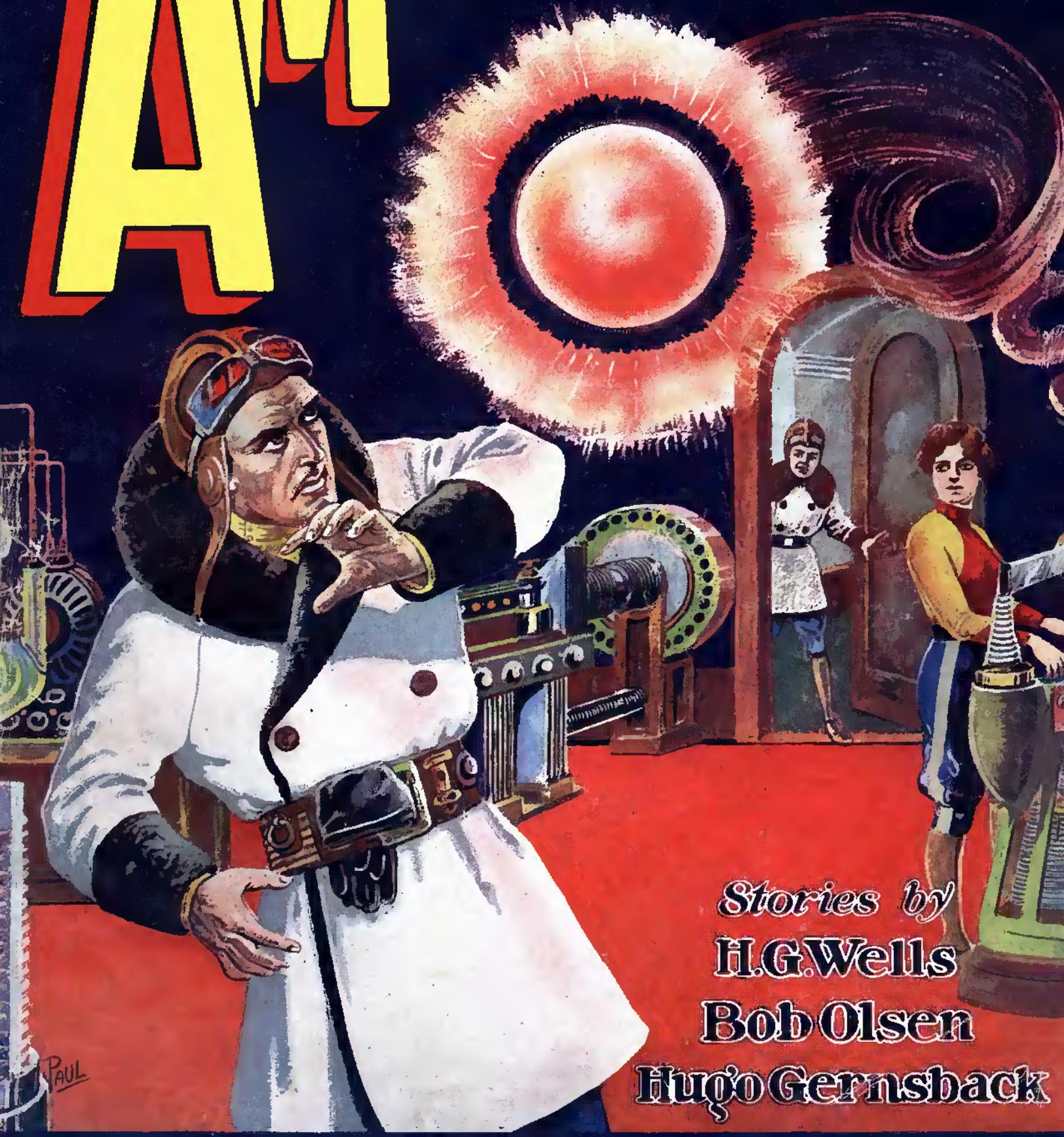


July

BROADCAST
WRNY
STATION

AMAZING STORIES

HUGO GERNSBACK
EDITOR

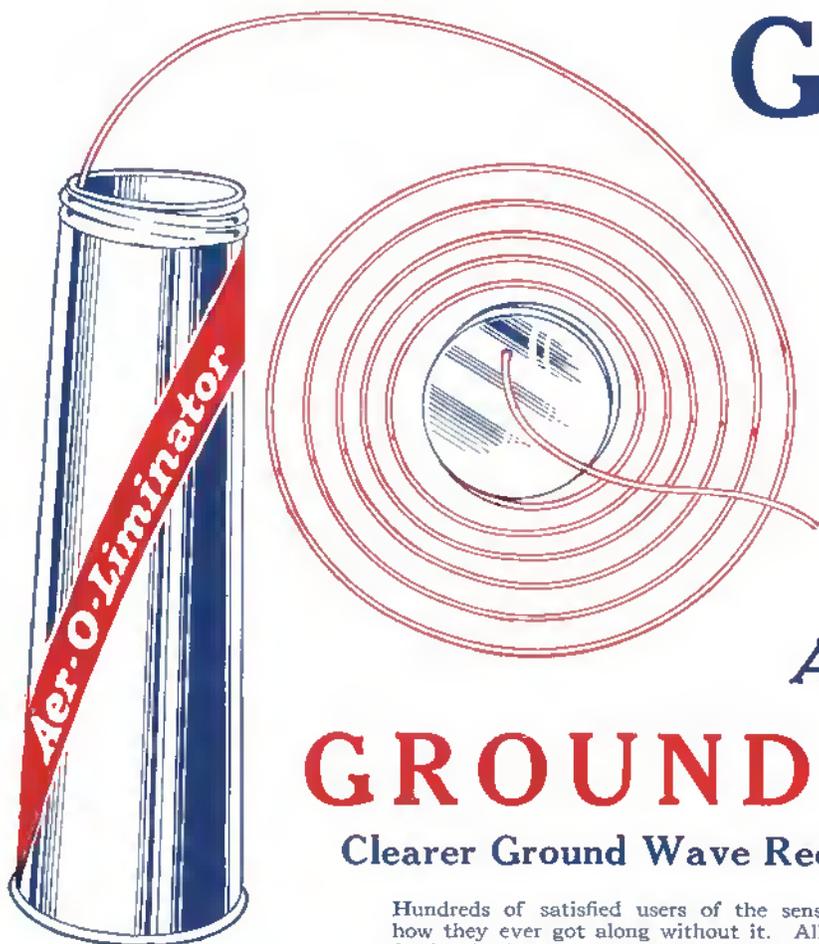


Stories by
H.G. Wells
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PORTRAYING HIS IMMORTALITY

AMAZING STORIES

July, 1928
Vol. 3, No. 4

EDITORIAL & GENERAL OFFICES: 230 Fifth Ave., New York City
Published by Experimenter Publishing Company, Inc.

H. GERNSBACK, Pres.; S. GERNSBACK, Treas.;
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Publishers of SCIENCE & INVENTION, RADIO NEWS,
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Owners of Broadcast Station WRNY

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Our Cover

this month depicts a scene from the story entitled "Super-Radio," by Charles Cloukey, in which "M. W.," the super-criminal scientist, by manipulating a peculiar-looking instrument, brings forth from the tube at the top, a small, brilliant object, which floats through the air. It is an artificial ball of lightning, with which the criminal very nearly succeeds in destroying the intruder.

In Our Next Issue:

THE SKYLARK OF SPACE, by Edward Elmer Smith, in collaboration with Lee Hawkins Garby. (A Serial in Three Parts) Part I. Much conjecturing has been done on the far-reaching effects and possibilities of the energy contained in an atom, if it ever could be released. If some method for liberation of intra-atomic energy is discovered, the discovery very probably will be accidental. The first instalment is chock-full of intense moments and thrilling detail.

ARMEGEDDON—2419 A. D., by Philip Francis Nowlan. While enormous strides were made during the World War, both in the type of mechanical warfare and in the uses of poisonous gases, the limit has not been reached by a far stretch. In this story, the author tells about some amazing things, which are scientifically correct. It certainly contains a number of interesting prophecies, many of which are sure to come true.

THE PERAMBULATING HOME, by Henry Hugh Simmons. This is the fourth of the series of "Hicks' Inventions with a Kick." It is funnier and more thrilling than the preceding amazing inventions of this inventive genius, and gives us some very startling new ideas.

THE HEAD, by Joe Kleier. Recent experiments in Germany have proved that it is possible to decapitate insects and transplant the heads from one insect to another, with no obvious harm to the insects, after the wounds are healed. If it can be done with insects, why not with animals, and perhaps with humans, sometime in the future?

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AMAZING STORIES is published on the 5th of each preceding month. There are 12 numbers per year. Subscription price is \$2.50 a year in U. S. and possessions. Canada and foreign countries \$3.00 a year U. S. coin as well as U. S. stamps accepted (no foreign coin or stamps). Single copies, 25 cents each. All communications and contributions to this journal should be addressed to Editor AMAZING STORIES, 230 Fifth Ave., New York, N. Y. Unaccepted contributions cannot be returned unless full postage is included. Publishers are not responsible for loss. ALL accepted contributions are paid for on publication.

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 in the class-room but he was
 for many years engaged in com-
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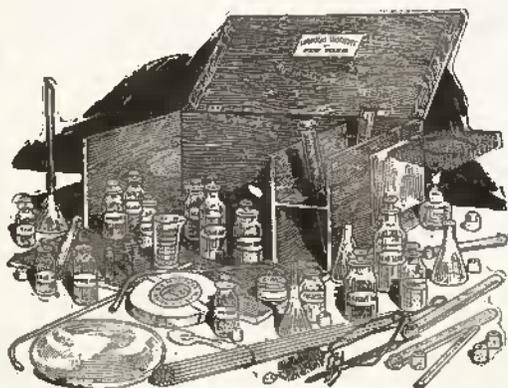
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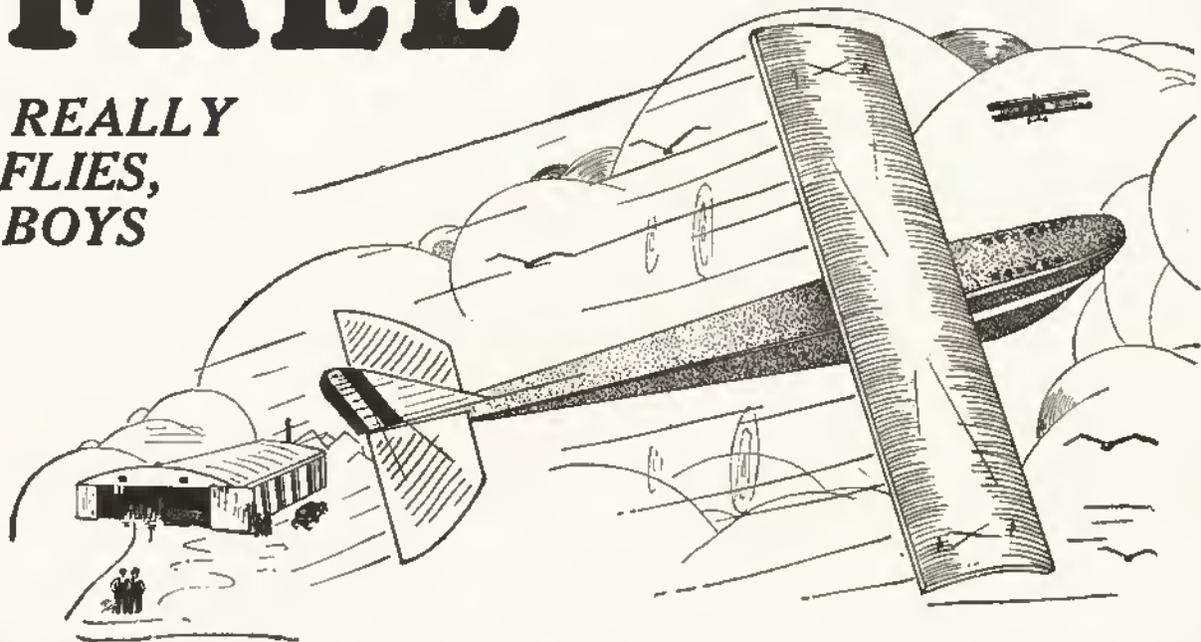
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OUR AMAZING SENSES

By HUGO GERNSBACK



IN a world where we take many things for granted, it is most surprising to note how the very faculties which keep us in direct touch with the outside world behave under certain conditions.

Offhand, almost anybody would say that our five senses perform certain duties which never change. For instance, we see objects and colors. We hear voices, music and other sounds, and the same down along the line with the other senses. The senses are necessary for us, because without them, we would be out of touch with the world that surrounds us. That seems a trite statement, but on closer investigation, we find we are not so well off after all. Our senses, at best, are very imperfect, and are not at all what we believe them to be at all times. The eye, for instance, can see only certain colors. You cannot see ultra-violet, and you cannot see infra-red in the visible spectrum. Yet, a photographic plate sees them perfectly. The same condition is true of our other senses, all of which act in similar manners; none of them are perfect or even nearly perfect.

As a matter of fact, volumes could be written on how our senses constantly fool us into believing the direct opposite of what actually exists. Very often, such illusions are so important, that not only are we grossly misled, but what is more disturbing, our health and often our very lives are endangered.

Thus, for instance, people are killed every year by running the engine of their car in a closed garage. If our sense of smell were perfect which, unfortunately, it is not, the carbon monoxide gas could be smelled and warning given, but our sense of smell is so poor, that we do not smell certain gases, and before we know it, we are overcome. Many people thus die every year.

We might set up the axiom and say, "Don't trust your senses *overmuch*." Present-day civilization, rather than sharpening our senses, tends to greatly dull them, and frequently we pay the price for our easy living.

The eye is supposed to see and convey impressions to the mind. However, it does not always do so under all circumstances. An interesting example to support this may well be in order. Recently, during a spiritualistic seance held in SCIENCE AND INVENTION Magazine offices (a full account of which will be found in the current issue of SCIENCE AND INVENTION, the following occurred:

The medium was sitting behind black curtains, strapped and tied with ropes, which had been sealed to his chair. In front of the curtain was a table on which were a number of objects, such as a tambourine, a piece of rope, pencil, paper, etc. As a member of the Spiritualistic Investigation Committee of SCIENCE AND INVENTION, I was sitting directly in front of the table. The room was not entirely dark, but was lit up faintly from the red bulb of a single electric lamp, which cast a dim light upon the objects. It was possible to see the objects rather well though, of course, not as well as in daylight. I was sitting about a foot away from the tambourine, and it was easily discernible, due to its white drum-top. Naturally, everyone strained his eyes watching for supernatural manifestations, which, by the way, never occurred. I was looking at the tambourine intently, and sud-

denly it vanished completely. I knew that this could not be the case, and naturally became suspicious of my eyes, and for a moment I closed them. Immediately upon opening them, the tambourine was seen where it had been before. The same thing happened with practically all of the other objects on the table, and after awhile it got so that I could make them vanish at will, and make them reappear after I had rested my eyes for a second. Here then, is a simple case where eyesight is not what it is supposed to be, and where the sense of sight easily fools one. It is simply a case of eye-strain, which produces in the uncertain light, a sort of temporary blindness. If I had been a believer in spiritualism, I could easily have persuaded myself that the objects had vanished, and that the spirits had been responsible for their disappearance.

All of our senses act likewise under various circumstances. Perhaps you do not think that you can fool the sense of touch easily, but you certainly can. Try the following experiment:

Cross the index finger with the middle finger, then place a small round ball on the table. If you have no ball, use the top of your pencil or fountain pen. Now run the two crossed fingers over the ball and be sure that the ball touches the two tips of the two fingers simultaneously. You will find it most difficult to believe that the fingers are not touching two balls, but only one. As a matter of fact, the sensation is so strong, that you involuntarily must supplement the touch of feeling with the "touch" of eyesight and look and convince yourself that there is only one ball. This is only one of many examples.

The sense of hearing is also very incomplete. A classic example that the ear really does not hear what you think it does, is the telephone. A friend is talking to you over the phone, and you are quite certain that you hear everything he says. You do nothing of the sort. Most of the hearing is done, not by the ear, but by your own intelligence, which supplements certain sounds and in your brain forms the words that you believe your friend uttered. As a matter of fact, if your friend were reading disconnected words out of a dictionary, you would probably not understand 20% of them. Just try, and ask your friend to call various letters from the alphabet to you over the phone, and you will find how hopeless it is. Outside of the vowels, very few consonants will come over. It is impossible on the telephone to distinguish between B, C, D, E, G, P, T and V, as a rule. Many other similar examples might be cited.

The sense of taste is perhaps the most easily fooled of all senses, because you very seldom are sure of what you taste. Any good cook can fool you, and make you believe that you are eating something totally different from what you actually think it is. Not only that, you cannot taste without smelling. The two are so closely related, that when the sense of smell becomes impaired, as when you have a heavy cold, you really will not be able to taste much at all; only when foods or drinks become totally different in their taste are we able to distinguish them, and in that case, a warning is immediately sent to the brain, and we say that the food does not taste right and we had better not eat it. However, that is not true in all cases, because certain chemicals can be mixed with food and poison it, without you being aware of it.

SUPER-RADIO

By Charles Cloukey

Author of "Sub-satellite"



GOOD evening, Basehore," said Dr. Harris as I entered the room. "I'm working on a case now that I think will interest you."

He did not need to say more. The remarkable success of Dr. David S. Harris as an investigator of crime has brought him both fame and fortune. He is perhaps the most famous detective in the world at the present time.

I seated myself in the chair he indicated with his thumb and waited for him to speak. After a few seconds he began, speaking slowly and precisely.

"After the funeral of Dr. D. Francis Javis this morning, his son and heir, Jack, decided to visit the vault in which his father had deposited his enormous fortune of artificial diamonds. When he entered the vault he found that its contents, a billion dollars' worth of perfect, flawless diamonds, had completely disappeared. They were there two days ago, according to the testimony of Arthur Garner, the guard, who has been a trusted employee of the Javis family for forty years. I tested him with a sphygmomanometer, and found out that he was telling the truth. The diamonds were there two days ago.

"But the most remarkable feature of the case is the bulky apparatus which was found in the vault. It is nothing less than a super-radio, which is capable of transmitting solids through space.

"It is well known, in scientific circles, that Mr. C. Gerald Clankey, the radio engineer, has been working for several years to perfect such an apparatus. Mr. Clankey has quite mysteriously disappeared, as has also his friend, Robert Kornfield. The police believe that they are responsible for the disappearance of the diamonds, as Mr. Clankey's fingerprints were found on the panel of the instrument. Various other circumstances, which I need not relate to you now, seem to connect Kornfield with the crime."

I interrupted. "Impossible, Doctor. I've known Bob Kornfield for ten years. We've been comrades in Alaska and Tibet. He's not a crook. He is—"

"Enough, Basehore, enough," said Dr. Harris calmly. "I have precisely the same opinion of the character of C. Jerry Clankey as you have of the character of Kornfield. No matter what the police think, Clankey and Kornfield are innocent. I have not yet informed the police that one of my clever assistants, Billy Wood, has definitely proved, by means of microphotographs,

that the fingerprints are forgeries. I have seen more cleverly executed forgeries than these during my career. These are almost crude."

"Then you believe that the robbery was committed by some as yet unknown party, using the apparatus invented by C. Jerry Clankey, forging his fingerprints to confuse the authorities, and finally kidnaping Clankey and Kornfield to prevent them from disclosing what they know?"

