who was evidently second in command, for orders.

"It's the English pig, Bradley," shouted the latter, "and he's alone—go and get him!"

"Go yourself," growled Plesser. Hindle moved close to the side of Plesser and whispered something to him. The latter nodded. Suddenly von Schoenvorts wheeled about and seized Bradley's pistol arm with both hands. "Now!" he shouted. "Come and take him, quick!"

Schwartz and the three others leaped forward; but Plesser and Hindle held back, looking questioningly toward the English prisoners. Then Plesser spoke. Now is your chance, *Engländer*," he called in low tones. "Seize Hindle and me and take our guns from us—we will not fight hard."

Olson and Brady were not long in acting upon the suggestion. They had seen enough of the brutal treatment von Schoenvorts accorded his men and the especially venomous attentions he had taken great enjoyment in according Plesser and Hindle to understand that these two might be sincere in a desire for revenge. In another moment the two Germans were disarmed and Olson and Brady were running to the support of Bradley; but already it seemed too late.

Von Schoenvorts had managed to drag the Englishman around so that his back was toward Schwartz and the other advancing Germans. Schwartz was almost upon Bradley with gun clubbed and ready to smash down upon the Englishman's skull. Brady and Olson were charging the Germans in the rear with Wilson, Whitely, and Sinclair supporting them with bare fists. It seemed that Bradley was doomed when, apparently out of space, an arrow whizzed, striking Schwartz in the side, passing half-way through his body to crumple him to earth. With a shriek the man fell, and at the same time Olson and Brady saw the slim figure of a young girl standing at the edge of the jungle coolly fitting another arrow to her bow.

Bradley had now succeeded in wresting his arm free from von Schoenvorts' grip and in dropping the latter with a blow from the butt of his pistol. The rest of the English and Germans were engaged in a hand-to-hand encounter. Plesser and Hindle standing aside from the mêlée and urging their comrades to surrender and join with the English against the tyranny of von Schoenvorts. Heintz and Klatz, possibly influenced by their exhortation, were putting up but a half-hearted resistance; but Dietz, a huge, bearded, bull-necked Prussian, yelling like a maniac, sought to exterminate the *Englische Schweinhunde* with his bayonet, fearing to fire his piece lest he kill some of his comrades.

It was Olson who engaged him, and though unused to the long German rifle and bayonet, he met the bull-rush of the Hun with the cold, cruel precision and science of English bayonet-fighting. There was no feinting, no retiring and no parrying that was not also an attack. Bayonet-fighting today is not a pretty thing to see—it is no artistic fencing-match in which men give and take—it is slaughter inevitable and quickly over.

Dietz lunged once madly at Olson's throat. A short point, with just a twist of the bayonet to the left sent the sharp blade over the Englishman's left shoulder. Instantly he stepped close in, dropped his rifle through his hands and grasped it with both close below the muzzle and with a short, sharp jab sent the blade up beneath Dietz's chin clear to the brain. So quickly was the thing done and so quick the withdrawal that Olson had wheeled to take on another adversary before the German's corpse had toppled to the ground.

But there were no more adversaries to take on. Heinz and Klatz had thrown down their rifles and with hands above their heads were crying *"Kamerad! Kamerad!"* at the tops of their voices. Von Schoenvorts still lay where he had fallen. Plesser and Hindle were explaining to Bradley that they were glad of the outcome of the fight, as they could no longer endure the brutality of the U-boat commander.

The End of a Tyrant

THE remainder of the men were looking at the girl who now advanced slowly, her bow ready, when Bradley turned toward her and held out his hand.

"Co-Tan," he said, "unstring your bow—these are my friends, and yours." And to the Englishmen: "This is Co-Tan. You who saw her save me from Schwartz know a part of what I owe her."

The rough men gathered about the girl, and when she spoke to them in broken English, with a smile upon her lips enhancing the charm of her irresistible accent, each and every one of them promptly fell in love with her and constituted himself henceforth her guardian and her slave.

A moment later the attention of each was called to Plesser by a volley of invective. They turned in time to see the man running toward von Schoenvorts who was just rising from the ground. Plesser carried a rifle with bayonet fixed, that he had snatched from the side of Dietz's corpse. Von Schoenvorts' face was livid with fear, his jaws working as though he would call for help; but no sound came from his blue lips.

"You struck me," shrieked Plesser. "Once, twice, three times, you struck me, pig. You murdered Schwerke—you drove him insane by your cruelty until he took his own life. You are only one of your kind—they are all like you from the Kaiser down. I wish that you were the Kaiser. Thus would I do!" And he lunged his bayonet through von Schoenvorts' chest. Then he let his rifle fall

with the dying man and wheeled toward Bradley. "Here I am," he said. "Do with me as you like."