"Precisely. We may deduce that the thief used Clankey's apparatus to transmit the diamonds from the vault for the reason that it would be practically impossible to get them out of the country in any other manner. One or two, perhaps, might be successfully smuggled out. But not a billion dollars' worth. No plane has yet been invented that can cross the invisible barrier of high-frequency waves maintained by the government along every mile of our coast and border, except at the airports, through one of which every incoming or outgoing plane must pass, where it is thoroughly searched by customs officers for both taxable and contraband articles. And, as you know, every outgoing auto, train, ship, or other vehicle is similarly searched. I tell you, Basehore, it's a difficult job to smuggle anything in or out of the country since the government adopted that system in 2072.

"My hypothesis at present is something like this. Clankey and Kornfield were last seen on Monday. Today is Friday. Sometime between then and now

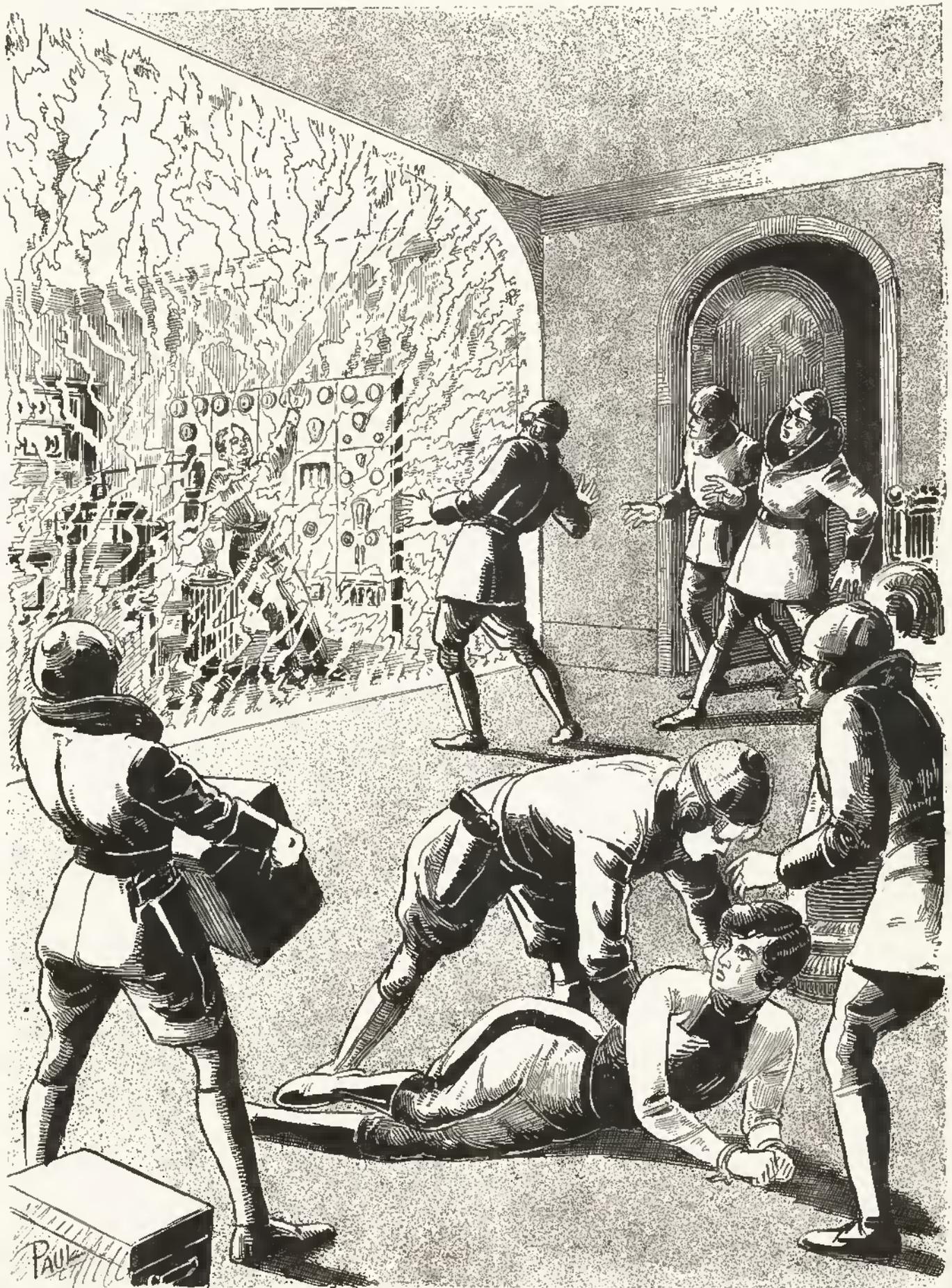
they were kidnaped by the criminal we are after. He transported them to some point outside the United States, having given a satisfactory excuse for their presence to the government agent who, at some airport, probably New York, inspected his plane. (I am assuming that he used a plane.) He also transported one of Clankey's instru-

ments to the same place. I have been informed that Kornfield has not the slightest knowledge of radio. He was captured, I think, for no other purpose than to get him out of the way. Perhaps he attempted to free Clankey or to prevent his capture. I have no way of telling.

"The bandit must have forced Clankey to tell him how to operate the instrument. Then, leaving his prisoners under guard, he returned. There are several varieties of gas that will render a man totally unconscious in such a way that he will not have the slightest memory of it afterward. The criminal perhaps used

HERE is a scientification story that bristles with good science, and at the same time provides you with a goodly number of thrills.

Ball lightning, of which the author makes use as a topic in his story, is nothing new, and is well known. Many text books treating on lightning describe ball lightning. An excellent description of this form of electricity will be found in the January, 1916 issue of "The Electrical Experimenter." In that magazine, the various forms of ball lightning were discussed at length, and an experimental method of how to produce it in the laboratory was described.



... The dying man laughed, and threw, not the switch he had spoken of, which was on the other side of the room, but one close to his side. A sheet of flame separated him from the rest of us. From one side of the room to the other, and from ceiling to floor, leaped roaring, blinding discharges of electricity...

one of these gases on Garner and the other guards, transported Clankey's other apparatus to the vault, and transmitted the diamonds through the ether to the place to which he had taken the other instrument. In that way he avoided all danger of apprehension by customs officials and various other government inspectors.

"Perhaps he did not care to risk discovery by removing the bulky apparatus, or perhaps some other reason influenced him to leave the transmitter in the vault. He did, and made his escape, leaving an imitation of the fingerprints of Clankey on the panel.

"Now, who is this thief? Basehore, I think he is none other than our friend 'M. W.'"

This statement surprised me. "M. W." was the signature of a criminal responsible for many daring robberies. For eighteen months he had baffled all detection. The newspapers called him a super-criminal. David Harris had twice tried to capture him, but without success. After each case had been given up as hopeless, the Doctor had received an impudent note signed "M. W.," ridiculing his efforts to catch him. Various other persons, among them some rich victims of the bandit and several important police officials, had received similar notes, heavy with sarcasm.

"What makes you think that M. W. is responsible for this robbery?" I asked.

"The forged fingerprints," replied Dr. Harris. "M. W. has twice before left forged fingerprints at the scenes of his crimes. Under the microscope these bear a certain resemblance to the forged prints left on the instrument in the vault. It is not definite proof, but nevertheless I believe that M. W. is the gentleman we wish to apprehend."

"Then, Doctor, our friends are in danger. M. W. has a habit of performing an operation on the brain of anyone who knows too much of his affairs, which causes the victim to entirely lose his memory, and then turning him loose. Unless we hurry, Clankey and Kornfield may be transformed into idiots."

"I know, Basehore. I am working as speedily as I can. I have been working on the case for less than two hours, and I am forced to confess that at present I have nothing more than a hypothesis, which can quite possibly be entirely incorrect. I have ninety-three agents engaged in interviewing various members of the government at the present time. Until I hear from them I can do nothing further. They are attempting to find a clue to the direction taken by the criminal. I sincerely hope they succeed in locating the customs officer that inspected his plane when he was abducting Clankey, and that they find out what explanation he offered, what alias he used, and what direction he took. From those two other cases I have definitely learned that his home, the base from which he conducts his operations, is outside the United States."

The door opened, and the jovial, rotund Billy Wood, an expert on microphotography, entered, and addressed the Doctor somewhat as follows:

"Doc, a gent is outside which says his name is Wesley B. Gibson, a friend of C. Jerry Clankey. Shall I let him in?"

Dr. Harris nodded assent. Our visitor, who entered

immediately, was slender, with a remarkably intellectual countenance. He seated himself and addressed my friend.

"Doctor, have you, or has anyone else, altered the position of the instrument found in the Jarvis vault?"

Dr. Harris leaned suddenly forward, a curious gleam in his eyes. "No. The police ordered it to be left as it is. Why?"

"Perhaps I can help you. A few months ago, Mr. Clankey disclosed to me the details of his invention, which I agreed not to repeat, because his patent arrangements are not yet complete. I can, however, say this. His mechanism reduces an object to its constituent atoms. It then changes—transmutes—these atoms into a certain class of waves, which are transmitted through space to his receiver, where an intricate process, the inverse of the first, restores them to their original form. But a thorough explanation of his invention is not possible, or necessary, at this time. What I'm getting at is this. Mr. Clankey's machine does not create matter, nor duplicate matter. It is obviously impossible for a diamond, for instance, to be *broadcast*, and the same diamond to be received at two, or sixty-seven, or a thousand or more different places. Mr. Clankey's apparatus transmits the object in one direction only. His receiver must be exactly in line with his transmitter, or no results are obtained. Mr. Clankey's system is to first broadcast an ordinary radio signal. This is received by the other operator, who, using accurate radio direction finders, and making allowances for the curvature of the earth, magnetic fields, and all other circumstances which deflect radio waves, finally accomplishes the necessary alignment. Then, after several tests, the object is transmitted.

"My hypothesis concerning the crime is about the same as that I heard you explaining to Mr. Basehore. I have come to request you to obtain a police permit for me to visit the vault, and to examine the instrument. If you will do this, I may be able to discover in what direction the diamonds were transmitted. Of course, it is quite possible that the thief purposely altered the position of the instrument, to throw us off the trail. But I sincerely hope that the criminal overlooked this important detail. If you will please give me a permit—"

Dr. Harris scribbled a few words on a piece of paper and signed. "This will be sufficient, Mr. Gibson," he said. "Shall I take you over to the vault?"

"It is unnecessary," said our visitor. "My cab is waiting." He left the room, and proceeded toward the elevator.

Dr. Harris suddenly sprang into action. He hurried to the phone, and in a few seconds had obtained his connection with the Philadelphia apartments of Richard Brown, the stuntflyer, skywriter, and daredevil. The Doctor did not use the television system because it would have required almost four minutes—four minutes that he did not care to waste—to obtain his connection if he had.

Brown himself answered the phone.

"Hello."

"Dick Brown? This is Dr. Harris speaking. Come at once with the Kelinov monoplane. Mount a couple

of Marvite guns on it. Fuel up for a long trip. Hurry."

"I'm coming, Doc. I don't know what's up, but I'm with you. It's seven-thirty now. I'll be there by eight o'clock."

With these words the likable young adventurer hung up his receiver. I felt glad that I was shortly to see him again. He, Bob Kornfield and I had been bosom friends for several years. Dr. Harris could count on his loyalty and assistance positively, in any undertaking that might solve the mystery of Kornfield's disappearance.

Dr. Harris, after Brown had hung up, had proceeded to get in touch with government officials, and had obtained permission to pass through the New York airport, and the twenty-five hundred foot wide gap in the high-frequency barrier, without descending. After this permission had been granted, he called the Police Department, and asked for five reliable men to be assigned to him. This was done without question.

Then, calling the weather bureau, he obtained detailed information as to weather conditions within five hundred miles of New York. Meanwhile I was getting into a flying coat that the Doctor had lent me. He donned a second. His powerful motor car carried us to the great flying field at Brooklyn. The five officers were already there. Three minutes after our arrival, an enormous quintuple-motored Kelinov monoplane, piloted by the keen-faced, smiling, capable Brown, landed as lightly as a feather on the brilliantly lighted field. At the same instant I caught sight of a speeding white taxicab approaching the field from the direction of Manhattan. It stopped with screaming brakes. From it leaped the tall form of Wesley B. Gibson. He had succeeded in obtaining the desired information.

"Unless the position of the instrument has been altered," he said, "the diamonds were transmitted in a direction just one degree, four minutes, and thirty-eight seconds east of northeast. They were probably transmitted several hundred miles."

A few minutes later the great plane rose again into the cool evening air. After he had seen that the plane was exactly on its course, Brown locked the controls. The five powerful motors whirred quietly as the monoplane shot through the night.

In the comfortable cabin, Brown, Harris, myself, and the five officers sat silent, each occupied with his own thoughts. I was wondering vaguely why Dr. Harris had brought the five police officers along. We were leaving the country. They had no right to arrest anyone outside of the United States. The plane, I knew, would soon be proceeding in the general direction of Iceland.

I wondered if Dr. Harris had arranged for extradition papers in case the arrest of the criminal would be in foreign territory.

My wonderings were interrupted by a brilliant red light flashing past the windows of the cabin. It was the government signal. I knew then that we were passing through the airport. Dr. Harris flashed our red signal in return. Brown altered the direction of flight and locked the controls again. I looked below, but could see hardly anything. An exceedingly dense fog

was obscuring the atmosphere. The great plane continued unswervingly on its way.

* * *

A WHITE light, that seemed to throw no shadow, came from a fixture near the ceiling of a large, windowless room. Directly beneath it lay two unconscious figures on an operating table. All around were stands and cupboards containing a large number of complex instruments, electrical devices and appliances, and many small, razor-edged knives, of various shapes and sizes. A white-clad figure, short and slender, stood at the side of the table. M. W., the super-criminal, was preparing to perform the delicate electro-surgical operation that would forever rob a famous radio engineer and his equally famous friend of their memories, change them into idiots, erase forever their knowledge of the Jarvis diamonds.

M. W. never killed. For a murder would mean execution if the criminal were ever captured. Though the physical evidence of a murder could perhaps be successfully concealed, the psychological evidence could never be hidden. A sphygmomanometer would betray the secret in three minutes. So M. W. never killed. Under the present laws, which were adopted in 2071, murder is the only crime punishable by death. And as M. W. did not consider capture to be an impossibility, M. W. did not commit murder. This operation would prevent Clankey and Kornfield from disclosing their knowledge of the criminal and the stolen fortune of diamonds quite as effectively as their death would.

The scientific criminal, holding a shining scalpel skillfully in long, sensitive fingers, bent over the unconscious C. Jerry Clankey to make the preliminary incision. The steely grey eyes glittered as brightly as the keen surgical knife.

A door at the far side of the room opened.

* * *

THE fog which enveloped the speeding plane became thicker every second. The locked controls kept the silent Kelinov exactly on its course, rigidly level, and traveling at the comparatively slow rate of 215 miles per hour. Brown was manipulating our infra-red searchlight. This sent a powerful beam of invisible light below us, which brilliantly, though invisibly, illuminated the sea. On our special receiving screens, the ocean was plainly visible. By using this device, we hoped to be able to find out where the criminal had landed, without betraying our presence as we would probably have done if we had used a searchlight employing visible light.

Suddenly the flyer leaped to his controls. He started the helicopter propellers that had not been used since the take-off, and switched off the tractors. Then he again locked the controls, and hastened back to the infra-red searchlight. He, Harris, and I regarded the screen that disclosed the scene below us, that our unaided eyes could not see. The monoplane hovered in the air, motionless, silent, hidden in the dense fog. Almost directly below it, revealed by the infra-red searchlight, was an artificial island.

Brown referred to some of the instruments on the

dashboard, obtained his data, and proceeded to find out the exact latitude and longitude with a pilot's, automatic calculator. The accurate mechanical computer soon supplied the desired information. Dr. Harris checked the position on a map. "The island has not been charted," he said.

Then I understood why the officers had been brought along. By international agreement, any artificial island was considered as territory of the nation whose citizens were responsible for its erection. M. W. was, it had been ascertained, an American citizen. Therefore, American officers had a perfect right to arrest an American lawbreaker on an American island. I wondered why I had not thought of that sooner.

If the island was the property of an honest person, it would have undoubtedly been charted, according to law. This island had not been. Here, far from the usual paths of commerce, the criminal had erected a base. I understood then why M. W. had been so hard to trace, why the best detectives of two continents had failed. Here, in the unfrequented northern ocean, was the bandit's stronghold.

Brown diminished the speed of his helicopters, and the plane dropped slowly, vertically, coming finally to rest on the island's darkened landing platform, without the slightest perceptible jar, owing to Brown's unusual skill as a flyer. Landing at night, without adequate lighting facilities, is not easy, even with the best of planes.

Two officers were left, fully armed, to guard the monoplane. Two were sent to the hangar at one end of the platform with instructions to disable every plane in it so completely that aerial escape would be impossible. The other officer, a sturdy chap named Finnegan, accompanied Brown, Dr. Harris, and me, as, with automatics drawn, we advanced to a door at one side of the platform. We opened it without any difficulty.

The room we entered was an electrical laboratory, well-equipped, at least fifty yards long, and about half as wide. No one was in it, although it was lighted. We assumed, therefore, that someone had been in it recently. It had two doors, not including the one we had entered by, at opposite sides of the room. The great amount of various radio and electrical apparatus it contained would probably be valued at more than a hundred thousand dollars.

After a whispered consultation, we decided to divide, the Doctor and Finnegan taking one door, and Brown and I taking another. This plan was carried out. Brown and I, having opened our door and passed through it, soon found ourselves in a narrow corridor. With the utmost caution, making as little noise as possible, we passed down the hallway, our guns in our hands.

We entered the first door we came to, Brown preceding me. I heard a metallic click, a bullet whistled past my face, and the aviator pitched forward to the floor. In the center of the room stood a tall man. I pulled the trigger of my gun without waiting to see what he looked like. My bullet must have struck his gun, or the hand that held it, for he dropped it with an exclamation of pain, and darted out a door behind him, slamming it shut. When I reached it, it was

locked, as was also the door by which we had entered.

I bent over Brown, opening my pocket first-aid kit hurriedly. He was not seriously wounded, having merely been scratched. The bullet that scratched him, however, was anesthetic. I at once attempted to revive him. Having removed his coat, I ripped open his shirt sleeve so that I might more easily attend to the trifling wound.

On his upper arm were tattooed an anchor, a mermaid, and the two letters, "M. W."

DR. HARRIS and Finnegan had silently advanced to the other door leading out of the electrical laboratory. Opening it cautiously, Dr. Harris saw, for the first time, his archenemy. In the center of the room, M. W. was bending over an operating table, on which, the Doctor perceived, lay two unconscious figures. Dr. Harris fired, and ran to the table. In his intense excitement, he missed completely.

The criminal, eyes blazing, suspended the scalpel six inches above the throat of C. Jerry Clankey, holding it between thumb and forefinger. It was checkmate. If the Doctor shot again, the knife would fall.

The tall man, whose gun I had shot from his hand, having pressed the button that electrically locked all the doors of the room that Brown and I had discovered him in, ran down the corridor to warn his chief. It was he, who, bursting suddenly through the door at the rear of M. W., saved the radio engineer's life.

The criminal, startled by the noise, turned involuntarily. In that second, Dr. Harris fired. His bullet, by a freak of chance, hit the scalpel. The tall man snapped out the light. Several pistol shots rang out.

When Finnegan finally succeeded in extracting his flashlight from his pocket and lighting it, no one was in the room but himself and the two unconscious figures on the operating table. Finnegan set about to revive them, and in about fifteen minutes had succeeded in doing so.

Let Bob Kornfield tell the story from now on.

I ROBERT KORNFIELD, sat up suddenly. A young chap I'd never seen before was regarding me with satisfaction. His name, I learned later, was Finnegan.

Suddenly memory came back to me. Excitedly I asked questions of Finnegan, who was attempting to revive Clankey, and obtained from him a brief synopsis of what has been narrated by Paul Basehore, with the exception of those details concerning the shooting of Brown, which Finnegan, of course, did not then know of. Then I borrowed one of Finnegan's guns, and, in spite of his protests, ventured out into the corridor. He continued to try to revive my unconscious friend, and therefore could not hinder me. I soon reached the electrical laboratory.

At one side of the laboratory stood the "super-radio" that had been invented by C. Jerry Clankey. Close beside it were three enormous chests. I opened one of them, and then the other two. Each was completely full of diamonds. Artificial diamonds, created by the genius of the late D. Francis Javis, who had carried his secret to his grave.

Even though diamonds were now comparatively cheap, because those that Jarvis had sold were to some extent flooding the market, I knew nevertheless that I was gazing at a colossal fortune. Fascinated, I picked up a beautiful gem of several hundred carats, and of the most delicate shade of rose, and held it in the light. It flashed, scintillated. The perfect beauty of it hypnotized me.

I heard a step behind me. I wheeled, and found myself face to face with M. W.

When the tall man had snapped off the lights in the operating room (as Basehore has narrated, though he was not there at that time, he obtained his information later from Harris, just as I did in several instances), the criminal had leaped for the door. The tall man had already escaped through it.

The keen ear of Dr. Harris enabled him to follow closely, even though the room was completely dark. When he passed through the door, he slammed it shut. Sprinting down the corridor, he succeeded in overtaking and grasping M. W. by the shoulder. An involuntary exclamation escaped from the criminal, and Dr. Harris' suspicion was confirmed. M. W. was a woman! The high-pitched voice could not possibly have been possessed by a man. The clothes that she was wearing had quite effectively concealed her figure.

The tall man, whom I might as well call Ericson, which we ascertained later was his name, had concealed himself in a doorway. Hearing the woman's cry, he had hurried to her assistance. One blow from his enormous hamlike fist, and the Doctor was down, with a fractured jaw. M. W. ordered Ericson to carry him to the next floor below, and tie him securely. Then she hurried to the radio laboratory, where, she knew, there were several guns, of various deadly varieties. It was her intention to obtain one of these, and then to return to the operating-room and dispose of Finnegan. When she entered the laboratory, my attention was completely absorbed by the great rose diamond.

I turned and faced her. For a moment I thought I saw fear in the steely grey eyes. I covered her with Finnegan's gun. She advanced toward me. I fired. The gun clicked futilely. It was empty. Finnegan had evidently been using it rather freely in the dark, before he had lit his flashlight, and set about to revive me. When M. W. perceived that the gun was my only weapon, and empty, the bravado vanished. She darted to a peculiar instrument at the opposite side of the room, threw in two switches with long, insulated handles, and manipulated one of three small levers. From a tube at the top of the instrument a small, blindingly brilliant object seemed to float through the air towards me.

It was an artificial *ball* of lightning!

I attempted to dodge it, and escape through a door. But it could move as fast as I could. It reached the door before I did, headed me off, and finally cornered me. M. W. quite evidently had it under control. It hovered around me.

I recalled various stories I had heard about that peculiar freak of nature, ball lightning. I remembered having heard of one that had rolled off a roof, floated through a window, and finally exploded, killing two

men, and doing a considerable amount of property damage.

Scientists have long been able to produce artificial lightning, enormous discharges of electricity, but artificial ball lightning was something new. And M. W. had it under control! The bright, crackling, luminous ball of electricity went where the criminal wanted it to go. I did not doubt that she could explode it at will, too.

Even as the flaming ball hovered about me, I could not help thinking what a wonderful war-time weapon this invention would make. I had a mental picture of an airplane, high over an enemy's lines, sending out these electrical spheres by the dozen, to float gracefully down to an ammunition dump, set off tons of high explosive, and eliminate thousands of men at one time. These thoughts and others raced through my mind as I stood in the corner and watched the hovering ball of fire.

FINNEGAN had revived my friend C. Jerry Clankey, and had gone in search of Dr. Harris, while Clankey had come at once to the electrical laboratory, where Finnegan had told him I had gone.

Entering suddenly, he seized M. W. by the shoulder and threw her to the floor. Then he leaped to the instrument. Unfamiliar with its operation, he experimented with the three small levers that controlled the actions of the lightning sphere that was hovering level with my waist. He soon discovered how to manage it. The ball moved away from me in little jerks, approached M. W. She raised her head and regarded it intently, fearfully. She was sobbing. The excitement of the night had been too much even for her. C. Jerry Clankey had broken her nerve.

I looked at him. In the deep, blazing, blue eyes I read his intention. There was no chivalry there. He was not considering the fact that she was a woman. He thought only of his stolen invention, that he had worked at for so long, of the attempt to besmirch his honor by leaving the false fingerprints, and of his narrow escape from insanity at her hands. I have known him for many years, but this was the first and only time I had ever seen his temper thoroughly aroused. I read his eyes. There was murder in them.

Fascinated, unable to speak, I watched the flaming ball of electric fire, as it moved, slowly, but with a horrible certainty, to the figure of the sobbing "super-criminal." The ball seemed to hesitate about three feet from her.

The figure of a man sprang through the open doorway, and leaped directly at the ball of lightning. It exploded.

PAUL BASEHORE had discovered that Brown and he were locked in the room where they had first discovered the tall man, Ericson. He set about, as he has narrated, to revive the unconscious aviator, and in so doing, discovered the two initials tattooed on the daredevil's arm. His curiosity aroused, he redoubled his efforts to bring the man to consciousness. But the powerful anesthetic, contained in the tiny grooves in the bullet that had scratched Brown, had taken effect.

It was some time before Brown finally opened his eyes, and said weakly, "Thanks, Paul. Where are we?"

Basehore at once started toward a door, determined to break free from the tiny room in which Ericson had imprisoned them, after having fired the bullet that had thrown the aviator into oblivion. But Basehore could not see the tall form of Ericson passing in the corridor outside, bearing the unconscious Dr. David Harris on his shoulder. Basehore could not see when Ericson paused in the corridor outside to open a tiny panel and throw a hidden switch. Then Ericson continued on his way with his burden. At the end of the corridor, Finnegan was waiting for him.

Basehore did not know all of this. He did not know that the switch had been thrown, or that it connected the metallic plate imbedded in the floor before the doorway, and also the cleverly concealed metallic plate in the door itself, with the gigantic generators far below, in the bowels of the island that supplied, directly from the never-ceasing tide, the light, and heat, and power that this artificial island, this ultra-modern laboratory of criminals, used. Basehore hurled his whole weight against the door, determined to break it down. As he did so, his body closed the circuit. That is why I, Robert Kornfield, am completing the story he began. Basehore did not return to consciousness, and feeling, and life, until many, many days had passed, and even then would not have done so, were it not for the super-human skill and ability of the world's greatest surgeon. Of that, later.

BUT Basehore had broken down the door, snapping the electric wires it contained as he did so. Brown leaped over his body into the corridor, made sure that he was no longer in contact with the metallic plates, lifted him gently to his shoulder, and carried him down the corridor, in the opposite direction to that taken by Ericson. So it happened that he arrived at the entrance of the electrical laboratory just as C. Jerry Clankey was causing the ball of electric fire to approach M. W.

And Dick Brown recognized the girl. Fate is a curious thing. Chance. That is all. Of all the unusual episodes of the night, this was the most impossible. Brown had known her, four years before. They had attended the same university.

He had, for a while, been in love with her. She never had paid the slightest attention to him. She never had been known to display the slightest emotion, unless a biting, iconoclastic sarcasm, which showed itself in her notes, could be classed as an emotion. She always had been cold, scientific, unnatural, abnormal. She could have been beautiful, if she had tried. It is difficult to say just what quality in her had attracted the fun-loving Brown. He had had her initials tattooed on his arm once, and had been told by her that he was an exceedingly silly fool. He had never seen her after his graduation.

But chance had brought the impulsive adventure-seeker and the cold-blooded criminal scientist together once more. Dick Brown recognized Margaret Walters.

Hurriedly, though gently, he deposited his unconscious burden on the floor, and leaped through the

doorway, directly at the flaming ball that menaced the young woman. It exploded. But it exploded harmlessly. They were both within six feet of it, but neither was seriously hurt, contrary to my expectations. Actual contact with the flaming ball, I have since learned, is necessary for the purpose of killing.

I turned my eyes again to C. Jerry Clankey. The madness, the flaming hate, was gone from his eyes. He switched off the machine. Then Finnegan entered, with Dr. Harris on his shoulder. When Ericson had seen him in the corridor, he had dropped the Doctor and fled. Finnegan had shot after him, but he had not stopped running until he was out of sight around a corner. Then Finnegan had bound up Dr. Harris' bleeding jaw as well as he could, and had carried him back to the laboratory.

The girl was manacled, and taken out to the plane, after Basehore and Dr. Harris had been carried out by Brown and Finnegan.

I stayed in the laboratory with Clankey, as he busied himself at his own invention. Five minutes later I heard him start to talk out loud to himself, as he has a habit of doing. "Good old Gibson," he said. "He's always where you want him when you want him there."

A FIERCE battle had been raging outside. The two officers who had been detailed to disable the planes in the hangar had, in so doing, inadvertently aroused from their slumber M. W.'s accomplices and assistants, whose living quarters were at one side of the hangar. Excluding M. W., Ericson, and the deaf-mute cook and housemaid, there were five others on the island, four men and a woman.

The four officers had managed, after some gun-fighting, in which one of the men was killed, and one of the officers severely wounded, to explode a tear-gas bomb, and, equipped with masks, had taken the three remaining men and the woman prisoners. Leaving them manacled, the three officers dressed the wounds of their comrade, and then decided to enter the building in search of Brown, Basehore, Harris, and Finnegan, and were about to do so when Basehore and the Doctor were carried out. Brown and Finnegan returned to the laboratory. The officers manacled M. W. to her friends, and attempted vainly to revive Basehore and Dr. Harris.

In the laboratory, Brown, Finnegan, and I watched Clankey. He had succeeded in getting in touch with Gibson, who had returned to the vault in New York, and he was transmitting the diamonds back to him. We watched with superlative interest as each sparkling gem was placed in the apparatus to be sent invisibly hundreds of miles through the ether to New York, where the other marvelous mechanism received them. Though at least one diamond was sent every ten seconds, it took a considerable amount of time to transmit the enormous fortune. When two of the three chests of jewels had been emptied, Ericson entered the laboratory.

He was bleeding. Finnegan's bullet had penetrated his abdomen, and the unfortunate man was dying a slow, torturous death. He laughed at us, a sobbing, jerking laugh. He spoke between spasms of pain.

"Au revoir!" he said. "Gentlemen, I shall blow you all to hell with me. That switch over there, when I throw it, will detonate about thirty tons of trinitrotoluene. I wish you a very happy journey."

As he spoke, Brown leaped toward him. The dying man laughed, and threw, not the switch he had spoken of, which was on the other side of the room, but another, which was close to his side.

A sheet of flame separated him from the rest of us. From one side of the room to the other, and from ceiling to floor, leaped roaring, blinding discharges of electricity. No man could go through it and live. It divided the room into two parts. We were on one side of it. Ericson was on the other. We heard his laugh above the noise it made. We saw him stagger across the room to that other switch that would throw us all into eternity.

IN New York, Gibson bent over the other instrument with an anxious, puzzled frown. Only about two-thirds of the diamonds had been received, and the instrument had fallen silent. He tried desperately to signal Clankey, to find out what was wrong. Though he stayed at the instrument for more than an hour, no message, no diamonds, came through. In New York, he could not know immediately of the terrific explosion that had taken place so many miles out on the restless Atlantic. For Ericson had reached the switch.

But we escaped. Ericson had stumbled in the middle of the floor. He could not rise. But he crawled. And that gave us time. When Brown had found that bullets could not penetrate the great sheet of electricity that cut off that end of the room from us, and that we had no possible way to prevent Ericson from carrying out his purpose, Brown, Finnegan, Clankey, and I carried the other chest of diamonds out to the plane. By the time that Ericson had managed to reach the switch and throw it, the great Kelinov was nine hundred feet up in the air. A large fragment of the wreckage of the island hit the left wing and snapped it off. The plane reeled, and dove vertically to the ocean below.

GIBSON leaned back in his chair and looked steadily at the paper in his hand. It was the report of the Seismographic Station of New York, and told of the occurrence of a violent explosion in the North Atlantic. Gibson noticed the time that it had occurred, 1:35 A. M. The last diamond received had been transmitted to him at 1:24 A. M. He wondered if escape had been accomplished in those eleven minutes between the last signal received and the time of the explosion. He looked at the clock. It was thirteen minutes after two. It had been only eight hours before that the expedition had left the metropolis to attempt to apprehend the super-criminal.

Gibson was very tired. The nervous strain that he had been enduring was telling on him. He nibbled at a tablet of concentrated food.

Suddenly he seized a hypodermic needle from the desk before him, jabbed it viciously into his arm, and pushed down the plunger. Then, his drowsiness gone,

his brain cleared by the drug, he rose and left the room to direct the search for what was left of the expedition that had set out in the early evening.

* * *

By three o'clock, more than fifty small, fast, scout planes were searching the ocean from Greenland and Iceland south to the line of artificial islands that marks the trade route from Europe to America.

Several times their searchlight beams came close to the wrecked, silent monoplane floating on the angry water.

When the wreckage from the explosion had taken the wing off the Kelinov, it had plunged vertically towards the sea. But the master-flyer Brown had saved us once again. Fighting desperately at the controls, he had brought the plane out of its dive with inches to spare. It struck the water laterally, submerging what remained of the wing. But the fuselage was watertight. We floated, fuel gone, radio gone, food gone. The food, fuel and radio had been stored in the hollow compartments of the wing. The searchers found us just before dawn.

It was an unusual party they rescued. Five policemen, one badly wounded; the captives they had taken in the battle by the hangar; the horribly burned, scarcely breathing Basehore; Dr. David Harris, whom we had finally succeeded in reviving, with his broken jaw; Brown, the aviator; his former acquaintance, Margaret Walters, the super-criminal; C. Gerald Clankey, the radio engineer; and myself, Robert Kornfield. When Gibson's graceful amphibian biplane swooped down from the sky to take us aboard, the dawn broke, and the most exciting night of my life was over. Gibson's pilot took us all to MV-39B.

When we had arrived at this well-known British artificial island, which boasts of a population of more than a million and a half, we discovered that Herbert Wiessler, the world famous surgeon, would arrive there half an hour later. During that half hour, Gibson communicated with the authorities and made all necessary arrangements. He also sent a radiogram to Jack Javis informing him of the safety of the remaining diamonds.

Wiessler himself attended to Basehore. It was with very great joy indeed that we heard his announcement that our friend would live, though he was unconscious and would remain so indefinitely. I believe I have mentioned before that Basehore did not return to consciousness for many weeks.

Then Wiessler, leaving the wounded policeman (and also Dr. Harris' broken jaw), to the attention of other competent surgeons, performed what is known as operation 43A on Margaret Walters, after Gibson had obtained the necessary legal permission from New York.

The research of the last fifty years has shown that crime is, to a great extent, a mental disease, which can be cured, in most cases, by various operations on the brains of criminals, and our laws are now in a process of transition. If the sphygmomanometer tests had shown her to have been guilty of murder, the inexorable law would have required her execution, but this

(Continued on page 364)

VANDALS *from the* MOON

By Marius

CHAPTER I.

The Spot on the Moon



I HAD just left Lake Tahoe, beautiful Lake Tahoe, as blue as the summer skies it mirrored, where the pine clad foothills of the tall Sierra Nevadas loomed above all, so that through the mist of the early morning it appeared like a vast gem of azure hue in a setting of mouldy green. That night I lay on my improvised army cot within hearing distance of the Feather River's call, and it called in a voice that few Nature-lovers can resist—the hoary, age-old cry of the primitive. I thought of the fishing on the morrow, I cursed the mosquitoes, and I thought of Leola Spalding, literary critic of the *Artists' Review*. I cursed her faint-heartedly, which is more of a fatherly reproof than it is a curse, as I recalled the harsh sarcasms she had used in her criticism of "Ariadne," my newest novel. I had met Leola Spalding several times before, a tiny, kitten-like, blond-haired wisp of a girl, full of the fun which denied her twenty-six years and her eminent position in the world of literature. Our last meeting had taken place in the southernmost part of Oregon where I had attempted a silly and blustering proposal of marriage (in my anxiety I nearly upset our canoe) to which she answered merrily that my lovemaking, like my writing, was as weak as water. At that time I did not resent it. But now, as the thought recurred, I felt annoyed. She had been harsh—so I mused, partly asleep—unreasonably harsh, and then I began to recall the night. It was exactly one month ago and the moon was full, fuller than it is now. With that I severed my line of thought and began watching our lovely satellite as it peeked over the hills and hid its round face behind the maze of trees. I watched it, half in slumber and very drowsy, as it left its hiding place and burst forth in all of its splendor, its vastly brighter light obliterating the feeble glow of the nearest stars. Another world, I mused; our sister planet, part of ourselves, and perhaps like us, teeming with life. Clear and bright shone the moon and then, as if done instantly, there appeared to my gaze upon its bright, clear surface of silver, a single black spot, a tiny dot of ebony near its rim, just as though some gigantic pen had been wafted through orbit space and had left behind it a splotch of black on that silvery face. I rubbed my eyes, but when I looked again the black spot was still there. I fell asleep watching it. When I awoke

early the next morning, moon and spot were both forgotten.

Came another day of fishing and once again the trout were unlucky. I angled with a zeal, for I love the sport dearly. Fried trout made up both my dinner and supper and their mellow, yellow flesh was delicious. Glutton-like I gorged myself to capacity and then like the contented man that I was, I threw myself lazily backwards upon my canvas cot which protested with squeaks and gazed upwards and toward the sky. Two or three taupe clouds, their borders turned fiery by a departing sun, were slowly passing over this desert of pale, translucent blue-like slender, gray caravals on an azure sea. This azure, however, was slowly giving way to a darker purple which so soon was to become an ebony, darker still, a sea of ink sprinkled with silvery star-dust, tiny pin-points flickering in space. Later on the moon would come out to keep them company. I thought of the black spot I had noticed the night before and wondered what it could be, and wondering and watching the stars, I fell asleep. A heavy stomach is oft the best lullaby.