"You will not be punished," said Bradley. "There are four of you left—if you four want to come along and work with us, we will take you; but you will come as prisoners."

"It suits me," said Plesser. "Now that the captain-lieutenant is dead you need not fear us. All our lives we have known nothing but to obey his class. If I had not killed him, I suppose I would be fool enough to obey him again; but he is dead. Now we will obey you—we must obey some one."

"And you?" Bradley turned to the other survivors of the original crew of the *U-33*. Each promised obedience.

The two dead Germans were buried in a single grave, and then the party boarded the submarine and stowed away the oil.

Here Bradley told the men what had befallen him since the night of September 14th when he had disappeared so mysteriously from the camp upon the plateau. Now he learned for the first time that Bowen P. Tyler, Jr., and Miss La Rue had been missing even longer than he and that no faintest trace of them had been discovered.

Olson told him of how the Germans had returned and waited in ambush for them outside the fort, capturing them that they might be used to assist in the work of refining the oil and later in manning the *U-33*, and Plesser told briefly of the experiences of the German crew under von Schoenvorts since they had escaped from Caspak months before—of how they lost their bearings after having been shelled by ships they had attempted to speak to farther north and how at last with provisions gone and fuel almost exhausted they had sought and at last found, more by accident than design, the mysterious island they had once been so glad to leave behind.

"Now," announced Bradley, "we'll plan for the future. The boat has fuel, provisions and water for a month, I believe you said, Plesser; there are ten of us to man it. We have a last sad duty here—we must search for Miss La Rue and Mr. Tyler. I say a sad duty because we know that we shall not find them; but it is none the less our duty to comb the shore-line, firing signal shells at intervals, that we at least may leave finally with full knowledge that we have done all that men might do to locate them."

None dissented from this conviction, nor was there a voice raised in protest against the plan to at least make assurance doubly sure before quitting Caspak forever.

The Beautiful Co-Tan

AND so they started, cruising slowly up the coast and firing an occasional shot from the gun. Often the vessel was brought to a stop, and always there were anxious eyes scanning the shore for an answering signal. Late in the afternoon they caught sight of a number of Band-lu warriors but when the vessel approached the shore and the natives realized that human beings stood upon the back of the strange monster of the sea, they fled in terror before Bradley could come within hailing distance.

That night they dropped anchor at the mouth of a sluggish stream whose warm waters swarmed with millions of tiny tadpolelike organisms—minute human spawn starting on their precarious journey from some inland pool toward "the beginning"—a journey which one in millions, perhaps, might survive to complete. Already, almost at the inception of life they were being greeted by thousands of voracious mouths as fish and reptiles of many kinds fought to devour them, the while other and larger creatures pursued the devourers, to be, in turn, preyed upon by some other of the countless forms that inhabit the deeps of Caprona's frightful sea.

The second day was practically a repetition of the first. They moved very slowly with frequent stops, and once they landed in the Kro-lu country to hunt. Here they were attacked by the bow-and-arrow men, whom they could not persuade to palaver with them. So belligerent were the natives that it became necessary to fire into them in order to escape their persistent and ferocious attentions.

"What chance," asked Bradley, as they were returning to the boat with their game, "could Tyler and Miss La Rue have had among such as these?"

But they continued on their fruitless quest, and the third day, after cruising along the shore of a deep inlet, they passed a line of lofty cliffs that formed the southern shore of the inlet and rounded a sharp promontory about noon. Co-Tan and Bradley were on deck alone, and as the new shore-line appeared beyond the point, the girl gave an exclamation of joy and seized the man's hand in hers.

"Oh, look!" she cried. "The Galu country! The Galu country! It is my country that I never thought to see again."

"You are glad to come again, Co-Tan?" asked Bradley.

"Oh, so glad!" she cried. "And you will come with me to my people? We may live here among them, and you will be a great warrior—oh, when Jor dies you may even be chief, for there is none so mighty as my warrior. You will come?"

Bradley shook his head. "I cannot, little Co-Tan," he answered. "My country needs me, and I must go back. Maybe some day I shall return. You will not forget me, Co-Tan?"

She looked at him in wide-eyed wonder. "You are going away from me?" she asked in a very small voice. "You are going away from Co-Tan?"

Bradley looked down upon the little bowed head. He felt the soft cheek against his bare arm; and he felt something else there too—hot drops of moisture that ran down to his very finger-tips and splashed upon the deck—tiny little splashes, but each one wrung from a woman's heart.

He bent low and raised the tear-stained face to his own. "No, Co-Tan," he said, "I am not going away from you—for you are going with me. You are going back to my own country to be my wife. Tell me that you will, Co-Tan." And he bent still lower from his height and kissed her lips. Nor did he need more than the wonderful new light in her eyes to tell him that she would go to the

end of the world with him if he would but take her. And then the gun-crew came up from below again to fire a signal shot, and the two were brought down from the high heaven of their new happiness to the scarred and weather-beaten deck of the *U-33*.

The Last Encounter

AN hour later the vessel was running close in by a shore of wondrous beauty beside a parklike meadow that stretched back a mile inland to the foot of a plateau when Whitely called attention to a score of figures clambering downward from the elevation to the lowland below. The engines were reversed and the boat brought to a stop while all hands gathered on deck to watch the little party coming toward them across the meadow.

"They are Galus," cried Co-Tan; "they are my own people. Let me speak to them lest they think we come to fight them. Put me ashore, my man, and I will go and meet them."

The nose of the U-boat was run close in to the steep bank; but when Co-Tan would have run forward alone, Bradley seized her hand and held her back. "I will go with you, Co-Tan," he said; and together they advanced to meet the oncoming party.

There were about twenty warriors moving forward in a thin line, as our infantry advance as skirmishers. Bradley could not but notice the marked difference between this formation and the moblike methods of the lower tribes he had come in contact with, and he commented upon it to Co-Tan.

"Galu warriors always advance into battle thus," she said. "The lesser people remain in a huddled group where they can scarce use their weapons the while they present so big a mark to us that our spears and arrows cannot miss them; but when they hurl theirs at our warriors, if they miss the first man, there is no chance that they will kill some one behind him.

"Stand still now," she cautioned, "and fold your arms. They will not harm us then."

Bradley did as he was bid, and the two stood with arms folded as the line of warriors approached. When they had come within some fifty yards, they halted and one spoke. "Who are you and from whence do you come?" he asked; and then Co-Tan gave a little, glad cry and sprang forward with outstretched arms.

"Oh, Tan!" she exclaimed. "Do you not know your little Co-Tan?"

The warrior stared, incredulous, for a moment, and then he, too, ran forward and when they met, took the girl in his arms. It was then that Bradley experienced to the full a sensation that was new to him—a sudden hatred for the strange warrior before him and a desire to kill without knowing why he would kill. He moved quickly to the girl's side and grasped her wrist.

"Who is this man?" he demanded in cold tones.

Co-Tan turned a surprised face toward the Englishman and then of a sudden broke forth into a merry peal of laughter. "This is my father, Brad-lee," she cried.

"And who is Brad-lee?" demanded the warrior.

"He is my man," replied Co-Tan simply.

"By what right?" insisted Tan.

And then she told him briefly of all that she had passed through since the Wieroos had stolen her and of how Bradley had rescued her and sought to rescue An-Tak, her brother.

"You are satisfied with him?" asked Tan.

"Yes," replied the girl proudly.

It was then that Bradley's attention was attracted to the edge of the plateau by a movement there, and looking closely he saw a horse bearing two figures sliding down the steep declivity. Once at the bottom, the animal came charging across the meadowland at a rapid run. It was a magnificent animal—a great bay stallion with a white-blazed face and white forelegs to the knees, its barrel encircled by a broad surcingle of white; and as it came to a sudden stop beside Tan, the Englishman saw that it bore a man and a girl—a tall man and a girl as beautiful as Co-Tan. When the girl espied the latter, she slid from the horse and ran toward her, fairly screaming for joy.

Good-bye to Caspak

THE man dismounted and stood beside Tan. Like Bradley he was garbed after the fashion of the surrounding warriors; but there was a subtle difference between him and his companion. Possibly he detected a similar difference in Bradley, for his first question was, "From what country?" and though he spoke in Galu Bradley thought he detected an accent.

"England," replied Bradley.

A broad smile lighted the newcomer's face as he held out his hand. "I am Tom Billings of Santa Monica, California," he said. "I know all about you, and I'm mighty glad to find you alive."

"How did you get here?" asked Bradley. "I thought ours was the only party of men from the outer world ever to enter Caprona."

"It was, until we came in search of Bowen J. Tyler, Jr.," replied Billings. "We found him and sent him home with his bride; but I was kept a prisoner here."

Bradley's face darkened—then they were not among friends after all. "There are ten of us down there on a German sub with small-arms and a gun," he said quickly in English. "It will be no trick to get away from these people."

"You don't know my jailer," replied Billings, "or you'd not be so sure. Wait, I'll introduce you." And then turning to the girl who had accompanied him he called her by name. "Ajor," he said, "permit me to introduce Lieutenant Bradley; Licutenant, Mrs. Billings—my jailer!"