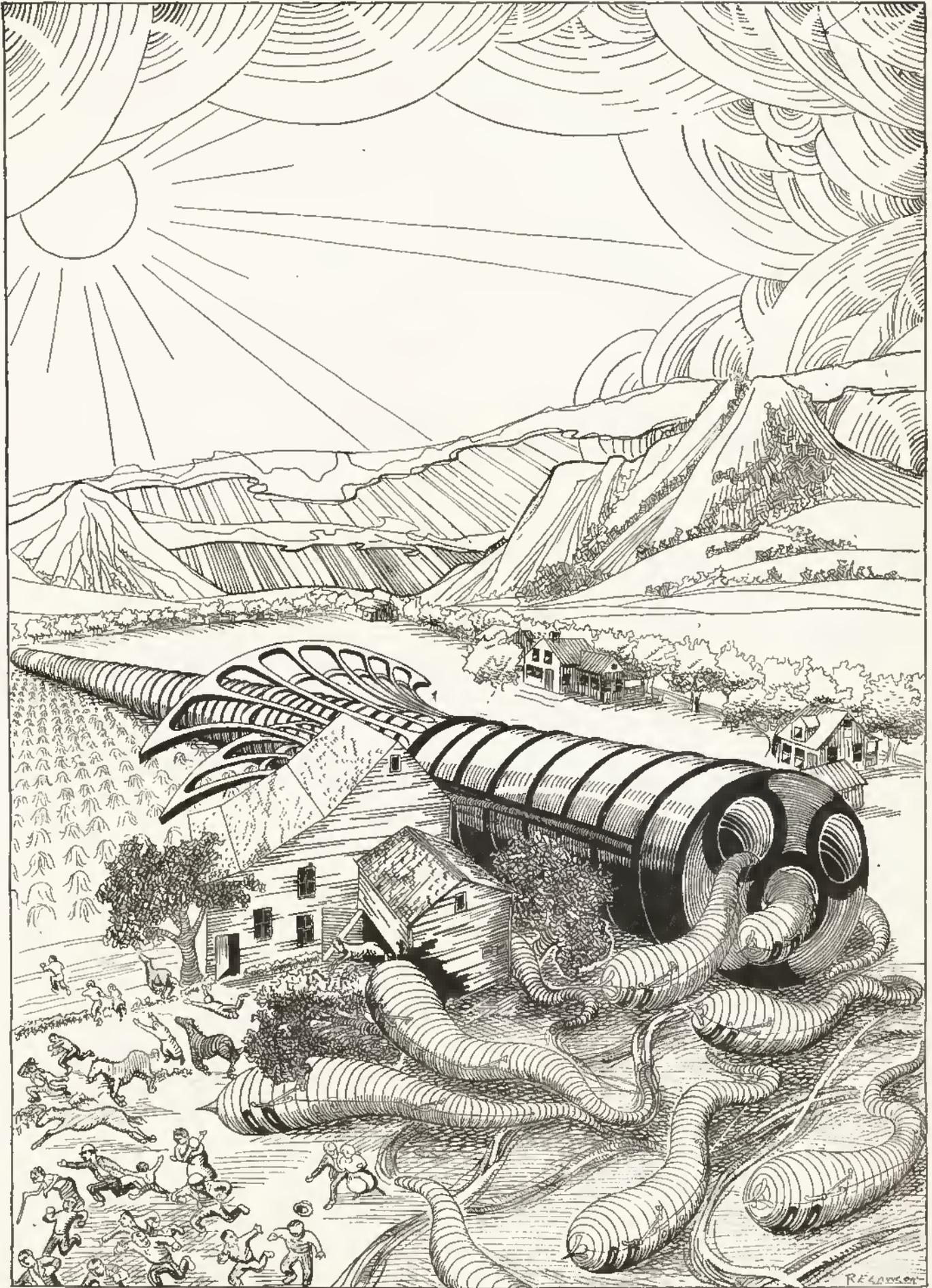
It was close to midnight when I awoke. Only the weird rhapsody of nocturnal insect life broke the grave-like silence. Now and then, as if in a soothing chorus, the wind, pushing its way through twig and branch, joined the merry diapason which cricket and katydid gave to the night. Overhead hung the moon, a full milky orb suspended by some invisible and magic string in the vastness of the firmament. About a quarter of a million miles away; yet it was so bright. I watched it

as I had done the night before and even as I looked, I slowly became aware that like a scar upon its surface of silver lay the same black spot. It was somewhat larger than it was yesterday and appeared to be separated from the satellite. "Sun-spots have nothing on our little moon," I said to myself, and soon after I was dreaming grotesque

dreams of distant lunar lands, black rock-strewn lands, with dead volcanos raising their silly flat heads everywhere.

My curiosity was not fully aroused until morning. The sun had a long time ago peeked over the hilltops and was now giving long, quivering shadows to the wind-struck trees, at the same time making a set of tiny mirrors out of each leaf and pine-needle. It was now well over the top of the tallest hill, yet I still lay between my blankets, pipe in mouth, gazing at the foliage and thinking. I was ever blessed with imagination.

*H*ERE is a different Moon story—a powerful story, which will hold your interest to the end. In this narration, the author brings forth a new means of terrestrial traction that may prove prophetic. We know of no large mechanical vehicle that advances with a snake-like motion at the present time. Anyone who has seen a snake crawl over the ground rapidly, must have wondered how the snake does it. Yet none of our engineers have ever thought of duplicating the snake motion for propelling a heavy body. To us, it looks rather plausible, and certainly for war purposes it would probably be the ideal thing.



Within three hours of its landing on earth, ten long, slender, worm-like tubes, each of them in the neighborhood of one hundred feet in length and ten or twelve feet high, had emerged from the three circular trap doors at the head-end of the lunar torpedo.

"A black spot on the moon," I mused, "and growing bigger." Thinking these things, I got into my rough khaki clothes. Breakfast over, I turned to my fishing pole, almost instinctively. But my mind was much too occupied to find joy in the catching of fish. I was restless and not a bit surprised to find myself packing my automobile-trailer. Five hours later I was in Westwood, home of sawmills and lumberyards.

Westwood too had seen the moon and there as everywhere else on earth, the Queen of Night was the chief topic of conversation and conjecture. A week ago practically every astral observatory in the world had caught the first view of the moon-spot, a tiny pin-point of black that was hourly becoming larger. Safe from newspapers, I had heard nothing of this in the wilderness and it was only four days after the first telescope reported the splotch on the moon's surface after it had become visible to the naked eye, that I became aware of a fact which for nearly a week now was puzzling the whole civilized world. Astronomers differed widely as to its origin and significance, though the majority of them stuck firmly to the theory of lunar volcanic action. Others talked vehemently through the newspapers and magazines of meteorites, and a few daring ones even hinted at life on the moon and attempts to signal us. Periodicals all over the world were giving it much space while scientific and semi-scientific journals played it up considerably. Men who had spent their entire lives glued to the eye-piece of a telescope, obscure till then, were suddenly pushed to the forefront of worldly events. Pictures of the luminous Queen of Night graced every sheet, while wise theatre-managers bought plays dealing with the moon.

I arrived in San Francisco late that evening. A thick fog had slipped in from the bay and had slowly enveloped the city, obscuring the scarlet death-bed of a dying day. With night the fog rose and like a canopy of moist cotton hid sky, moon, and stars.

Excitement everywhere was high and tense. Buzzing crowds looked vainly at the fog-covered sky. Market Street, its thousands of brilliant electric-lights turned milkily pale by the fog, was a veritable bee-hive of hurrying, scurrying humanity, who appeared in the mist like so many quick-moving ghosts. Cars clanked their warning bells, automobiles honked horns, and newsboys shouted stentorian "extras."

However, I tarried not long in the city behind the Golden Gate. Turning the nose of my roadster southward, I arrived in Santa Cruz a couple of hours later. Santa Cruz with its pretty beach lies only a short automobile drive south of San Francisco. It is home to me. There, too, the moon-spot was in everyone's mind and on everyone's tongue. Newspapers ran glaring headlines, men and women talked about it incessantly, and long unused books were resurrected from dust-covered shelves. Anxiety, conjecture, and wonder were rampant everywhere.

MIDNIGHT brought a brisk wind from the sea and the fog retreated into the eastern hills. A star-studded sky next revealed itself above us and in the center of it hung the moon. The black spot had grown to an enormous size, fully one-twentieth part of

the silvery lunar surface. Every eye in the western hemisphere was focused on it.

The next morning's *San Francisco Examiner* brought the latest theory of most of the world's savants that the spot was in reality a body entirely free of the moon and was even now advancing at a very rapid speed in the direction of the earth. According to most accounts, or rather surmises, it was expected to collide with our terrestrial home in less than a week, although its size was still a matter of conjecture. It was this latest announcement that brought fear like a gloomy pall down on civilized mankind and sounded the knell of despair.

The evening of that day found me in Los Gatos, home of Leola Spalding. At her home, sunk deep in the velvet softness of a huge Morris chair, I listened to some more talk about the moon. There was much said of the possibility of a lunar visit though more conservative people stuck to the early theory that a message from the moon would be delivered to the earth.

The papers the next morning brought a final concrete proof of the projectile theory. Life on the moon was sending us a message. How terrible the message would be, the world was soon to learn.

CHAPTER II.

The First of the Lunites Arrives

THE noon-day edition of a large San Francisco daily brought news of a second moon-spot which was even now visible through the larger telescopes all over the world. The evening edition confirmed it. A late night extra then electrified the reading public with news of the falling of a huge cigar-shaped projectile on a farm near Burbank, a suburb of Los Angeles only four hundred and some odd miles to the south. The spot on the moon had hourly grown in size and toward the last day its growth was almost visible; it was estimated to be traveling at the terrific speed of about fifteen hundred miles every terrestrial hour! It appeared to all observers like a small, dark ball enveloped by a solid, though semi-transparent halo, Saturn-like. In diameter it measured more than one hundred miles across and covered the entire moon from our view long before it landed. As it neared the earth this outer, diaphanous circle could be seen revolving swiftly around its tiny center nucleus. It soon covered almost the entire sky, blotting out almost a world of stars. Then as it hourly drew nearer and nearer to us, the tiny central core seemed to absorb the outer halo. An hour before it fell to earth it had dwindled to a few hundred feet in diameter, a revolving wing-like structure that seemed to be the propelling force of the earth-bound missile. As the wings of this lunar messenger diminished, so too did its speed. By the time it had hit our atmospheric envelope, about forty miles above the surface of the earth, what little did remain of the wings fell backwards like an umbrella inverted by a strong wind and revealed behind it a blunt-nosed torpedo about five hundred yards long. Outlined against the moonlit sky, with three fiery points on its forehead and its huge wings slowly gyrating around the black body, it appeared to us below like some horrible gargoyle-faced monster out of antediluvian times. Its speed had diminished to a mere hundred

miles, so that as it traversed our atmosphere, it left no trail of fire in its wake as do the earth-bound meteorites when they enter our terrestrial realms out of space. It landed very gently, at first on its nose and then as the remainder of its wings withdrew into the torpedo-shaped body, it slowly lay down flat, and looked to us like a short, blunt cigar. For a couple of hours it lay motionless and quiet.

Curiosity thereupon gave valor enough to a few people who dared to approach the monster from the moon. Tapping proved it to be hollow and it was found to be constructed of a steel-like metal, corrugated, and reinforced with thick ribs of the same metal, at twenty feet junctures on its exterior. Three circular openings like three enormous trap-doors, each of them fully fifteen feet in diameter, took up almost the entire surface of its nose and gave it the horrid, dragon-like appearance that it embodied. In height it measured fifty-two feet.

Close on the heels of the first news-extra, came another. Within three hours of its landing on earth, ten long, slender, worm-like tubes, each of them in the neighborhood of one hundred feet in length and ten or twelve feet high, had emerged from the three circular trap-doors at the head-end of the lunar torpedo. They seemed of the same metal as the torpedo itself, and had no discernible openings, and differed very little from it in shape; instead of being rigid as was the parent ship, these metal worms were flexible, almost snake-like in their structure. They seemed to be made of a long series of narrow hoop-like segments and tapered down to a tail. They traveled with curving snakish motions with great rapidity and employed a terrific crushing power in the manner of the boa-constrictor or the giant python. Armed citizens and the police of the vicinity found them to be bullet-proof. Cartridge and buckshot alike glanced like so many dried peas off a stone wall off their convex metal sides.

About a quarter of an hour after they had emerged, they continued to tarry in the immediate vicinity of their cigar-shaped carrier, as though the guides within were undecided about the next course of action. An oncoming Southern Pacific freight train headed for the Los Angeles yards, however, spurred one of the flexible metal monsters into immediate action to display its prowess. One second after the screeching locomotive had been sighted by the nearest one of the Lunite war-machines, this ironclad worm turned its head toward the tracks and with a queer wriggling movement soon reached a nearby iron railroad bridge. Wrapping itself twice or three times around a number of steel girders, it tore the structure in a moment from its strong foundation of concrete blocks, twisting the thick steel as if it were wire. The locomotive engineer put on the brakes a moment too late and twisted steel and shattered wood piled up into a colossal funeral pyre for its dead crew.

Following this, four other worms took stations at both road-ends of Burbank. Going back and forth with their queer snake-like movements they appeared like a quartette of horrible dragons taken out of some medieval print of hell and the damned. The others then swiftly advanced, disregarding all highways, over the hills in

the direction of Los Angeles, using a slender periscope in lieu of observation balloons. An airplane's bombing proved comically ineffective, the wriggling Lunite monsters did not heed the exploding terrestrial war-engines that were dropping all about them.

A COUPLE of days later the second lunar spot was noticeable to the naked eye and this time there were no conjectures as to its intentions. A panic-stricken world, like a cornered beast, armed itself for defense. The state militia of both California and Arizona were hastily summoned to arms and a message was sent to Washington asking for immediate military aid.

The vicinity about Los Angeles soon looked like an ant-hill just disturbed by man. What people were able to flee seaward or into the mountains, did so; the large majority, caught like scared rabbits in their warrens, were at the mercy of the invaders from the moon.

Then came news of martial law in Los Angeles and its vicinity and stories of atrocities worthy only of barbarians came through.

The fourth day after the first lunar torpedo had landed on earth and vomited forth its horrible freight, we received the first news of a newer weapon of war that the Lunites had at their command. Tales came from the south that told of ruined towns, decayed as if centuries upon centuries of time had left them so. Rusted, twisted iron, decayed wood, and bricks that seemed long ago to have fallen to dust, showed strange evidence of untold years of frightful havoc. It seemed as if Time, its ravaging furies pent up for a thousand years, let loose in one single day. Eyewitnesses corroborated each other in stories of a pale yellow light that seemed to emanate at almost any point from the metal sides of the Lunite worms—that decayed anything it touched—a yellowish ray that appeared to hasten Time. The slow fury of a century seemed to have been vented in a single second and the results were rust-eaten iron, decayed wood, and bleached, white skeletons, too horrible to look upon. Burbank, San Fernando, Whittier, Fullerton, and a part of Long Beach so far had fallen unfortunate victims to this newest weapon of destruction from the moon. The fate of Los Angeles itself, and its surrounding suburbs was but little known, though rumors had it that part of the city also had shared the cruel fate of the decayed lesser towns. Pasadena was afire and deserted; Hollywood's residents had fled long before. San Pedro and Wilmington harbors were bereft of all ships. A worm was reported at Pomona, thirty-three miles southeast of Los Angeles, where it scared most of the inhabitants of that little city of oranges southward and into the desert; another was seen as far out into the country as Redlands, in all probabilities out on a scouting tour, for no damage was reported. The following day, however, the country was horrified to learn from the northward fleeing refugees that all of the countryside surrounding Los Angeles south of Tehachapi Mountains and north and west of the many fruit-raising towns plus all of its beaches and seaports was already either in decay, in ruins or had ignominiously submitted to the yoke of the Lunite foe. The amount of dead was not known; it

was surmised, though, that the figure was large. The final bit of news before all communication was stopped, told that the Lunites had slowly surrounded the entire countryside and were concentrating the luckless inhabitants into one huge central group. Then there was silence from the south.

Three days later the second torpedo landed near Watsonville, a town of twenty thousand inhabitants, almost one hundred miles south of San Francisco. Seven metal worms emerged from it almost immediately and three of these started northward in the direction of Santa Cruz. Their tactics were almost identical there with those practised in the Los Angeles country. First they terrorized the inhabitants of a locality with their destructive ray and then circumvented one town after another, as they went, though they never strayed very far from the mother-torpedo. At Salinas, about sixty miles south of Santa Cruz, light artillery fire proved ineffective almost to the point of being ridiculous in the face of a pair of Lunite worms which had made their appearance there on the same day that the second torpedo landed and sent a vast horde of panic-stricken men, women, and children scurrying into the surrounding low hills.

CHAPTER III. The Decay Rays

ON the same day that the second torpedo landed and the news of the destruction of Watsonville reached Santa Cruz, I started toward San Francisco *via* the inland route which runs through San Jose. An almost unbroken procession of automobiles, bound for the Californian metropolis, lined the road and made the journey a slow and hazardous one. People afoot, many of them carrying cumbersome baggage and bawling infants, would jump on the running-boards and on the tail-end of the car pleading to be allowed to ride. Panic reigned supreme and the results of fear-maddened crowds were strewn on the roadsides, here an overturned automobile, gory underneath; there the mangled body of some unlucky wretch too slow to clear the way. At one place a huge truck loaded down to capacity with refugees came into collision with a Frisco-bound passenger train which dragged it northward for nearly a mile strewing the railroad embankment with wreckage and dying men. Several farmhouses and barns were afire and about ten miles out of Santa Cruz a noisy mob was looting a store. Near Los Gatos a gray-headed man with a bundle on his back was knocked down by a big closed car which never stopped. He was immediately crushed under a hundred wheels.

Once in Los Gatos I immediately proceeded to the home of Leola Spalding. Save for the main thoroughfare, which was packed tightly with honking automobiles, stampeding horses, and hurrying humans afoot, the town was empty and deserted. The Spalding home was void of life. Everything was indicative of a sudden departure and hasty packing. Having made certain that all had gone, I became one with the panic-stricken moving population once more and I turned in the direction of San Francisco. By this time, however, the procession had dwindled down to a slow tail-end of

horse-drawn vehicles of all sizes and descriptions and a scattered motley array of foot-sore stragglers who were unfortunate enough to have to walk. An occasional automobile, travelling at high speed, honked its horn derisively as it passed them by in a cloud of dust amidst a chorus of profane shrieks and curses.

It was within sight of San Jose that fate overtook me with one of its cruel pranks, that nearly cost me my life. Disregarding the highways for which it had no use, one of the lunar war-machines had traversed the bleak hills which, under various local names, make up the Coast Range Mountains of California, and had entered panic-stricken San Jose from the east. It was evening and the sky of the western horizon was rich in golden and gory scarlet, a fit death-bed for such a day. The moon was already up in the east. Only a few stray bits of fleecy clouds spoiled the otherwise azure monotony of the firmament. Coming around a sharp turn in the road, I was surprised to learn that the stately concrete highway had suddenly come to an abrupt end and in its stead was a continuation of ruts and debris that seemed to be centuries old. I stopped my roadster instantly. My first thought was that somehow or other I had missed my way and gotten off the main artery of travel and was now on some little used country-road. Then even as I looked down the rut infested strip with its powdered macadam and its tattered fringes of asphalt, I noticed that on both sides of it the trees and hedges had been withered as if by a score of frosts. Then, through the falling dusk, there suddenly shot forth a single pale yellow gleam, a translucent finger of milky gold, nearly a mile long. It quivered in midair as if it were shaken by a strong wind, and then fell upon a small grove of eucalyptus trees within a stone's throw of me. Only a hundred feet away, wonder-stricken, I saw the tall eucalypti suddenly wilt beneath the yellow ray of light as if a thousand autumns had struck them at once. Silently, the leaves went first, curling up on the instant that the ray struck them, and falling to the ground, crumpled cinders of brown and black, like wilted autumn leaves when the wind blows hard. The tree went next, sinking away into a time-ravaged stump. This sight had kept me so enthralled, even though it took but a fraction of a minute, that I failed to notice that along the destroyed highway the source of this terrible ray was slowly crawling in my direction. I barely had time to jump into a nearby clump of flat-topped arbor-vitae. When I looked back, I found that the ray of light had changed in color from a pale yellow to a glittering golden. A veritable stream of vacillating flame shot through the ebony of the night, and left my car as soon as it touched it, a couple of armloads of rusted tin and iron and some rotted wood. A hundred years had ravaged it in a second.

I remained hidden until darkness came and brought with it the stars. The Lunite worm passed by me almost silently, a huge, dark, ironclad creature from another world, gliding along the road like a serpent, silent, writhing, full of hate. Even after it had passed, I lay prone upon the ground behind the brush fearful of being seen by the manipulators of that devastating ray. Once or twice I noticed those long, slender fingers of pale yellow or of bright orange in the distance,

hurrying hither and thither on their merciless errands of destruction. Save for the wind that whistled through the tree-tops, silence reigned over all. San Jose was a city of the dead.