The Englishman laughed as he shook hands with the girl. "You are not as good a soldier as I," he said to Billings. "Instead of being taken prisoner myself I have taken one—Mrs. Bradley, this is Mr. Billings."

Ajor, quick to understand, turned toward Co-Tan. "You are going back with him to his country?" she asked. Co-Tan admitted it.

"You dare?" asked Ajor. "But your father will not permit it—Jor, my father, High Chief of the Galus, will not permit it, for like me you are *cosata-lo*. Oh, Co-Tan, if we but could! How I would

love to see all the strange and wonderful things of which my Tom tells me!"

Bradley bent and whispered in her ear. "Say the word and you may both go with us."

Billings heard and speaking in English, asked Ajor if she would go.

"Yes," she answered, "if you wish it; but you know, my Tom, that if Jor captures us, both you and Co-Tan's man will pay the penalty with your lives—not even his love for me or his admiration for you can save you."

Bradley noticed that she spoke in English—broken English like Co-Tan's but equally appealing. "We can easily get you aboard the ship," he said, "on some pretext or other, and then we can sail away. They can neither harm nor detain us, nor will we have to fire a shot at them."

And so it was done, Bradley and Co-Tan taking Ajor and Billings aboard to "show" them the vessel, which almost immediately raised anchor and moved slowly out into the sea.

"I hate to do it," said Billings. "They have been fine to me. Jor and Tan are splendid men and they will think me an ingrate; but I can't waste my life here when there is so much to be done in the outer world."

As they steamed down the inland sea past the island of Oo-oh, the stories of their adventures were retold, and Bradley learned that Bowen Tyler and his bride had left the Galu country but a fortnight before and that there was every reason to believe that the *Toreador* might still be lying in the Pacific not far off the subterranean mouth of the river which emitted Caprona's heated waters into the ocean.

Late in the second day, after running through swarms of hideous reptiles, they submerged at the point where the river entered beneath the cliffs and shortly after rose to the sunlit surface of the Pacific; but nowhere as far as they could see was sign of another craft. Down the coast they steamed toward the beach where Billings had made his crossing in the hydro-aeroplane and just at dusk the lookout announced a light dead ahead. It proved to be aboard the *Toreador*, and a half-hour later there was such a reunion on the deck of the trig little yacht as no one there had ever dreamed might be possible. Of the Allies there were only Tippet and James to be mourned, and no one mourned any of the German dead or Benson, the traitor, whose ugly story was first told in Bowen Tyler's manuscript.

Tyler and the rescue party had but just reached the yacht that afternoon. They had heard, faintly, the signal shots fired by the *U-33* but had been unable to locate their direction and so had assumed that they had come from the guns of the *Toreador*.

It was a happy party that sailed north toward sunny, southern California, the old *U-33* trailing in the wake of the *Toreador* and flying with the latter, the glorious Stars and Stripes, beneath which she had been born in the shipyard at Santa Monica. Three newly married couples, their bonds now duly solemnized by the master of the ship, joyed in the peace and security of the untracked waters of the south Pacific and the unique honeymoon which, had it not been for stern duty ahead, they could have wished protracted till the end of time.

And so they came one day to dock at the shipyard which Bowen Tyler now controlled, and here the *U-33* still lies while those who passed so many eventful days within and because of her, have gone their various ways.

THE END.

The Plague of the Living Dead

By A. HYATT VERRILL

(*Concluded*)

crashing, pattering, until at last all was still—not a sound was heard.

Awed and shaken, the watchers, accompanied by a band of armed troops, made their way cautiously to the devastated area.

A vast new crater yawned where the Living Dead had been. For half a dozen miles about, the island was littered with debris; but nowhere could a trace be found of the terrible beings.

And as no one, anywhere, has ever reported finding one of the monsters, or any fragments of their immortal bodies, it is safe to assume that somewhere, far beyond the earth's attraction, the Living Dead, blown to infinitesimal atoms, are doomed to forever remain suspended in space.

The terrific explosion, which was reported by ships at sea and which was plainly heard at Roque over fifty miles distant, was passed off as a natural, but harmless eruption of Sugar Loaf volcano.

As for Doctor Farnham, with the several thousands of dollars left from his fortune, he built a church and a hospital, and he still resides quietly in Abilone, devoting his talents and his knowledge to healing the sick and relieving the suffering. His three human experiments are still with him. Never have they divulged what they know, and never do they mention the fact that they were subjected to the doctor's treatment, for they have got the idea that if the officials should discover they are immortal, they would meet the same fate as the Living Dead.

As far as can be seen or determined, they are as lively and chipper as ever, but whether they are fated to live on forever, or whether their span of life has merely been extended, no one can say. At any rate, the oldest fellow has made his will, and the other two are in constant dread of being killed by motor cars. So, being immortal does not, apparently, rid a person of the fear of death.

THE END.

Hicks' Inventions With a Kick

By HENRY HUGH SIMMONS

coward, Irvine, who had been hiding behind her ample proportions. As he fell, he received a jelly in the face and the inventor, who was trying to get away he knew not where, slipped on a steak and put one foot down firmly on his stomach. The maniac roar of Irvine could be heard even above the din of the fray, the groans of the unfortunate guests, the shrieks of the women, the "swish! slap! flop!" caused by the impact of the steaks, eggs, tarts and other solid articles of nutrition, and the hissing and splashing of the hot liquids.

One more rush, a final, grand, and wild rush, the table made, and as it did, it carried with it the ring of liquid tubes. Instantly a solid sheet of red-brown-yellow-black liquid covered the room, watering the guests there assembled on the floor plentifully, generously, and thoroughly. The remaining objects on the table were shot into the midst of our unfortunate selves, instantly felling those that tried to rise from under that fierce red-hot liquid sheet. Then the hissing in the adjoining room grew louder, there was a tremendous report, and the boiler blew up. Instantly the liquids ceased to flow. The table gradually slowed up, until it was only spinning lazily, and eight dazed mortals picked themselves out from under miscellaneous articles of crockery and food and limped or crawled out.

I am sorry to say that my aunt Zelinda proved quite unreasonable. She disinherited me on the spot. As for Hicks, that mighty genius went on a prolonged journey and I have not heard from him since. I met Uncle Jeremiah recently and he told me he had disinherited "that confounded, low-down scoundrel" entirely. That, I willingly tell, but spare me further details, please!

THE END.

The Remarkable Case of Davidson's Eyes

By H. G. WELLS

of our minds that Davidson has really seen the place. In some unaccountable way, while he moved hither and thither in London, his sight moved hither and thither in a manner that corresponded, about this distant island. *How* is absolutely a mystery.

That completes the remarkable story of Davidson's eyes. It's perhaps the best authenticated case in existence of real vision at a distance. Explanation there is none forthcoming, except what Professor Wade had thrown out. But this explanation invokes the Fourth Dimension, and a dissertation on theoretical kinds of space. To talk of there being "a kink in space" seems mere nonsense to me; it may be because I am no mathematician. When I said that nothing would alter the fact that the place is eight thousand miles away, he answered that two points might be a yard away on a sheet of paper, and yet be brought together by bending the paper round. The reader may grasp his argument, but I certainly do not. His idea seems to be that Davidson, stooping between the poles of the big electro-magnet, had some extraordinary twist given to his retinal elements through the sudden change in the field of force due to the lightning.

He thinks, as a consequence of this, that it may be possible to live visually in one part of the world, while one lives bodily in another. He has even made some experiments in support of his views; but, so far, he had simply succeeded in blinding a few dogs. I believe that is the net result of his work, though I have not seen him for some weeks. But the whole of this theory seems fantastic to me.

The facts concerning Davidson stand on an altogether different footing and I can testify personally to the accuracy of every detail I have given.

THE END.

Discussions

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.

WHERE CRITICS DISAGREE

Editor, AMAZING STORIES:

On the whole, I like your magazine. The idea back of it is extremely good, yet many of the features of the magazine I dislike. Many of your stories are poor. I refer especially to the "Dr. Hackensaw" and "Mr. Fosdick" series. I do not recall ever having read any stories that were more poorly written than these, except, perhaps, "The Time Eliminator," by Kaw, in your December issue. Please do not spoil your magazine by allowing such mediocre stuff to reach your pages.

Regarding the subject matter: I like scientifiction, but I like it administered so that I can at least swallow it. It would gratify me immensely to see "intelligent lobsters" and "man-eating trees," together with similar hokum, missing from AMAZING STORIES. There is a difference between fairy tales and real scientific fiction.

Now, I have made some rather harsh criticisms. The fact remains that your magazine is, on the whole, good. I like H. G. Wells. Garrett P. Serviss, (except in "A Columbus of Space"), and Murray Leinster, is really good.

One other thing occurs to me. I do not find your covers attractive. Somehow, they seem to suggest the cheap magazine class. And now, having unburdened myself of all this, I will close, hoping that you will give my criticisms a little thought, and wishing good luck to you and your publications.

J. F. McCAGUE.
Chicago, Ill.

[This critic wants scientific fiction administered so that he can swallow it. One of the greatest fiction stories of the world is "Gulliver's Travels." We wonder if our correspondent would consider that the adventures of Dean Swift's hero were administered so that he could swallow them. The authors he dislikes and criticizes so unfavorably are great favorites with many readers.