The worm glided past my hiding place twice within the next hour. The second time it stopped for a while only a few hundred yards away from me. It appeared, outlined in the pale light of a half-moon, like some prodigious serpent that lay stretched out upon the ground. Even as I watched it, there seemed to emanate a phosphorescent glow from its tapering tail—a glow that cut a luminous hole in the darkness of the night, like the fire-box of a locomotive when the flames are being fed. Then this glow, a brilliant orange in color, spread out like a flowing stream of golden water lighting up everything as it advanced. Swiftly it became bigger and bigger, a river of phosphorescent gold that made a bright day out of the night. It passed but a hundred yards from me, throwing long, gray shadows everywhere, and as it did so I was aware of a sudden and chilling drop in the atmosphere. The light, in order to shine, had to rob the heat it used from the surrounding air. It remained glowing for quite a while, a golden river that lit the landscape for many miles around, and then it died away until only a few scattered patches and then only a few scattered sparks of orange flame remained. And as this stream turned everything golden, the yellow decay-rays of the Lunites followed close upon its heels and turned these gilded reflectors into an ashen gray just as if centuries had left them so.

It was midnight before I dared venture from my hiding place. A strong western wind had blown in some clouds from the sea and the sky was starless and dark. The light emanating worm had long ago left, but now and then in the direction of the town I could see the cruel yellow finger-like rays of the Lunite war-machines sweep across the sky. Now and then also, through very long hours of vigil, I could make out an occasional scurrying figure, a scared human rabbit hurrying from one hiding nook to another, terror-stricken by the lunar vandals who had dropped upon us so suddenly. I started toward town *via* the highway just as the first drops of rain began to fall.

AFTER a few hours of walking, I was fortunate enough to run across a small Ford truck parked near a deserted house. On it were two small trunks and a number of suitcases, apparently ready for a hasty departure. Two bleached skeletons, white and dry like marble, lay sprawled out on a queer dry spot in the grass about twenty steps distance from the gate. The shriveled bushes behind them were the mute witnesses that told only too well that the decay rays had been there too. A moment later I was driving the truck along a deserted highway into San Jose. Morning was soon to come, an auroraless morning with a dull sun shining down from a duller sky. The dawn of that morning saw me in San Jose, now a deserted city. Daylight found me safely hidden among the thick, green frondage of a bulky pepper-tree from which I contemplated a dead no-man's-land—a bleached skeleton here, a ruined home there.

It must have been close to ten o'clock when the sun

finally burst through the leaden canopy of clouds that blanketed the sky. I began to feel hunger's unrelenting pangs and I dared to descend from my ignoble perch. In an adjoining street I found a small grocery store, the word "Abarrote"* showing it to be the property of a Mexican. The door was held closed by a huge lock, but hunger sufficiently keen recognizes neither bolts nor laws.

My stomach appeased and with a number of cans and cartons as a reserve held tightly under one arm, I was about to return to my treetop refuge until night and darkness would make traveling possible again, when a slight scraping noise in the room above me attracted my attention. A few seconds search revealed a small trap-door in the rear of the building and a precariously rickety set of aged wooden steps leading from a store-room to an attic above. Mounting these stairs, I soon found myself in a low-ceiled room, dusty and almost barren. A somewhat scared old Mexican peon, dressed in overalls, greeted me. "Come in queek, Meester," he said in accentuated English, offering me a helping hand. He was the proprietor of the little store below, and together with a very fear-stricken wife had taken refuge in this seldom used attic, when all others fled. He appeared to be very glad at my coming and kept repeating over and over again in his Latin-English, "They no can get-a us here," "They no can get-a us here." His wife was a tiny part-Indian peon woman who greeted me with a nod of the head and a sickly smile, which showed an excellent set of milky white teeth, a striking contrast to her dark parchment-like skin.

The attic-room boasted of but one solitary window, a tiny glassless opening in the wall that looked out on the street. Its sole entrance was the trap-door, through which I had come. The aged storekeeper kept this door firmly bolted and for greater reenforcement, he put a few heavy articles that the attic contained against it. Four large filled water bags decorated the walls and victuals were piled high in two corners of the room.

To my query if he had seen the Lunite war-engines yet, he answered eagerly that he had. At first, he, like a great many others, had taken these huge, black worms of metal for living creatures, malicious beings from another world. But the night before, while foraging in his store, his attention was attracted by a sudden series of ear-splitting shrieks in the street. Then even as he turned around a stream of golden light seemed to brighten the fog-enwrapped close of day, and into this aureate stream that illuminated the entire street, came one of the lunar worms, a long, sinewy monster of metal, silent and snake-like. Alongside of it ran five of his Mexican neighbors, three young men and two young women, and they ran as only those run who know too well that Death is the pacemaker. It was the two girls whom he had heard shriek and even as he watched this scene, a space about the size of his front door opened up in the side of the worm and to the astonishment of the terrified Mexican storekeeper, revealed a golden interior almost like the fire-box of some huge engine. He was too astounded to move, and even when from this exit emerged four of the most grotesque elfin-like caricatures of an earthly human being that he

*A retail grocery store.

had ever seen, he still found himself rooted to the floor of his little store.

"They were on tall stilts, señor," he told me, his jet eyes wide open with excitement, "and, *Dios mio*, they were not men, not men like us, you understand, like you and me. At first I thought that these long worm-machines were living animals from the moon; moon-snakes, I called them to my wife. Then imagine my surprise when with my own eyes I saw a door open up suddenly and from it funny little men come out—men who walked on stilts equipped with queer little chairs on top, on which these men sat. They had big heads with no hair and very short, thin arms, like the arms of a little boy. In size they were no larger than a ten year old child and even in the golden light their skin seemed to be sickly pale. Yes sir, they sat on these chairs about ten or twelve feet above the ground and guided their stilts with a short rod; they walked very quickly with their three long legs. I was too amazed even to be afraid.

"But they did not see me, thank God. They were after the runners, the three men and the two girls, all neighbors of mine. I knew them well. The moon-snake stopped as soon as the three-legged chairs got out to give chase. I think there were four of them. It was very soon over, señor. The chairs were fast, like automobiles, and run as they would, the three men and two girls could never escape them. It happened only a few steps from my door. The moon-men did not seem to care about the three men but only about the two women. María Vegas one of them was and the other a Morales girl, who was still going to school. From the seat part of the chairs stuck out two thin rods like a pair of nippers and with these the moon-men seized the two screaming girls and carried them to their snake-machine, kicking and shouting. It was a terrible sight. They never seemed to mind the men; and it was only when one of them, the oldest Morales boy who used to work for me, went to protect his sister, that one of the other moon-men grabbed him around the chest with his two long rods and hurled him like a ball across the street. Shrieking, the two girls were carried into the golden insides of the moon-snake and then the door was shut. Thomas Morales lay where he fell, his face bloody and he groaning heavily. What became of the other two men I could never find out. Very likely they ran away and hid. I thought of going out to help the injured Morales boy, but the moon-machine did not go away, so I slunk quietly back into my storeroom and then up here. From my little window I was able to see even an hour later patches of the golden light which the moon-people left behind them. It is terrible, señor, it is terrible. What will become of us all? God have mercy."

FROM the tiny attic window I watched the street below me. From where I was I could easily count three houses ruined by those deadly rays, I also saw half a score of grim skeletons, bleached as if by a century of suns. Four of them especially I noticed, only half a block away. They all faced the same way and all four of them lay flat on their faces. A rusted tube and a bit of aged wood, once upon a time guns, lay at the

side of each white skeleton. They told the mute tale of futile resistance. A bit farther on was another skeleton, a little one, maybe that of a child, and it lay as it fell on its knees and forehead, as if in prayer.

With night came quiet, absolute quiet, for San Jose was a city that belonged to the dead. Clouds still hid the starry vault of heaven and ominously threatened rain. There was lightning in the eastern sky. The day was a fit one for the times. Much to the horror of my two Mexican companions in hiding and much against their remonstrances, when darkness increased the safety I started out again. So with many blessings and much advice and a huge paper bag full of victuals, I went through the trap-door, down the squeaking set of steps, and out by the rear into the open. It was just beginning to drizzle.

Ghost-like I crept through the back-yards and from street to street, a fugitive. The story of the two Mexican girls that the aged storekeeper had told me reassured me a bit that the Lunites were more or less rational creatures of some type of civilization and were not altogether bent upon wanton destruction. However, I thought discretion a sound policy.

The northern part of San Jose was in ruins. It seemed to me an ancient city dug out by archeologists from the debris of age-long ruins. An earthquake could not have been more relentless. In the gloom of the rainy night it was only the spectre of a city, a shadow of San Jose, and I wondered at the fate of the many others that stood in the way of the Lunite invaders. Away to the south of me, I once noticed a long yellow ray, like a jaundiced finger of Death, traverse the sky and then fall down again. The Lunites were conquering once more.

Morning overtook me on the San Francisco highway about twelve miles north of San Jose. It was still raining and I was soaked to the skin. Somewhere, I can never recall where or when, I lost the big bag of food which the kindly Mexican storekeeper had given me and when hunger overtook me again, I immediately repaired to the nearest farmhouse. Its occupants must have fled the day before. An untouched copy of the *San Francisco Times* lay on the kitchen table. Its date was undoubtedly a recent one. Headlines told in inch-long letters, the news of two more moon-spots, or deadly torpedoes on their way, and of a third torpedo that had fallen in the vicinity of Stockton the night before. The population of the entire countryside fled immediately, most of them for some inexplicable reason crowding into the already over-congested cities of San Francisco and Sacramento. A few were wise enough to take to the hills for refuge. I was able to find no account of the number of worms that emerged from this latest vehicle from the moon. There was an article, however, that told of an encircling movement by at least thirty of the Lunite worm-machines-of-war that seemed to take in all of the territory bounded by San Jose and Santa Cruz on the north and on the south as far as Santa Maria—an area as large as the state of Massachusetts. The few survivors of the numerous air-expeditions that were sent out to combat the foe were unanimously of the opinion that the Lunites had intended to corral off the population of a certain area. I recalled

a tale by an eminent English author wherein the inhabitants of Mars, mentally as far ahead of us as we are ahead of the beasts we slaughter for our tables, had run short of food on their planet home and had decided to visit ours on a hunting expedition. So wafting themselves through forty-million miles of interstellar space in their queer egg-shaped contrivances, they landed with their long-legged fighting-machines and deadly heat-rays on our globe, where they proceeded to herd humanity, just as humanity herds the flesh that it eats. The Martians had become hungry and were using our globe as a larder. For one awful moment the thought entered my mind that the imaginative fiction-child of Wells' brain had come true, but when I recalled the story of the two captured Mexican girls and the three unmolested men, it dispelled any such idea. Their quest was a different one. Some strange disease probably, some queer twist of fate, had bereft the moon of its women. The Lunites were hunting mates.

CHAPTER IV.

As With the Sabines of Old

THE true intentions of the Lunites was by now well known to everyone and a scared world was at bay, hastily arming itself against the predatory inroads of these Vandals from the moon. From a fellow refugee, formerly a merchant in San Jose, whose house and family had only the day before fallen unhappy victims to the deadly Lunite ray, I learned of a newspaper rumor of a battle between an American army and the invaders from our satellite. It was a story of burning towns and of slaughtered regiments. Wherever artillery and air-bombs dared to pit themselves against the invaders, they proved futile and the results were always the same. Only rows of white skeletons on a naked field of battle showed where the men had fallen.

My fellow refugee stuck it out in the cellar of his house in San Jose as long as he could, hoping for relief. Daily he saw the Lunite war-machines pass back and forth in the street before his home, illuminating the town at night with their cold golden glow. Traffic of every kind had stopped passing through San Jose on the day following the first Lunite monster's entrance into the city. The panic-stricken population fled immediately. A few, like himself, however, dared the terrors of the invader and stayed. A mob of citizens armed with rifles and shot-guns made a fatuous attack on one of the worms and this caused the Lunites to take retaliation in the shape of their terrible rays. It seemed to him that the Lunites did not wish to kill; rather they seemed to want submission. Their aim, without doubt, was the wholesale abduction of the females of the land and later on of the entire globe. As the earliest of Romans stole the Sabine women and took them to wife, so now the female-less world of the moon was also hunting mates. Terror seized me as I thought of Leola Spalding.

Dawn, a pale pink dawn, struggling vainly to break through a pall of clouds, caught us still walking northwards. The rain had lost its fury at about midnight

and was now only a very uncomfortable drizzle. My companion was still voluble.

"The first worm entered San Jose about four days ago," he let me know. "We had received news of it and were expecting it. Of course, almost everybody fled. A few like myself and my family, however, stayed. There was a hasty organization of defense and a force went out to the edge of town to meet the invaders, but it never came back. The police kept order among the refugees and that was all.

"I lived in the north end of town, the last part of San Jose to be invaded by the Lunites. I had a wife and two young boys and was the owner of a small confectionery business. When news of the torpedo that fell near Watsonville reached us everyone became terrified, for Watsonville is only about forty miles away. Like so many scared rabbits, my panic-stricken neighbors fled. Families left their all behind them and either went north or into the hills. The Exodus was on. I, like a fool, stayed. I wish to God that I had been gone, too. No, despite the pleas of my family, I stayed. I was the brave man—and so stiff-necked. But I never thought that it would be so terrible. People exaggerate, you know, especially when fear is their mouthpiece. The stories that were rampant here were beyond the credulity of the most credulous. And all day long the endless procession passed before my door, a living river of men, women, and children. The Reverend Bickford of our Church, I am a Seventh-Day Adventist, you know, stopped by with his wife and urged me to flee. 'It is the doom of God,' he said, and I believe that he was right."

He quieted down for a while and we walked side by side in silence. Turning my head a trifle, I was able to observe him well. He was a short man, a bit inclined to embonpoint, and his stooped shoulders and lowered head gave him the appearance of being shorter still. I noticed that he wore eyeglasses and had a tiny moustache and, like myself, was hatless. When finally he turned his face toward me, I took note of the eyes behind the glasses. They were wild eyes, the eyes of a man who did not have a normal mind.

"Yes sir, believe it or not, I do," he continued his harangue in a more normal tone. "The end of the world is at hand. The Millenium is here and we shall be judged—judged everyone according to his merits. What else could all this mean? Ah, me. Woe unto the wicked."

I glanced at the man. He was shaking his head slowly and mumbling to himself as he walked, as though he were in great mental agony. I knew now that I had to deal with a religious fanatic, a man whose mind had gone astray when Death and destruction had overtaken all that he held dear.

"They came," he went on as if to himself, his eyes on the ground before him, "in the night, just like the Assyrians of old. God lit the world with golden light and the last of the people were fleeing before his awful wrath and they had just passed my door. I had come outside to see, for I had expected the worst. My family were still in the cellar beneath the store. I saw a single ray of gold down the street about three or four blocks away. Everything was lit with gold, even the

night. The long yellow ray of light seemed to go from house to house, linger there for a brief moment, and then the house would disappear. Not suddenly disappear, but bit by bit it would fall away until only the cracked foundations remained. Wood would go first, then brick, then steel—just drop away in chunks and rusted pieces. I watched it from where I stood as if nailed to the ground. Nearer and nearer came the awful light, from house to house, and wherever it lingered, if even for a second, that place immediately fell to pieces, rotted. Trees withered under its touch just as they do under the touch of a frost. Then even as I was gazing on in amazement the yellow ray crept nearer and nearer until only about fifty feet away from where I stood, it reached the house which I called home. I gave a shout of terror, and even before the echo of it had died away my house was no more. Dust and moulded wood above showed where it had once been. Even the foundation of it was gone and the walk around it was cracked as if by a thousand giant hammers. I ran there as fast as I could. My three loved ones had died in the cellar and their skeletons lay milky white beneath the ruins. It was terrible. 'The Lord hath given and the Lord hath taken away,' but, just the same it was terrible."

Then once more we plodded on in silence, save for the sobs of the heart-broken man.

LATE that day a passing automobile, the final refugee of an almost endless line, stopped to give us a lift. An aged farmer and his wife were the sole occupants. They had lingered on behind in the safety of their little out-of-the-way apricot orchard, as long as they dared, and it was only when one of the Lunite war-machines actually passed through his front yard that he thought it high time to leave. He had a married son in Oregon and was bound there now.

It was night when at last we arrived in San Francisco—a foggy night covering a dead city where men hid and dared but seldom show themselves. The city itself was under martial law and thievery and rioting was rampant. I noticed not a few buildings bearing huge red-cross flags before their doors, temporary hospitals to house the injured and the dying.

On the corner of Howard and Fourth Streets a noisy Salvation Army orator was haranguing a very scared crowd of about twenty, for the most part life's derelicts. My religious-mad companion fell into their midst with an "amen" and that was the last I was ever to see of him. A big church on Seventeenth Street was overcrowded. Men and women suddenly realized that at best they were the puny subjects of a power that they knew nothing about. They knew they were at the mercy of whatever happened to be stronger than they and they were kneeling bareheaded on the stone steps and on the concrete sidewalk in front of the church. Otherwise the streets were deserted and only here or there did one run across an occasional scurrying figure, too frightened to stop.

The ferries across the bay had stopped operating the day before. The city was overcrowded with refugees from the south, a plethora of the scared rabble of a hundred towns and hamlets, though they showed them-

selves but little. From divers sources I soon learned that the southern part of the state had been entirely cut off from the rest of the world for over a week and its fate was unknown to the outside. From various other outlying places, the vicinities of Stockton, Santa Cruz, and San Jose, came terrible news of the invader. Death, ruin, and abduction followed the trail wherever the Lunite went. Yet those places which offered the least resistance were spared death and ruin. The encircling of the bigger part of southern California had now become complete, a sordid bit of past history. A solitary wireless message from Salt Lake City had reported a pair of Lunite torpedoes that had dropped out of the sky and had landed a mile or so to the south of the city and then all was silent. Telegraph messages from outlying Utah towns said that the entire population of the Mormon city was taken by surprise and added that the state capitol was even then in ruins. One tale, told of a pair of gigantic Lunite engines of war that had attacked a high school in session. They alighted in their queer three-legged walking-chairs and made quick work of the defenders with the miniature ray apparatus each Lunite-chair carried. They left the building behind them a moulded tomb with only one wall standing over the grim skeletal reminders of the boys and girls who held out till the last. The Mormons had put up a sad resistance in the face of the relentless foe, only for a short while.

By this time military aid had arrived from the east. The rumbling of heavy artillery could be heard in the hills southeast of San Francisco. Newspaper yarns told of sanguinary combats with the Lunite invaders and of destroyed metal-worms.

With some effort and the aid of a bill of a rather large denomination, I managed to cross San Francisco Bay to Berkeley in a motorboat driven by a very incompetent young man. Like its neighbor across the bay, the college town was a silent city, though it was full of the living.

Leola Spalding had a widowed aunt residing in Berkeley, and I felt certain that she had fled there, and it was there that I found her and her parents. My narrative thrilled them all, especially the women. A woman, no matter how cold a logician she may be, is ever at the mercy of a thrill. There was dire news from Bakersfield, in the southern part of the state. Two army divisions, almost seventy-five thousand men, had met the Lunites and had been entirely destroyed. Not a solitary soldier came back as a veteran to tell the tale of disaster and defeat. Artillery, bombing planes, and armored tanks proved ridiculously ineffective in the face of the ruthless yellow rays that instantly ruined whatever they touched. Poison gas and fire, though these did halt them at times for a brief minute or two, proved miserable failures. The pale yolk-colored fingers of light would play upon gas or flame and in a little while they would be no more. Near the outskirts of Kern, one of the bolder worms that had crossed the arid miles of the Tehachapi Mountains had been destroyed by an underground mine-trap set for it by some far-sighted engineers. Nearly one half a ton of dynamite, sunk deep in the sandy ground, blew the long, slim invader from the moon into smithereens and left a gap-

ing hole in the earth big enough to admit a town. For a while hope seemed to lie in that direction, but the people from the moon had immediately become wary and from then on cleared the possibilities of another such disastrous occurrence by making a passageway for themselves to pass over as they advanced.

News also came from the coast south of us, near Monterey, a cavalry station, two mounted regiments augmented by some artillery and a nondescript army of citizen volunteers were routed with ghastly losses by two lunar worms. Then the decay rays made short work of the presidio and the town. Later on in the day a small squadron of warships steamed into Monterey Bay and fired broadside after broadside at the worms, but no noticeable damage to their thick metal sides was done. Two luckless torpedo-boat destroyers, whose captains had been more foolish than the rest, had ventured within striking distance of the deadly rays and were both sunk in less than five minutes. The survivors claimed that the decks just gave way beneath them and that the ship fell apart, crumpling to pieces like a house of cards. A squadron of huge bombing planes, including some English tri-planes of the newest design, were also destroyed. A Japanese dreadnaught of the pre-war class was badly damaged in her superstructure, but luckily managed to get out of range before the decay-rays could break through her thick steel bulwarks.

CHAPTER V.

The Moon-men are Coming

THE next day was Sunday, bright and almost clear. The first metal war-worm from the moon entered Berkeley at about ten a. m. It had crossed the bay from San Francisco, wriggling snake-like on the oozy bottom of the sea, a nightmare to the finny denizens of the deep. Only a few hours earlier two huge Lunite torpedoes had landed in the heart of the Bay City behind the Golden Gate—one of them on the Embarcadero right at the quay, and the other a bit farther up on the hill in the midst of the residential district of the well-to-do. Fifteen minutes later eight worms emerged from each.

Survivors tell to-day that the stampede which followed gives defiance to tongue and pen alike. Every street was a gruesome shambles, every highway out of the city a graveyard of the unburied dead. For weeks after, water-logged bodies rotted on the beach. San Francisco's population, thanks to an influx of a million or so of scared fugitives, had already trebled its normal mark. Hiding places of all sorts and descriptions vomited forth their terrorized hordes and clogged the thoroughfares of the city. Vallejo, San Mateo, and other adjacent towns became grim battlefields where gun, knife, and fist killed and maimed as one panic-stricken crowd tried to force its way through another in their mad effort to get away. "The moon-men are coming!" was the cry on every terrified lip, and like wine lent heat to the fury and echoed and re-echoed throughout the city. The decay-rays, in all probability used merely to intimidate the inhabitants of the city, only added more fear to the maddened mob, and men,

women, and children stampeded aimlessly as do frightened cattle in a storm. The number of those underfoot and underwheel far exceeded those that fell victims to the invaders' rays of death. The Lunites came to capture, not to kill. Disregarding all streets and highways for which their snake-like engines of war had no use and often with their deadly rays cutting a path for themselves through entire blocks of dwellings, the Lunites soon surrounded the entire city. Almost a million men, women, and children were trapped. Following that five of the Lunite war-machines crossed the bay, wriggling like enormous sea-serpents of wrinkled metal on its oozy floor, seeking newer territory to conquer.

There was mob-rule in Berkeley for an hour before the first Lunite war-worm shook the salt water of the bay off its metal back and wriggled upon the land. The pent-up terror of half-a-million desperate men and women burst forth at the news of the falling of the two Lunite torpedoes into San Francisco. Machine-guns fired into looting crowds and caused tiny rivulets of scarlet to flow down the street and make gruesome pools in the gutters. Fighting was going on every place where a road led out toward safety. Conflagrations burst out in several places. A weak-hearted militia proved ridiculously ineffective in the face of desperate people. Murders took place over the possession of automobiles and even of horses. The college campus turned out to be a desperately contested battlefield between armed students inside of the buildings and angry mobs seeking hiding and shelter. The fray was bloody and resulted in several fires. The police made no attempt to handle the situation. They knew they were powerless, besides they too were anxious to get out of danger. From the direction of the waterfront I could hear the firing of heavy guns. Later I learned that one of the worms was destroyed by several well-placed broadsides. The war-machines from the moon were not invulnerable!

Even now, when the Lunite raids are figured as history of the past, I shudder involuntarily every time I think of those days.

We drove northward as rapidly as traffic and wreckage-strewn roads would allow, through Benicia which was entirely deserted save for a pack of playful masterless dogs.

How panic-stricken the refugees were can best be judged by the large number of wrecks that were encountered at all crossings. Mangled men, enshrouded in twisted steel and shattered wood, were strewn on both sides of the road for many miles. Whenever we passed a car, more often overloaded than not, its occupants would shout at us: "The moon-men are coming, the moon-men are coming." Hurrying people afoot and carrying baggage and infants would echo the cry. Truly the Lunites had struck terror into the heart of the invaded land.

Sacramento was well nigh deserted when we entered. Down "J" Street a hundred or more noisy disciples of the Seventh Day Adventist Church were holding a parade. The cry of "The moon-men are coming" changed to "the Day of Judgment is here. Repent ye sinners." On one street corner, I cannot recall which,

a tall, thin man of dubious age was shouting the arrival of the millenium at the top of his voice. Across from him a cotton-headed negro preacher was haranguing a motley crowd with the most awful of Bible texts; and "amens" and "hallelujahs" came from the rabble. Farther down the street a corpulent middle-aged man, hatless, bare-headed, and with the business-like air of some big executive, was challenging a cheering audience in the name of patriotism and freedom to arm and meet the foe. No one seemed to be anxious enough to start, for the Lunite rays were deadly ones. Otherwise the streets were deserted, dead streets where no one moved.

Twice we were challenged by uniformed armed sentries who seemed to pop up in our path as if from nowhere, and bayonets fixed, asked us numerous questions before we could pass.

Train service had been discontinued only the day before. Nobody who had once set foot on the safety zones of the north cared to return south or west to the stricken areas again. Thus all rolling-stock about Sacramento was at a standstill. The river-steamers had been out of service a long time, one of them now only a charred wreck on the grassy waterfront near Rio Vista. Looting was not as rampant in Sacramento as it had been in the other panic-stricken cities. A large force of armed guards saw to that. Fights, however, were just as frequent and no plague that ever visited a city saw more gruesome sights.

CHAPTER VI.

Trapped

FOOL that I was to linger in this mad city of the living dead. The writer's instinct that was so strong in my make-up and that demanded strange sights to fill its bowl of imagination, cost me heavily. Early that evening, the Lunites were still true to their earlier strategies; eight worms had subtly surrounded Sacramento, using the bottom of the river as they had used the bottom of San Francisco bay. In less than a minute their deadly rays had destroyed the long bridge that spanned the river and led to safety and the hills. The city was trapped and the refugees were refugees no longer. A single pale yellow bar of light, the deadly saffron herald of destruction that we had learned so well to fear, turned me back twice from the roads that lead out of town. Escape was impossible and those who passed a certain limit, unmarked save by the decayed remains of some too venturesome ones, never returned, nor went farther on to tell the tale. In truth we were like penned beeves, corralled and awaiting the pleasure and the knife of the butcher. Proud mankind was shown its place at last. The Lunite race needed women to propagate it and so this, the lower, race must die.

Terror struck Sacramento immediately. Gone was the desire to fight, gone the desire to loot. The advent of the Lunites had been so sudden, so unforeseen. No warning, no preliminaries. One hour ago we considered ourselves safe and the next hour struck the crack o' doom. The Lunites fell out of a clear sky, just like a "norther" midwest storm.

Having had bitter experiences not so long ago with panic-stricken crowds that flew hither and thither in a mad, aimless effort to get away, I decided that hiding would be a better course. The cellar of a rather dilapidated cottage situated on an off street at the edge of town afforded the five of us a temporary nook of safety.

Deep into the night I could hear the clatter of feet and the rumble of cars as the panic-stricken people aimlessly came and went. Their tones for the most part were hushed though now and then someone would cry out in a shrill, frightened voice, "Here they come," and then a mad rush would ensue. Gradually an exhausted body drove me to slumber.

Terror-stricken shouts aroused me at daybreak. The cellar was gloomy with the half-light of dawning day. A million throats seemed to be shouting the same refrain, "They're coming. The moon-men are coming." Ten thousand noisy, hurrying feet must have passed before my cellar window ere the sun rose high enough to light up our nook. The first Lunite worm entered the street when the first rays of the sun entered the window. I watched it as it crawled slowly into the capital city of the state, a malignant monster of metal. Fifteen minutes behind it came another.

Terror makes strange creatures of us all, sometimes heroes, sometimes fools. As the second worm passed, two bare-headed men ran in front of it and emptied at its almost invulnerable metal hide the pitiful contents of a couple of shotguns. The worm never stopped; it never deigned to use its light. It merely passed over the two mad attackers, crushing them as a steam-roller would crush an obstrusive clod, and as it passed it left behind two gruesome patches of crimson stretched out on the macadam.

When noon-day came some of the more intrepid ones of the hidden population dared to venture forth, most of them men who had but little to fear from the Lunite foe.

Unfortunate people! They came out of doors at an ill-chosen moment. From behind a clump of trees a solitary quivering streak of yellow fell into their midst. It was done instantly and it lingered but a second and yet no broadside of artillery could have been more deadly or could have created more terror. The unknown is always the most feared. Like caged mice that hurl themselves foolishly against their prison-bars, the scared humans ran helter-skelter, stumbling over the naked, white skeletons that the cruel ray had left behind it, and crushing one another beneath their feet. The men from the moon had indeed accomplished their intentions and even before a score of the panic-stricken group had returned to the shelter of their houses and cellars, the worm had opened its metal sides, leaving hollowed within itself a cavern of gold. From this gilded opening I saw come forth four of the strangest creations of man or of Nature that it has ever been my lot to see. Imagine, if you can, a tall, drab-colored spider, a grotesque spider with three very long and straight legs and on top of these legs a gargoyle body. A pair of long and slender arms that ended in pincer-like fingers extended for about fifteen feet from this body. The aged Mexican storekeeper in the city of

San Jose had not exaggerated an iota when he said they were unearthly, terrible things. But it was only when I saw them myself, that I was able to appreciate the full horror of the old man. In truth they were grotesque, unearthly, horrible. Queer, elfin-like men, hump-backed and immense of head, naked. No hair covered their heads or adorned their faces and their pale, milky skin seemed as smooth and as tender as the skin of a year-old babe even from a distance. Their arms were short and thin as were their legs. They appeared to have almost no necks and their long and pointed chins seemed to sink, as if helplessly, into their enormous chests; ample lung-space for a breathing apparatus that had a very rarefied atmosphere to contend with. Their prodigious chests heaved heavily, like that of an asthmatic, beneath the thicker, heavier air of our orb. Their eyes were small, greenishly cat-like, and bereft of any brows or lashes. Their noses large, very large, fit air-intakes for so vast a chest. Their mouths, however, struck me the most; long, thin, pale-pink lips, snake's lips that hid no teeth, Nature's signal of warning that their owners were dangerous. Only cold, cruel, inhuman things could possess such lips. No passion was written in them, no emotions. Only egoism and cruelty. These were the invaders from the moon.

The Lunite walking-chairs moved swiftly. Not with the awkward, wobbling motions that I had expected, but they ran stiff-legged as a pacing horse. They were the engines which the Lunites used to offset the stronger gravitational pull of a larger planet and the two long, slender pincers made up for their lack of bodily strength. Of connections of wire, or otherwise with the metal worm which had spewn them forth, I could see none, and decided that the walking chairs, somehow or other, moved independently of the Lunite worms-of-war. Wireless currents from the main body might have directed them, so I thought at that time, but later events disproved this theory.

Straight for the racing fugitives went the chairs on their long, slender legs with the speed and accuracy of a race-horse and the metal-skinned worms followed close at their heels. I did not care to linger long over the sight and sunk back within the safety of my cellar.

I heard the staccato bark of fire-arms and with the noise of more or less helter-skelter shooting commingled the racket of a thousand running feet and together they sounded as sounds a heavy surf on a rocky shore. Curiosity tempted me to look again. The street was almost empty. Only the last of the refugees were out. The Lunites were entering their worm again, stepping cautiously over dead and mangled, and each one in its metal arms carried a struggling woman or two. A fat, unshaven man (I can still see him in blue pants, suspenders, shirt-sleeves, and brown cap) stood not far from my window. In his hand was a long double-barreled shot-gun and about thirty feet from him passed a mounted Lunite. His weapon roared once, a stentorian once, for both barrels spoke, jerking the gun from the big man's shoulder, and it vomited forth fire and smoke and death to the tiny, naked abductor from the moon. The little man's huge head fell sideways, not very far for he had no neck, and tilted

ludicrously over his narrow shoulders. His arms fell lifeless at his sides, the hands relaxing their clutch on the guiding mechanism of the chair on stilts. This, however, kept on moving forward at a fast walking gait. A half block away it encountered the brick wall of a two-story house, hit it and itself toppled over, its long, skinny legs still in a ridiculous series of movements as it lay prone upon the ground. The tiny man fell off his seat, the blood of his life appearing, and lay motionless on the ground. A pale-rose colored pool soon formed around him. A young woman broke loose from the cruel grasp of the pincers and deer-like ran toward the porch of the house. A Lunite followed her too late. Unabashed by his failure, this Lunite picked up the body and machine of his fallen fellow-warrior and a moment later entered the gilded interior of the worm. Then a maze of yellow and orange rays criss-crossed one another up and down the street and at the end of a minute a thousand years of time appeared to have visited the neighborhood.

CHAPTER VII.

Prisoners

THAT the little men from the moon, though mounted on their tall chairs, were very vulnerable and dared not follow into their houses and cellars those whom they forced to seek refuge there, and that their long, heavy metal worms could never do so, was an evident fact and gave us a feeling of some security. They dared not use their terrible rays of death and destruction often, for they did not desire to destroy the prey that they needed so much. On several occasions, however, the powerful pincer-like arms of their ambulating machines would search the interiors of houses through windows and doors, often tearing down weaker portions of the structures themselves and sometimes picking off bodily the roof of some little house. For the most part, however, things soon dwindled down to a game of hide-and-seek between sly hunter and wary hunted; sudden swoops on one side and pot-shots from windows and house-tops on the other; and occasionally the deadly decay-rays would be used to silence forever some good marksman. However, as through experience men became wiser, the Lunite warriors dared venture forth only under cover of a bullet-proof cheese-box shaped turret surmounting their tall three-legged walking machines. This gave each metal-encased lunar visitor the strange appearance of a perambulating hat-box with two long, thin arms. For four days I watched them come and go, safe behind the shelter of the little house in which we hid. In scores of other surrounded places I learned later, other people were doing the same, scurrying out in the ebony of night, awaiting desperately the moment on which starvation would claim them as its own or force them to leave their shelters to face the lunar foe. And as I watched from my cellar window some scared individual spurred by the unrelenting lash of hunger, who dared to venture forth from nook or cranny, I drew a mental picture to myself of a future world of underground dwellers, scared human rabbits, who would come forth only on the sly.

Escape was impossible and our sole hope was patience, a bleak future looming ominously. How well the people from the moon knew it. We were corralled and at their mercy in traps we ourselves had built.

With nights would come the golden stream of cold light which gave brilliance to the city. At times some refugee, braver or rasher than the rest, would venture from his burrow and visit us. One such, a ruddy-faced Italian vineyard farmer from Lodi, had surreptitiously wandered about the city, from one housetop to another, from cellar to cellar, and brought with him tales of the outer world. In some places, so he claimed, the Lunites were employing huge derricks, similar in form to their three-legged machines, to slowly tear apart the houses in which their victims hid, and from the ruins extract the terrorized refugees. At other places they were employing fire and a thick, bluish gas to drive out their prey. Not a few women, so the frightened Italian farmer said, had already committed suicide. Resistance was becoming more and more infrequent, for the hunted ones had lost all spirit in face of the deadly rays and of the thin-lipped little dwellers of the moon. Another visiting neighbor told of a tunnel which he and some fellow refugees were building. I said nothing but I wondered where he expected to lead the tunnel, where in this land one could say, "I'm safe here." Still another, a diminutive, wild-eyed man with all the ear-marks of a protagonist, tried to rally us in an excited and nasal tone to form an army and make a sudden swoop down upon the antagonists. "Many will perish," he said, "but in the end numbers shall conquer. 'Many rats can down a dog.'" Even then, he claimed, he was on his way from hider to hider, from nook to nook, in search of volunteers, brave men and women who would dare all. I never saw him again, but I wondered how many volunteers he could get to face that deadly, jaundiced ray.

At times we could hear the distant voice of field-pieces and of heavier artillery and now and then the ear-piercing bang of some high explosive. Sometimes too, usually at night, the even hum of aerial motors broke the quiet and then the roar of exploding bombs would suddenly break forth. From my post at the cellar window I could see a cloud of smoke, like some monstrous ostrich feather of ebony color, swinging back and forth in the breeze and then I knew that part of Sacramento was afire—a second Moscow sacrificed to drive out the foe.

Sometimes a worm would wiggle past the house and now and then a tall, three-legged, metal-cupola-ed Lunite walking machine would amble down the street with giant strides. Every minute of the day or of the gold-lit night, we expected to hear the crack and clatter of beams giving way before the big wrecking machines of the foe.

And soon the inevitable came to pass. One morning I was awakened from a dream of tall mountains covered with snow and pretty flowers by the harsh creaking protest of parting timbers. Upon looking out of the cellar window I beheld one of the cupola-topped Lunite chairs standing straddle-legged about ten feet or so from the house as if overseeing a job. Near it was a Brobdingnagian prototype of itself, a huge three-legged

wrecker, a heavy engine on three short, sturdy feet and its two thick derrick-arms were moving silently. The house trembled as if an earthquake had passed beneath it, squeaked in protest, and then came a dull series of thuds, the noise of falling debris. I looked up only to find that we were roofless. A smaller counterpart of the huge machine came up and joined the wrecking Leviathan, immediately proceeding to pile up into the middle of the street the debris that the latter made. I turned around in order to comfort Leola and my eyes met hers. She was pale, deathly pale. In one hand she held a small pearl-handled pistol in a suggestive manner. "Don't, Leola, for God's sake, don't. All isn't over yet," I said softly as I took it from her. She dropped her head on my shoulder and began to weep.

I would rather not linger on the details of those few terrible nerve-wracking minutes. In fact, I can recall them but hazily. The naked foundations of a house, a pile of debris in the middle of the street, a huge three-legged Nemesis of metal, three smaller ones nearby. A horrible nightmare. I have a hazy recollection of a silent struggling girl being borne upwards by long arms of metal, upwards and into the gaping, golden interior of a Lunite worm. Then I lost my head. I cursed and raved and as I did so I ran after the tall three-legged abductor. The worm was only a few leaps away and in the turmoil that seemed to be everywhere, unnoticed by any predatory Lunite warrior, I followed the tall machine into the aureate interior of the Lunite worm of war until, swallowed by golden glow, the intensity of the brightness hurt my eyes. It was as if a hundred mid-day suns had become one and shone down upon me bereft of their heat. I put my hands over my face in an effort to shut out the fierce glow. A moment later I felt as if I had suddenly crashed down upon my head. I rolled over to one end of the interior compartment of the Lunite worm and then came darkness, a Stygian gloom void of all consciousness.

When I awoke it was to find myself lying between a pair of thick metal girders that lay on edge horizontally on the floor of the machine. I very soon became aware of a zig-zag motion and knew then that the Lunite worm was moving. Save for an almost inaudible humming, like the spinning of a distant top, everything was silent. There was no pounding of pistons, no roar of flying wheels.

My head throbbed dully and heavily and flashes of colored light, intense and brilliant, passed before my eyes. I put my hand to my wounded member and found a large gash a little above the right eye, as if some sharp weapon had left its gory mark there. Clots of dried blood were on my face and shirt. Later I surmised that the marauding Lunite whom I had followed had upon perceiving my attempt to enter his war-machine dealt me a wicked blow with one of the metal arms of his walking chair and, supposing me finished, had never stopped to look again, and did not remark my falling into the huge worm's entrance.