Our cover page illustrations are drawn by the highest grade illustrators and have excited much favorable comment. In many other letters which we received, we find the artist, Paul, highly commended. Yet it is with some of his best work that you are not pleased.—EDITOR.]

Discussions

HORSES ON THE ARK

Editor, AMAZING STORIES:

In your story, "The Second Deluge," by Garrett P. Serviss, the author has Cosmo Versal purchase the last horses in England, to put them on his ark and then, when Professor Pludder lands in Colorado, he finds horses and cattle there. Otherwise your magazine is certainly all right, and I would like to see it twice a month, if you could keep it on the same level.

OTTO LINDEMANN, U. S. M. C.,
Pearl Harbor, Hawaii.

[The best answer we can give to the curious criticism contained in this letter, is that when he purchased the last horses in England to put on his Ark, Cosmo Versal knew nothing of the probable or possible survival of horses and cattle in Colorado. As regards our correspondent's final clause, whether we publish ti twice in a month or not, we are determined to maintain the high level of AMAZING STORIES.—EDITOR.]

(Continued on page 101)

MORE FAVORABLE CRITICISM

Editor, AMAZING STORIES:

It is the first letter I have written to magazines in protest to the criticism of the readers. I certainly can not let the letters you have published in AMAZING STORIES get by without a come-back.

It seems that 70 per cent of the letters published disagree with the type of stories written. I do not believe in criticism unless the criticism is well founded on fact, which does not appear to be the case in the letters.

I have also read every issue of AMAZING STORIES and I have as yet to find fault. The authors are human and not perfect, but they give the best that is in them. What more can you ask? As for your judgment of the stories—I think your editors are well qualified to select the type of literature the public wants. And your judgment is supreme. Otherwise your other magazines would not be quite as great a success as they are.

As some of the readers remember—six years ago—you published almost the same kind of stories in *Radio News*—there were letters criticizing them but all the same the magazine went over big, and look at the circulation to-day. Let the critics digest that.

Much of the criticism refers to stories written by authors years ago. For those who haven't read them they are just as interesting as those written to-day. In Jules Verne's book "Twenty Thousand Leagues Under the Sea," the description of the submarine used in fiction does not differ far from the submarine of to-day. And in Verne's time they had subs made of wood!

Another thing—in your December issue you mentioned a ball of substance weighing 20 trillion tons per cu. inch. No doubt the wise ones (critics) think that this is a new discovery—but it isn't. You can find it referred to in Balls' "Story of the Heavens" I forgot to mention that the substance was known to be in certain stars—very remote.

That is all I have to say in regard to uncalled for criticism. I believe in giving the author and the editor their due. They work to the best of their ability to please and are not going to publish "bunk" that no one will swallow.

Certainly I would like to see AMAZING STORIES come out a semi-monthly; also wish you all the success in the world.

ERIC R. GAGE,
Philadelphia, Pa.

[We can only say about this letter that it is most acceptable, because, like several others, it expresses substantially, the ideas of the editor. We give the stories by the best scientific writers and many of the letters show that we do meet our readers' views, but we are getting some other interesting criticisms, which show that we have utterly failed with some of our readers.—EDITOR.]

THE ADVENTURES OF BURL

Editor, AMAZING STORIES:

I enjoy AMAZING STORIES very much and think that it is the best magazine out. The only serious fault that I can find with it is that it does not come out twice a month.

Give us more stories by Murray Leinster. I liked his "Mad Planet" exceedingly, also the "Red Dust." The only criticism I can make of these stories is that it doesn't seem possible that Burl and his companions could have descended to such depths as pictured in the stories, from the plane that the human race has ascended to.

Then, again, if the insects have increased to such gigantic size, why did not the humans increase proportionately if they managed to continue to exist at all? Both men and insects have for countless ages breathed air which contained about the same proportion of carbon dioxide. The breathing organs of both men and insects were adjusted to that particular proportion. So if the insects grew as the amount of carbon dioxide increased it seems only reasonable to suppose that human people would grow accordingly. But enough of that.

I would like to see more of the Fosdick stories and other stories of that type. They provide just the right touch of relief to the tone of the rest of the magazine, not that it isn't all right. One such story should be put in every number of AMAZING STORIES.

I enjoy your new department, "Discussions" and hope that it will live up to its name. In closing let me repeat my wish that you make AMAZING STORIES a semi-monthly.

ARTHUR LEVINE,
New York, N. Y.

[We are glad that you are interested in Burl. The nature features of the story, however, impress us far more than does the biography of the hero. It is a really valuable study of entomology and cryptogamic vegetation. No one will read it attentively without enjoying the scientific part, emphasized by the author's imagination, even more than he will be interested in the personality of Burl and his companions.