THE bright flashes before my eyes continued and as they did so their intensity increased. I found my eyelids moving with a rapid, jerky motion. Gradually, however, I began to accustom myself to this, and it was

only then that I realized that the bright flashes were but intermittent glimpses, as my eyes opened and shut before the glare of the brilliant, almost sun-like interior of the lunar war-machine.

The snake-like, wiggling motion of the engine was to one unaccustomed to it a sickening one, like the roll of a ship on a heavy sea to a man who had spent every hour of his life on dry land, and it only tended to accelerate the throbbing pain in my head. From the rapidity of the movement I was able to judge that we were traveling at a prodigious speed.

It was only after the passage of a noticeable time that I became accustomed to the brilliancy of the golden light with which the interior of the war-worm was illuminated, and then only through half-shut eyes. Even so I was able to make out the cold bareness of the compartment in which I awoke, a concave-walled room somewhat larger than the interior of the average street-car—probably a vestibule. The ceiling also was concave, following the outline of the main body, so that my prison-cell appeared very much like a huge upset cup. Only the flooring was a plane surface, a flat surface constructed of movable inch-thick bars that formed a grating which answered at each twist and turn to the motions of the moving flexible walls of the worm as it wiggled on its way. Half a dozen re-enforcing girders, each one about an inch thick and ten or twelve inches high, with a grooved plank separating one from the other, ran horizontally from wall to wall on the level flooring of the worm. It was on one of these planks, the only bit of wood I ever saw on any Lunite contraption, between a couple of girders that I found safety. That was the only reason I was not pinched to death by the moving bars that formed the gridiron floor of the fighting worm.

I made sure that no Lunite was about before I dared venture from behind the foot high safety of the girders that sheltered me. Putting my hand to my pocket I felt gladly reassured to feel the hard rubber stock of an automatic pistol that I had put there when I left Santa Cruz nearly a month ago. I jumped to my feet, and cramped as I had been, I felt very light. At first I attributed this feeling to the blow that I had received, but as I could feel no dizziness I was puzzled. I felt as one must feel who had just gotten an injection of some powerful nerve-deadening opiate. I took one step, steadying myself as best I could against the whip-like movements of my carriage. My one step brought me forward five times further than I expected. I landed upon the moving gridiron, happily without being immediately mangled. The next moment I sprang ever so lightly back again to the safety of the girders and the plank, fully eight feet away. Then it dawned upon me suddenly. The Lunites, scientists that they were, knowing of the vastly stronger gravitational pull of the mother planet, had by some means unknown to us so constructed their earth-bound war-machines as to safeguard their weaker bodies from suffering while on earth. This explained their tall, three-legged walking-chairs. Also I realized that the cause of the rarity of the air which even then was giving me difficulty in breathing, was only an attempt on the part of the invaders to equalize the atmospheric interior of

their engines-of-war with the breathing conditions of the air on their lunar home.

Mine was an uncomfortable place of refuge and the winding motions of the machine in the bowels of which I traveled made it even more so. The chamber in which I awoke to consciousness was a vestibule which adjoined the various other compartments of the worm's interior. Strangely I could hear no roar or buzz of engines, no putt-putt of exploding gasoline, nor the monotonous hum of a dynamo. Even the moving bars that made up the floor and the flexible sides of the worm emitted no noise. The source of the golden light will ever be a mystery to me. It seemed to come from nowhere and to be everywhere. Everything was lit with it.

I was unaware that a newcomer had entered the room. He was a Lunite, a dwarfed caricature of an earthly human being, with a very large head and exceptionally ugly features, the hob-goblin-self of our childhood nursery books, that dealt in witches, fairies, and Puss-in-Boots. In stature, he did not exceed the average ten-year-old boy, narrow of shoulders and heavy of paunch and chest. Next to his thin, snake-like lips, cold, cruel lips, his broad, noble forehead most attracted my attention. Save for a square piece of apron-like covering, in size and shape very much akin to the common pocket-handkerchief, that flapped in front of his waist and reached almost to his thin knees, the tiny manikin was stark naked. His tiny cat's-eyes were wide open, as if in defiance of the brilliant glare of the cold golden illumination that flooded the room. Evidently he came into this vestibule just before alighting, for scarcely had he been there a minute when the sickening motion of the machine began to decrease, and presently the big worm came to a dead halt.

The first Lunite was soon joined by a second, an older one who walked with an uncertain gait on the barred floor. A third manikin followed close behind him, though from where I lay I was unable to observe the entrance through which they went.

The last entrant spoke something to the old Lunite who had preceded him. His voice was soft, like that of a school-girl, and the one had a distinctive nasal twang that made the words roll off the speaker's tongue in rhythmical monosyllables, almost like the neighing of a distant horse. The absence of any harsh gutturals or of staccato-sounding k's or hard g's was remarkable and gave the lunar language the soft quality of the Hindoo or the Hawaiian. It seemed to consist entirely of m's, n's, h's, and y's with an occasional purring l or v, or a soft, almost inaudible th, and, in the fashion of the Chinese, dropped out of the speaker's mouth in a smooth, sing-song dialect not unpleasant to the ear, the pitch of the tone now ascending, now descending very slowly. That the older man was some kind of a leader or officer was evident, both from the way that he scrutinized the younger one and from the latter's respectful attitude. A few sentences were uttered, the patriarch nodded his immense head, and the young man meekly fell in behind him. I put him down for an orderly.

An opening had suddenly and silently revealed itself in the concave side of the worm, as if by some magic "open sesame." It appeared as if the metal hoops

that made up its sides had been pushed together of a sudden and an oval space about eight feet high been formed. Outside was night, dark and starless, though off at a short distance a stream of golden light, like molten, sparkling gold, gave life to the night. Even in the blackness of the night I was able to discern that our destination had been a camp, a Lunite stronghold on our earth, the first footing of the conquerors. The aged one was the first to disembark, with a dignity that ill-became his big paunch, thin legs, and monstrous head, tilting to the front. A guard on a tall walking-chair challenged him and for a moment they were in low voiced conference. Then the mounted Lunite hurried off as on eagle's wings. The two other Lunites left the worm and joined the aged officer a moment later, received an order, and hurried back to the worm. About a minute passed and they emerged once more. Two others, tiny, naked, brute-faced men, in all probability of a serving caste, followed them as dogs follow an ill-tempered master. They were leading Leola between them.

CHAPTER VIII.

In the Camp of the Lunite

MY first impulse was to fly at the pair, but reason got the upper hand of emotion and I decided to bide my time.

A few minutes passed and the last of the Lunite warriors had disembarked from their war-machine. I counted twelve of them, tiny elfins whose pipe-stem legs seemed to be ever on the verge of snapping in two beneath their fat paunches and huge heads. Then when I thought that observation was not very likely, I left my hiding place between the two girders that rose from the floor, and thanking my stars for the open door, with one great, though effortless bound, was free of the worm.

Once on earth I was again surprised to learn that here too, just as inside of their long war-machines the Lunite engineers had in their mysterious way offset the stronger gravitational pull of the earth. This alone enabled them to walk about their camp without the aid of their three-legged contrivances. The atmospheric changes, however, were slight.

The moon was in its first quarter, a silver bow in the star-sprinkled inkyness of the firmament. Its light was feeble and as the golden stream, that the Lunites used to brighten their nocturnal world with did not reach everywhere, I felt secure. About a mile distant a long, slender jet of pale green flame rose into the darkness for a thousand feet or more and pointing toward the stars, lost itself in altitude and the night. Set about it at various distances, I was able to discern a series of enormous magnifying lenses and between a pair of these, a huge reflector. A hundred Lunites were busy around this flame, and from a mile away appeared to me very much like so many tiny green moths fluttering menacingly about a candle. I made my way around them cautiously in a wide circle, for I did not care to be observed. At the distance of several hundred yards, as I darted from shadow to shadow, I kept my eyes on eight tiny moon-men, and head and shoulders above

them, like a queen in a band of pygmies, was Leola. Above me hung the moon, a slender white crescent in a sea of black, and even as I cast eye on it, the thought entered my mind that this gigantic flame of green was a signal to the people who lived on our satellite.

Once we passed a hastily erected corral, a fencing about ten feet high, made up of appropriated telegraph poles and barbed-wire. Around it, like so many demoniacal sentries, were slowly pacing with enormous strides a dozen or more tall Lunite chairs with their occupants, stilt-legged guardians, armed with cruel yellow rays. The interior of the corral was filled with women, frightened, weeping girls, wives and mothers who had already thrown to the winds their last shred of hope. One of them had a babe in her arms, grasping it to her bosom tightly, so I thought. Even from my quarter-mile distance I could distinctly see bowed heads and hear sobs and I knew that their hours on this world were few.

Farther on a tall rack, like the skeleton steel-frame-work of a skyscraper under construction, arose from the gloom of the dark night. There was no golden light now, for the Lunites feared the deadly bombs of the terrestrial airmen, who swooped down upon them in the night. Like the skeleton of a long-dead Cyclops it loomed, outlined in the dark. Venturing nearer, very cautiously, I was slowly able to make out in the darkness one of those long, cigar-shaped torpedo-vehicles in which the Lunites had dared unbounded space and wafted themselves earthward on their predatory errand. It was encased in the gigantic rack like a torpedo in its tube, its blunt nose pointed toward the heavens. Perhaps fifty or more three-legged guardians were active nearby. A door in the lower end of the torpedo was open, revealing a golden interior like the fire-box of some huge engine, and in the glow of this aureate light, I saw a rather reluctant army of marching women enter the huge vehicle of the moon.

By this time I had become somewhat used to the feebleness of gravity that the Lunites so needed to travel upon earth and found little difficulty in judging my distance. Better still, my speed enabled me to easily overtake those whom I watched, now augmented by a trio of mounted sentries on tall, three-legged metal steeds, and to scurry to safety, whenever danger lurked near. It was a queer, if unpleasant feeling, and I wondered how Leola grasped it all. Days later she told me that throughout the journey and in the camp of the foe, she was too miserable to even notice it. I, however, felt like a powerful and active man in a world of lazy midgets and I gloried in my speed and strength. Yet as I watched the victims meekly enter the Lunite ship that was soon to dare orbit space again en route to the moon, and now and then saw a pale finger of yellow in the distance, my strength and agility seemed a mockery, and I thought of Leola and our helplessness with sinking heart. No longer was I the giant in the land of the Lilliputs but a helpless fugitive, whom Death followed about everywhere.

The Lunite platoon and their fair captive halted before a low, flat edifice that covered almost an acre of ground. A tall door, high enough to admit the mounted warriors, was opened, allowing the golden light within

to flood for hundreds of feet the barren ground in front of the building. A moment later it swallowed girl and all. I was left outside. Slowly I slunk into the shadow of a low turtle-back hut, half-sunk in the ground nearby. It was of metal, the same kind of metal that the war-worms were made of, the men from the moon used only one metal, apparently—a strange alloy that defied rust, fire, shot, and water. The hut—that is the only name I could give it—was circular and as high as any small one-story edifice, sunk in the ground like a cellar. It boasted of only one window, a glassless and shutterless circular opening about five feet from the ground. From this opening, like the port-hole of a ship, radiated a golden glow, mellow and yet bright. My curiosity got the upper hand of my erstwhile waryness, and I was able to observe that its source was a pair of low, wide-mouthed jugs overflowing with an orange-hued liquid of great luminescence, fairly simmering as they threw off the aureate rays of light in all directions. A second peek allowed me a view of a snowy-aproned Lunite, the hut's sole occupant as far as I could see. He was a little old man with wrinkles on his pale, lacteal skin and signs of weariness in his green, beady eyes. His nose was large, very large and negroid in appearance and like the noses of all Lunites, covered about one-third of his face, the enormous nostrils dilating visibly at each intake and exhalation of breath. His lips were thin and snake-like—a sure sign of passionlessness and cruelty. The man was either a Torquemada or an arch-scientist. Some vials and tubes that lay scattered about pointed toward the latter. The Lunites were men of science, cold and heartless, and unmoral—just like the animals. And now they, a waning race, were desperately clutching a thin straw. Nature's great law of propagation was forcing them to dare the unknown in a final effort to get newer and fresher blood to carry on with.

But my meditations were short-lived. A creaking noise behind me brought me back to earth again. I had time only to dodge into the shadows before a mounted lunar messenger entered the circle of light that the port-hole emitted. A door opened silently and suddenly in the side of the hut, flooding with golden light the world outside. The Lunite stopped in front of the door and a pair of long metal arms that ended in pincer-fingers lifted an inert burden into the opening. A young Lunite dismounted nimbly from his metal charger and the door shut behind him and left me in darkness without. It was not until I dared another peek into the circular window that I became aware of the importance to me of that burden. It was Leola Spalding.

THE tall machine was left in the darkened doorway. Only a thin slit of gold told where the portal was. At closer range I was able to note well the workmanship of the lunar contrivance. Thin, polished wires formed a silvery network on the back of the chair that was mounted on stilts, every one of them coming into a central point, like a spider's web. A square metal box lay in the rear of this web. A lever led from it to the seat of the machine, no greasy gears, no noisy cylinders, everything silent and clean. Tiny springs,

powerful as a small dynamo, absorbed whatever shocks fell to its lot and I was able to make out a bar-shaped guiding apparatus near the lever that came from the spider-web set of silvery wires. A small tube ending in a funnel opening and set horizontally in front of the chair, absorbed my attention. It was about two feet long and was in appearance very much like a thick, blunt telescope. A yellow glass covered its funnel-like end. Thin wires lead from it to the black box in back of the chair. It was a miniature decay-ray apparatus, a tiny counterpart of those the Lunites carried in their worm-like war-machines.

However, I tarried not long in admiration of the Lunite engine but took my station once more at the little round window of the hut. Leola had fainted away and was prone on the floor. Knowing the spirit of the girl, I easily surmised that she had been drugged. Later news had it that in truth the Lunites were employing a gaseous opiate, whenever a captive proved too reluctant or recalcitrant. Some women, driven desperate by the prospect of the most dreadful of futures, turned claw and fist upon their tiny captors, who then turned loose their wicked yellow rays or employed the powerful metal arms of their walking machines.

The older Lunite was seated a few feet away while the younger one was on his knees beside the drugged girl, his head bent down over her face, and for once I observed that those pale, thin, icy lips could at times be touched by a warmer tinge. With one gigantic leap, I was inside the hut. In my eagerness, I had entirely forgotten the weaker gravity of the lunar camp and the strong impetus of my bound carried me and the two Lunites backwards and up against the metal sides of the wall. I heard the dull, sickening thud as the head of the elder man sharply hit the thick metal and a moment later he fell lifeless from my grasp. I hurled his younger companion bodily from me and even as I did so I could not help but marvel at his incredible lightness and delicacy. He seemed to be no more in my hands (and I am not a strong man) than a very fragile infant would have been. He tried to arrest my hold on his arm and his thin babe-like fingers felt like so many butterflies upon my wrist. Little wonder then that the dwellers of the moon needed machinery to perform all their labors. The jar of the fall certainly must have killed the little fellow.

Then with a strength and an agility that I never before dared give myself credit for, I picked up the doped girl, and in one jump was on the threshold of the door. For a moment indecision claimed me for its own, and I was about to return to the place, where my two fallen adversaries from the moon had given their lives, that their kind may live. I had a more or less hazy idea of barricading myself in, when the motionless walking chair arrested my attention. Its two long arms hanging limply at its side, it stood, legs apart in the fashion of a Kodak tripod, in the circle of golden light in front of the opened door where the Lunite warrior had left it, when he entered the hut with his fair prize. A wild idea immediately came into my head.

Ever since childhood's care-free days I had dabbled happily in wheels, gears, and rods, and was even now considered more or less of an amateur authority on

machines. A series of metal rungs led from the ground to the seat of the machine. The weak gravity prevalent in the camp allowed me to attain this seat in two leaps, though Leola lay inert upon my shoulder. The running apparatus of the machine was based on the simplest of principles and a few moments sufficed to initiate me into its manipulation. A lever shot it forward and the same lever stopped it on the spot—no brakes, no sudden jars, merely an almost insignificant slowing down before a dead halt. Speed was regulated by the lever also, while the turning of the long-legged walker was accomplished by two smaller levers that protruded from the side of the larger one. I could find no reverse mechanism. Such a machine had no need of any. A moment later rapid strides were taking us to safety.

We must have been traveling for at least five minutes toward a dimmer breach in the circle of golden light that surrounded the Lunite camp, a ring of gold many miles across and in it lay in lunar hands, city, hamlet, and town. My intention was to risk the deadly yellow rays they knew how to use so well, and attempt a sally through the spot where the flowing river of gold flowed not so wide and its light was at a dimmer ebb. Once I turned my head toward the hut, now fast receding in the distance, and in the open doorway outlined by the glow from within, I could make out three tiny figures bouncing up and down, apparently in excitement. Later I learned that the little people from the moon were masters of telepathy—to us it was still only a form of superstition—and even before they died my Lunite victims had broadcast messages for aid into time and space and their comrades in camp had just then come in answer to that silent summons. Like the wireless ways from the sending apparatus of some distressed ship this mental SOS was even now spreading from Lunite to Lunite all over the camp and streams of a golden hue were pouring out upon the drab landscape as if from nowhere and their aureate glow was cutting a brilliant hole into the dark night. And in this light, like so many excited long-legged spiders, a hundred mounted Lunite warriors were hurrying to and fro. From out of the shadows and into the light they emerged, strange, evil giants on three long legs.

But on that night Dame Fortune deigned to smile on me. The breach in the golden light that encircled the Lunite camp was becoming less and less and no deadly yellow finger of Death touched me and called me its own. Once in the darkness, I passed a war-worm, a long, slim, and silent monster of metal, speeding madly through the darkness outside of the camp. It wiggled by me scarce a hundred feet away, as I stayed hidden in the welcome shadow of a eucalyptus tree. In a second it passed me, and was lost in the night.

Eastward and toward the tall Sierras, I bore, and even then the artist within me took unconscious note of the beautiful caps of white that each high peak wore. The moon, a half-moon by now, turned them into silver, and as I gazed from the mountain summits to her, I noticed two more spots on her visage of silver. Enormous spots they were and two hours later when I looked again they had diminished in size. Two torpedoes were returning to the moon and I shuddered as I thought of the earthly cargoes that they bore within their

gilded interiors. Then I gazed down at Leola who was still under the influence of the gaseous opiate and slept silently and deeply beside me and I gave thanks to whatever powers there were for the good work of the day.

CHAPTER IX.

Into the Hills Beyond

ONWARD we flew with long, rapid strides, mounted on a spider of metal with three tall legs, eastward toward the rising sun, the snow-capped hills, and safety. Through the dusk of the night I could see the desolate landscape over which we passed, ruined as if by untold aeons, a wall here, a crumbling foundation there, wreck and debris everywhere, on the back of as strange a steed as earthly human ever rode. Early dawn, the horizon broken by the saw-teeth of the majestic Sierra Nevadas, came blushing pink as it ushered in another day, and found us in the timbered foothills. Here the Lunite war-worms had never come and had therefore left no trace of the sad, mute witnesses of death, desolation and ruin. There must be refugees in those tall mountains, I thought. Others passed over them to the temporary safety of the land beyond. We may be secure for some time to come yet.

Over the tall ridge of the age-old sentries that seemed to hold on hoary shoulders the blue of the sky, the sun was just beginning to rise in a sea of red. Directly below us was a vista of foothills, undulating like the ocean and endless like it too. Past it, into the mist of the early morn, was lost on the horizon the flat landscape, that stretched for miles beyond the broad valley of the San Joaquin, California's immense fruit garden. Toward the west it stretched, losing itself at the feet of the barren, turtle-back hills of the Coast Range, which in turn lost itself in the western sea as it seemed to wash its feet in the blue-green waters of the Pacific Ocean. From the hills it loomed in the far-off distance through the haze, like an immense garden of Ceres, and even as I gazed there shot forth through the mist a single ray of yellow, almost indiscernible in the distance and the fog, and then I knew that this garden of fruit, grain, and truck-farms had been turned into a Hades almost overnight.