Your criticism based on the action of carbon dioxide gas on the systems of human beings and on plants interests. Carbon dioxide gas would tend to increase the vigor of plant life, but would have exactly the opposite effect on the animal system. What would favor plant growth might operate to favor insect growth and development.—EDITOR.]

POOR FITZ-JAMES O'BRIEN

Editor, AMAZING STORIES:

Why on earth should you publish a story in which the science is so manifestly false that even I a mere dabbler, should be able to see the mistakes?

In Fitz-James O'Brien's "The Diamond Lens," why should animalicules living in a molecule, be discommoded by the evaporation of the drop of water? A molecule of water is of the same size as a molecule of steam or ice, and, I believe, is not in the least changed by evaporation or solidification. Why should evaporation kill an animalicule?

Also, how can a man see, with no aid save that of a diamond lens, that which we are unable to see because our eye is too coarse? Would the rays of light be of sufficient shortness to strike a molecule anyway? I am no microscopist, but I believe that no ray which can be intercepted by a molecule will find resistance in the human eye. I was under the impression that nothing but an X-ray would be stopped by a molecule—and we cannot see X-rays. Why publish stories which cannot be—since science has proven them false. Stories like "The Time Eliminator," which are possible, are all right—but the others *no*. By the way, what is the metal levium, which is mentioned so often in "The Second Deluge?" I am under the impression that all metals of a weight approximate to that which Mr. Serviss assigns to levium, have been discovered, and that none of them meets his requirements. Is levium a relation of lithium, glucinum, or some compound of the two?

Chicago, Ill.

[We do not agree with your train of thought as to Fitz-James O'Brien's "The Diamond Lens." This story, by the way, was written over fifty years ago, and the author has long since died. We insist that the optics in the story is correct, and we do not see why you question that evaporation could kill the animalcules. If the drop of water evaporates, naturally it becomes non-existent physically and it could no longer be observed by microscope or otherwise. It has been taken up in the atmosphere and therefore has vanished.

Mr. Fitz-James O'Brien's science, therefore, is correct, and must stand.

To be sure—and here we agree with you—"The Diamond Lens" itself is a poetic license. The author used the diamond because the refraction of the latter is of very large index and it was here that the scientific point of the story came in. If the story were fact, it would not be fiction. And if it were fact, we would be using the device as it is.

As to the metal, Levium, this is a purely fanciful name for a supposed metal which, of course, does not exist.—EDITOR.]

A CHARACTERISTIC LETTER FULL OF APPRECIATION

Editor, AMAZING STORIES:

No, this is not a story. And there is none coming "under separate cover." It is merely the result of a little curiosity concerning your new magazine, "a new sort of magazine." In these Readers' Forum things in so many of the publications nowadays are the letters those of real people, or are they merely turned out from the fertile imagination of the publishers? If they are written by real people, here is another contribution for you to print. If not, here is another contribution for the proverbial waste basket. I give some of the criticism that you were asking for.

In the first place, I strongly advise that the magazine be kept in the present form, *i.e.*, with one or two two-part stories and the rest short stories. When a person has a few minutes to spare, he is far more likely to want to read a whole story than to read a little bit of a long story, and then forget where he left off when he next starts to read. Probably I have expressed this rather clumsily, as usual, but I am too lazy to correct it, and so it must stand as it is.

I shall be looking forward to the stories translated from foreign languages, and also to some good ones by Jules Verne. I believe that some account should be made of Dr. Hackensaw's inventions, which he seems to produce at an amazing rate of speed. However, I hope that if they are inaugurated in AMAZING STORIES, they will be better than the last ones appearing in *Science and Invention.*

I have read your first issue from cover to cover. The "New Accelerator" was still good, although I have read it in two different places before. Jules Verne is almost always good, and his "Off on a Comet" is no exception. "The Man from the Atom," although the theme is old and timeworn, presents some new ideas on the matter. "The Man Who Saved the Earth" is good, even though the author does leave one or two things unexplained at the end. "The Thing from—Outside" was all right. I did not like it as well as the other stories, but probably other people liked it more. "The Facts in the Case of M. Valdemar" is a typical Poe story, but, to my mind, it does not belong in a magazine, or rather I should say, in "THE magazine of scientifiction."

"They Called Me a Human Clam, But I Changed Almost Overnight" is also good. I often wonder

what would happen if the Hard-Working-Young-Man-Who-Never-Seemed-to-Get - Anyplace studied fourteen or sixteen minutes a day instead of the accepted fifteen.

As you may wish to know my age, I will state that I am not a day *over fifty*. Neither am I a day over thirty-two. In fact, I am almost ashamed to say it, but it must be said, to my sorrow, I am not even a day over twenty-one. Indeed, some people state that my age (mentally) is three years. Such is the awful state of affairs, and I am almost beginning to doubt myself.

But I must sign off now, as time and paper are growing short, and thank you for this heart-to-heart conversation with your secretary.

P. S. In case that this is published, don't mention my name, for I am very bashful. Just say, "A gentleman from Ann Arbor, Mich.———", or something like that.

R. S.,
Ann Arbor, Mich.

[The Editors of AMAZING STORIES are very fortunate in that they receive such an avalanche of letters during the week, so that they are hard put to it not only to answer them, but to select those for publication. Making up imaginary letters, therefore, for these columns, would seem like carrying coal to Newcastle.

We publish our correspondent's letter mainly for the reason that we wish to show the wide variation of opinion of stories between different readers. What one likes another denounces violently. As a matter of fact, with the exception of a few outstanding stories, there seems to be little agreement among the readers as to their likes and dislikes.—EDITOR.]

OLD AUTHORS APPRECIATED

Editor, AMAZING STORIES:

I have read the three last issues of "Amazing Stories" and have found some that were excellent and some that I considered as being rather loose in spots.

Certainly Jules Verne owes this generation no apology. I read many of his thirty years ago; including "Twenty Thousand Leagues Under the Sea"; "Hector Servadac or the Career of a Comet", and "The Mysterious Island." "Hector Servadac" would be a most excellent story for those that have not read it and are fond of the highly imaginative.

H. Rider Haggard, now dead, also wrote many wonderful stories. "The People of the Mist", "Montezuma's Daughter", and "The Heart of the World", as well as "She", grip the imagination in a way that no other writer has ever succeeded in doing in that type of fiction. True, these are not your newly coined "Scientifiction", but they truly are amazing stories and have none of the loose spots in them.

H. G. Wells needs none to champion his work. He has been at the top of the list ever since he wrote the "War of Worlds" about a quarter of a century ago. No loose spots there either.

Murray Leinster certainly knows his "bugs." He has made quite a character of Burl and let us hope that we hear more of the doings of this primitive reasoner. It certainly is a relief to read a pseudoscientific story that is written by a person who does know something of science and does not have to depend entirely on his imagination. Certainly Leinster appears to be an entomologist of parts.

Garrett P. Serviss and Edgar Rice Burroughs are two more that are in the top rank and are commendably free from that looseness that I have mentioned before, and I almost forgot England in my list of good authors along that line.

In regards to the length of stories I prefer the regular full novel length.

I don't think that it would hurt the magazine at all to include one of the old masters, so to speak, in each issue. While the works of Wells, Haggard, Serviss, England and some others may be old stuff with some of us, as one of your readers had pointed out, and are standard material at the libraries, there are many that do not even know that such works exist in out of the way places. Not every one, and rather a small percentage are so situated that they have a library at their disposal.

Even in some fairly good sized towns the library is sadly lacking in that respect. I can name a town with about twenty or more thousand population, which has one of General Motors' largest plants, and there are not more than three of the books of Haggard in the public library.

E. H. HARDY,
Norwood, O.

[The suggestion that works by old-time authors should be used in all our issues, we hope in a measure to carry out. Murray Leinster's stories are of a very high order of merit, because in reading them, you are really studying correct entomology, and his description of the development of fungoid vegetation is most valuable. Our correspondent has undoubtedly seen the description and illustration of the exploding mushroom in our last issue, showing that the author of the adventures of Burl knew his botany.—EDITOR.]

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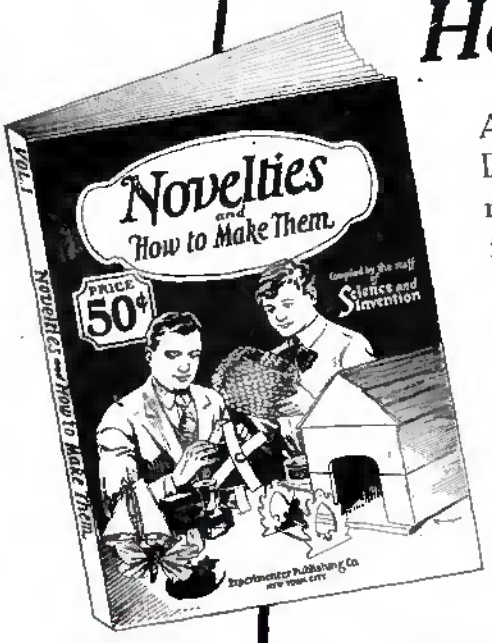

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