The long metal legs crept silently and steadily up the mountainside, stepping almost humanly yet without effort, and disregarding mountain trail or road. Leola awoke with the sun, bright blue skies meeting bright blue eyes. At the first instant she appeared startled, but as her quick mind grasped it all, she threw her golden-haired head upon my chest. For awhile she was silent, then, raising her head, she looked back at the plains we had left behind us, the land under the dreadful yoke of the lunar vandals who had dropped so suddenly upon us out of the skies. "Oh, dear me," she said almost inaudibly, and sank back upon my chest. A golden lock of hair grazed my chin lightly as a feather and I gave thanks to the fates that had thrown us so happily together, although it had used so cruel a means to do it.

Hunger soon began to assert itself and a long-

neglected stomach began to cry for food. Somehow or other, too, the Lunite walking chair was beginning to falter. At times it moved ahead jerkily, as an automobile does when its tank is all but dry. Its spasmodic steps seemed to ask for the fuel that gave it motive power. Of what this fuel was, I was entirely ignorant at the time. There were a series of metal keys on a dashboard at the foot of the chair on which we sat, and I ventured to test these, but with no effect. A buzzing sound that was almost a mechanical sigh came from behind me and the tall, three-legged walker that had faithfully served us so far, gave up the ghost and stood still. Days later I learned that the magnetism of the ore that was in the bowels of these hills through which we roamed had affected the ultra-delicate mechanism of my metal steed.

In my tinkering about the now useless engine from the moon, I came upon a tiny compartment beneath the seat of the chair. From it, I extracted some tools, and, among other things, a small metal box, in size like a penny box of matches. Upon opening it, I found a number of various colored capsules, inch-long gelatinous coverings with dull-colored powder inside of them, red and brown predominating. At that time I dared do no more than put them away for a future analysis and a month later a chemist friend of mine told me that they were highly concentrated food extracts, which the very delicate digestive systems of the Lunites needed in order to continue life. The mode they used in the concentration of vitamins and calories he was never able to deduce from the score of little pills. Curiosity one day tempted me to swallow one and resulted in missing a meal at the table. Tasteless, they were poor food for an epicure.

Then and there we pledged each other to start life anew in the shadow of the hills, where the deadly war-weapons of the lunar world would come very seldom. I cleared an opening in the undergrowth at the foot of a cliff behind the shelter of some tall, arboreal mammoths which had withstood the roughest of storms of countless years. The sun had already passed its noon-day meridian, when I started to build our little home. Pine-straw, fresh with pungent scent of the hilly outdoors, made up the floor, while brush-wood gave our home a top that would dare all rains. Feminine-like, Leola had to have ornaments, and a trio of huge sugar-pine burrs furnished these as the mountain breezes wafted them back and forth suspended by strings over our door.

"What would you do if a bear should come—a hungry bear, I mean, very hungry?" asked my little mate as she stopped suddenly in the midst of our task.

I still retained the automatic that I had wisely taken from my home in Santa Cruz, and for answer, I showed it to her.

"You had better keep it so we could eat," she replied, and despite the merry, girlish twinkling of her eyes, I saw that she too had realized that our plight here might be harsh indeed.

Every night we watched the moon, watched her when the clearness of the sky would allow, now she was full, a huge, white orb hanging in the firmament, now merely a crescent painted brightly on a background of

black or blue. There were spots upon it every night, spots that hourly became smaller as they journeyed homeward through space and spots that became larger as they came to conquer. Summer passed, cool in the hilltops, and autumn came on its trail, painting with yellow and scarlet the leaves of all but the evergreens. Cooler, longer nights soon came as harbingers of a mountain winter, when the boreal gods would vent their pent-up furies on the white-clad earth below. The birds began to scurry westward to the lowlands, where the weather was not so harsh. We had had absolutely no news from the outside world. No refugees found our camp, and though I roamed the mountains for many a day, I ran into no one from the world below. Nostalgia began to lay claim upon Leola. She spoke of home and her parents. These, together with her aunt, had made up our unfortunate party of five on our escape from Berkeley months before we fell into the trap of the Lunites. And when they wrecked our hiding place in Sacramento and took us out of our burrows, we lost trace of one another. Leola feared the worst. We talked of going east, but where? Who knew how far the marauding lines of the invaders had penetrated or how much territory they now called their own? Even a winter was far safer in the hills. One night, before our little campfire, she confided to my anxious ear that a third one would soon be among us before the open fire.

That night I thought of the tiny helpless stranger that was so soon to be one of us, and the merciless mountain winter that was to usher it in. I looked toward the east and thought of another flight.

Came the first snow of the season, a thin, flaky carpet of white that creaked a crunching protest beneath our feet. Summer and fall had been pleasant. Berries, birds, rodents, and nuts amply supplied our table. My clothing was torn in more than sundry places, and I was in dire need of both tailor and barber. Leola, however, born housekeeper that she was, managed to keep her little wardrobe in far better shape.

FOR many days the moon had been spotless. No astral-wandering torpedo marred her shining face. We watched nightly from our tree-encorralled home and exchanged theory after theory, neither one of us daring to say that which we hoped was true. Then, one day—the slush of the melting snow was still upon the ground—while gathering firewood, I heard Leola's voice raised to an unrestrained shriek, a shriek that told of exultation. I dropped my fagots and ran swiftly toward the direction of the cry. Leola was leaning against a huge sugar-pine which stood not far from the brink of a deep chasm. Seeing me, she beckoned. A valley spread itself before us, a pine-clad valley that spread itself for many miles outward from the foot of the wall of the gorge.

Following the outstretched arm of my comrade in adventures and of life, I saw, in a small, pale-green opening among the trees, one of those Lunite war-worms which had caused the world so much trouble and sorrow and left in their wake desolate lands. It was acting queerly, wobbling from side to side like a derelict in a choppy sea, as if the guiding hand within

it had lost control or was no longer there. I watched it, but I was unable to discern any visible reason for so strange an action, and even as I looked, from the dark green of the piney-woods emerged half a score or so of huge war-tanks, such armored, caterpillar-treaded monsters of battle as the British armies first used so effectively on the Somme during that dreadful, gory autumn of nineteen sixteen. The tanks were of a khaki-hue. I knew then that the absence of any further spots on the moon, that had been so impressive of late, had indeed meant just that which both of us hoped and neither dared to say. The conquerors from the moon were conquerors no more. Leola pointed toward the sky. Outlined on this snowy background, like a swarm of bees, was a squadron of war-planes in an echelon formation.

In the valley below, things were happening very rapidly. Then ten war-tanks stopped in an irregular line about a hundred yards distant from the Lunite worm, and from them emerged a score of brown-clad men. For a while they appeared to be examining the queer metal monster from the lunar world, and then part of them returned to the terrestrial engines of war. Once again they emerged from their tanks, this time, however, bearing heavy burdens between them. A minute more and the tanks wobbled back into the thick forest of pine trees and the long, snaky war-machine of the Lunites stood alone in the opening. Then a terrific explosion tore the silence of vale and hill asunder with a roar and echoed and re-echoed from mountain to mountain. Tons of some powerful explosive lifted the unfortunate lunar worm a hundred feet high into the air, tore its almost impregnable sides of metal asunder, and buried it in a gigantic pit of its own creation. Then the planes let fall a shower of bombs upon it, throwing high the earth and rock that the dynamite failed to throw, and a minute later khaki-uniformed soldiers were examining the ruins.

Leola fell into my arms. There were tears in her eyes—tears of joy. "We're saved," she whispered, and then she would say no more. Night was approaching at a rapid gait, and tree and hill threw enormous black shadows which pointed to the east. The winter wind howled wildly in the pines which bowed before its might. But we mocked the wind happily, for well we knew that no cold and cruel winter wind would find us in the hills. Early the next morning, an armored car marked U. S. A. met us on a little used mountain road and a very much surprised army captain made room for a bewhiskered and ragged young man and a somewhat disheveled young lady, clothed for the most part in poorly dressed squirrel skins. That noon found us at the nearest railway station, a hastily constructed edifice of unhewed pine wood over the decayed corpse of a nobler ancestor. Two days later we were in Los Gatos.

CHAPTER X.

The Last of the Lunites

IT was a very happy family reunion which took place a few days later. Five of us there were, the same plucky five that had lived through days of adventure and nights of terror such as fall to the lot of but

a few. Leola's parents and aunt had been somehow overlooked by the raider on that fatal morning that saw our hiding places torn to pieces over our heads. Their narrative was one of flight, a veritable game of hide and seek with the terrible little men who came from the moon, a game wherein a plight worse than death was the lot of the loser. Fortune, however, deigned to smile on them, and after a fortnight of nocturnal flights, the three fugitives managed to evade the watchful eyes of the Lunites. Divers routes and various means of travel brought them into Portland, Oregon, in about a week, at times only a day's travel ahead of the advancing vanguard of the northward-pressing Lunites, whose deadly rays of yellow the refugees often saw from a few miles to their rear. In Portland, a city of two hundred thousand or more, they awaited the time when a newer flight would become necessary, as the cry went up: "The moon-men are coming! The moon-men are coming!" They had a long time ago sadly listed us among the dead or among those who had suffered a bitterer fate, and a happy trio indeed they were when they found that the hopes, which they had surrendered, had played them true.

We heard of many happenings of the past half-year. Everyone was anxious to talk. Everyone, young or old, had his or her little thrill to relate. A black crepe hung over the nation. The destroyed towns were many, and the dead innumerable. Wealth lost ran into the countless millions. Of the laden torpedoes that had gone moonward with their earthly cargoes, no one dared to talk. Los Angeles, in whose vicinity the first Lunite had landed, suffered the most. Like Salt Lake City, in Utah, it was a demolished tomb, full of naked, bleached skeletons. Those who had been left unharmed by the lunar vandals told tales of futile resistance and of frightfulness too terrible and gruesome to relate. Others added stories grimmer yet to those already told. San Francisco, Sacramento, and not a few other cities, however, fared much better. Wisely they offered only flight as a resistance to the tiny lunar conquerors and their deadly yellow rays, and those who were unfortunate enough to have their city prove to be their trap, fared a better fate than did the denizens of the other. Cellars and sewers proved to be futile place of hiding; the powerful machines of the invader extracted the terrorized, luckless victims at their leisure. How many laden torpedoes returned to the moon, no one was able to say.

Strangely enough, no other part of the world suffered from the lunar raids. For some reason or other, they had selected this spot of the whole wide globe as the choicest one.

The people of the moon raided and destroyed everywhere; the laboratories of the world were working their weary scientists day and night. The happy results came from Germany, that hearth and home of chemistry. An invisible spray of lethal germs, harmless to the stronger constituted earth-dwellers, rolled like an airy ocean from ten thousand huge sprays wherever a Lunite had set foot. A few days and it was all over, and where cannonades had proved miserably ineffective, tiny bacteria conquered. Yellow rays

that decayed as they touched were powerless before the microscopic harbingers of death that came on filmy wings and could not be seen. The atmosphere about the invaded territories was virtually saturated with these infinitesimal weapons, saviors of mankind, and the helpful winds drove them where lunar lungs would be sure to breath them in. At first the results were scarcely noticeable, and hopes fell before another attempt that ended in failure. Then came a day on which the Lunites advanced no more. It was the decisive day and victory was won, and the lunar vandal rode on his raids no longer. The queer dwarf-like men died within their terrible war-machines, died to a man, and another conqueror was put down on the list of those who failed. It was less than a fortnight later that the last of the Lunites, a few scattered war-worms, were being hunted down by those whom they had so long ravaged, and with just as little mercy, and the spray of microbes proved deadlier than the deadliest of yellow rays. The hunter had become the hunted; the bear had turned upon the Nimrod.

Then from all over the world, civilized and otherwise, white, yellow, black, and brown men and women poured their mites and their millions into the coffers of charity. They had been spared that cruel year of nightmares, the dreadful fate of our own Pacific Coast regions; yet they understood only too well the fact that this American barrier which did not fall, saved their homes and lands as well. During the regime of terror they sent military aid, and with it that solace of the warrior, the Red Cross. But soldiers and artillery were futile. What chance had cannon in the face of those deadly rays? Then, when all was over and only the ruin and desolation remained as grim reminders, no nation, sect, or people was miserly with its gifts.

It is characteristic of the pioneer spirit of this land to arise quickly again after each blow. Otherwise, how could the West have been settled, its deserts conquered, its mountains scaled? It mattered not how hard the blow that felled. Even before the last Lunite warrior had become a hunted refugee in the hills, in time to succumb miserably to the deadly germs that surpassed his rays, the ruined towns and cities were starting life anew again. Tents and shanties went up like mushrooms overnight where dwellings of brick at one time had stood, and disrupted families, eyes still red from tears, were building newer homes. And southward and westward, daring mountain, desert, and distance, a vast multitude of moving men, women, and children were returning to the land from which they had been driven, ready to begin all over again. Their homes had been crushed, it is true, but their spirits, never.

ACCORDING to the best of authorities, it was found that the Lunites had used the static electricity that is everywhere in the universe to propel their engines and give power to their rays. Daylight, with the sun's magnetic energy and the magnetic attraction of the ore metal in the Sierra Nevada Mountains, interfered with the very delicately adjusted mechanism of my purloined walking-chair, and the lack of this knowledge and of its remedy, caused our half-year's detention in the hills.

Unfortunately for us, the dying Lunites, as soon as they realized that all was over, destroyed practically all of their machinery before they passed away. Thus, neither the static-electricity generators and dynamos, the motive mechanism of the huge worms, which was the source of their cold, brilliant golden light, nor their deadly yellow decay-rays, was ever to become a servant of the people of the earth.

The grayish metal which they used for almost all purposes was an alloy of various earthly ones, exceptionally durable and tenacious and of a very light specific gravity. It was their sole war indemnity, the sole payment which they, as losers, had to forfeit. To me it always was incomprehensible that the Lunites, scientists and engineers that they were, and the very light metal they were possessors of, should have been satisfied to stay on the ground and never rise into the air. For aerial craft, not counting their huge interspace torpedoes which were shot forth like a shell out of a gun, the Lunites had none, which was very fortunate for us.

In physique, they were merely vastly tinier, more fragile counterparts of ourselves. In all possibilities we will be such creatures in another ten thousand centuries, when our earth-home is, in the measurements of life, as old as its earlier cooled-off satellite is now. For days we buried many dead Lunites, tiny, bloated, dwarf-like bodies.

The Lunites had established eight camps on conquered territory—four in California, one in Nevada, one in Arizona, one in New Mexico, and one in Utah—over the wrecked remains where once upon a time had stood Salt Lake City. Each camp had a half-mile tall (and collapsible) skeleton-mast encasement, and from this tube the torpedoes laden with earth women went back to the moon.

A month after we had left the hills, I talked with an internationally famous astronomer, a man who had given a lifetime to the study of the moon. During our conversation I happened to remark the curiosity of the physical coincidences between the lunar people and ourselves.

His explanation was that as once upon a time, countless eons ago, when our own terrestrial globe was but a nebulous mass of burning gases freshly hurled off the huger mass, which is even now our sun, and was whirling through space, a piece of itself flew out from where now is the cavity which holds the waters of the Pacific. This immediately became an independent nebula of its own, a smaller gaseous fellow to our forming earth, later to become our moon. So, too, had each planet parted from the gigantic central mass which even today is still afire and which we call the sun. Then later, as the centuries flew by in innumerable millions, this satellite piece of ourselves had cooled off fit enough to become the home of that first almost invisible germ-plasm which for want of a more explicable name, we call life. Its smaller size allowed it to cool off quicker than did the mother planet and so it became fit for animate creatures to live upon long before the earth. The germs, that lay latent in the terrific heat, were identical ones, and so the denizens of the Queen of Night that had proved so terrible a foe only a short while ago,

(Continued on page 370)

The INVISIBLE MAN

By H. G. Wells

Author of "The Island of Dr. Moreau," "The Time Machine," etc.

What Has Gone Before:

ONE wintry day in February, the little town of Iping was startled out of its torpor, by the arrival of a stranger, wrapped up from head to foot, who walked through the biting wind and driving snowfall, from the Bramblehurst station, and almost fell into the "Coach and Horses" Inn. The next day three trunks, containing all manner and sizes of bottles and test tubes were delivered to his room.

His almost uncanny seclusion and his strangely bandaged head and face were respected as long as he paid his bills promptly, but, when his money runs out and strange robberies take place in the village, and his room is found to contain his only clothes, with no sign of himself, and doors and drawers begin opening, suspicion fills the minds of the people of Iping.

For three days he gets no food, and then, after being in the parlor for several hours, tinkering with his experiments, he steps out and sharply calls his landlady, Mrs. Hall, and demands food. She refuses to give him anything until his bill is paid, whereupon he takes the nose from his bandaged face, leaving an open gap in the middle of his face. He also takes the bandages from his head and suddenly becomes a headless man. They are panic-stricken for a while, when he tells them he is invisible.

He flees to the country, where he meets Mr. Marvel, a tramp, and forcibly engages him as a visible companion, because he

himself cannot carry anything and remain invisible. Mr. Marvel is terrified and must do as he is bid. They go back to Iping, where the invisible man manages to get his books, containing his scientific researches, and then they travel to Port Stowe. Meanwhile, news of the Invisible Man and his robberies along the street are published in the papers, and all the towns are on the look-out for him.

One afternoon soon after, Mr. Marvel rushes madly into the "Jolly Cricketers" yelling: "He's coming, the 'Visible Man,'" and begging protection from him. The doors and windows of the inn are bolted, but the Invisible Man manages to get in, and a strange fight ensues. Mr. Marvel is rescued, but the Invisible Man escapes once more. He finally gets into Dr. Kemp's home and enters his bedroom unseen. The Invisible Man tells Dr. Kemp, a scientist, that he is Griffin, of University College, an erstwhile friend of Kemp's, and that he has made himself invisible. He asks for food and a bed, and promises to tell the whole story to Dr. Kemp, who had that very morning, proved conclusively before a committee of scientists, that invisibility was impossible.

However, Kemp assures the "Invisible Man" that they are absolutely safe from any police interference.

Part II.

CHAPTER XVIII

The Invisible Man Sleeps

EXHAUSTED and wounded as the Invisible Man was, he refused to accept Kemp's word that his freedom should be respected. He examined the two windows of the bedroom, drew up the blinds and opened the

sashes to confirm Kemp's statement that a retreat by them would be possible. Outside the night was very quiet and still, and the new moon was setting over the down. Then he examined the keys of the bedroom and the two dressing-room doors, to satisfy himself that these also could be made an assurance of freedom. Finally he expressed himself satisfied. He stood on the hearthrug and Kemp heard the sound of a yawn.

"I'm sorry," said the Invisible Man, "if I cannot tell you all that I have done tonight. But I am worn out. It's grotesque, no doubt. It's horrible! But, believe me, Kemp, in spite of your arguments this morning, it is quite a possible thing. I have made a discovery. I meant to keep it to myself. I

can't. I must have a partner. And you . . . We can do such things . . . But tomorrow. Now, Kemp, I feel as though I must sleep or perish."

Kemp stood in the middle of the room staring at the headless garment. "I suppose I must leave you," he said. "It's—incredible. Three things happening like this, overturning all my preconceptions—would make me insane. But it's real! Is there anything more that

I can get you?"

"Only bid me good-night," said Griffin.

"Good-night," said Kemp, and shook an invisible hand. He walked sideways to the door.

Suddenly the dressing-gown walked quickly towards him. "Understand me!" said the dressing-gown. "There must be absolutely no attempt made to hamper me in any way, or to capture me! If there is—"

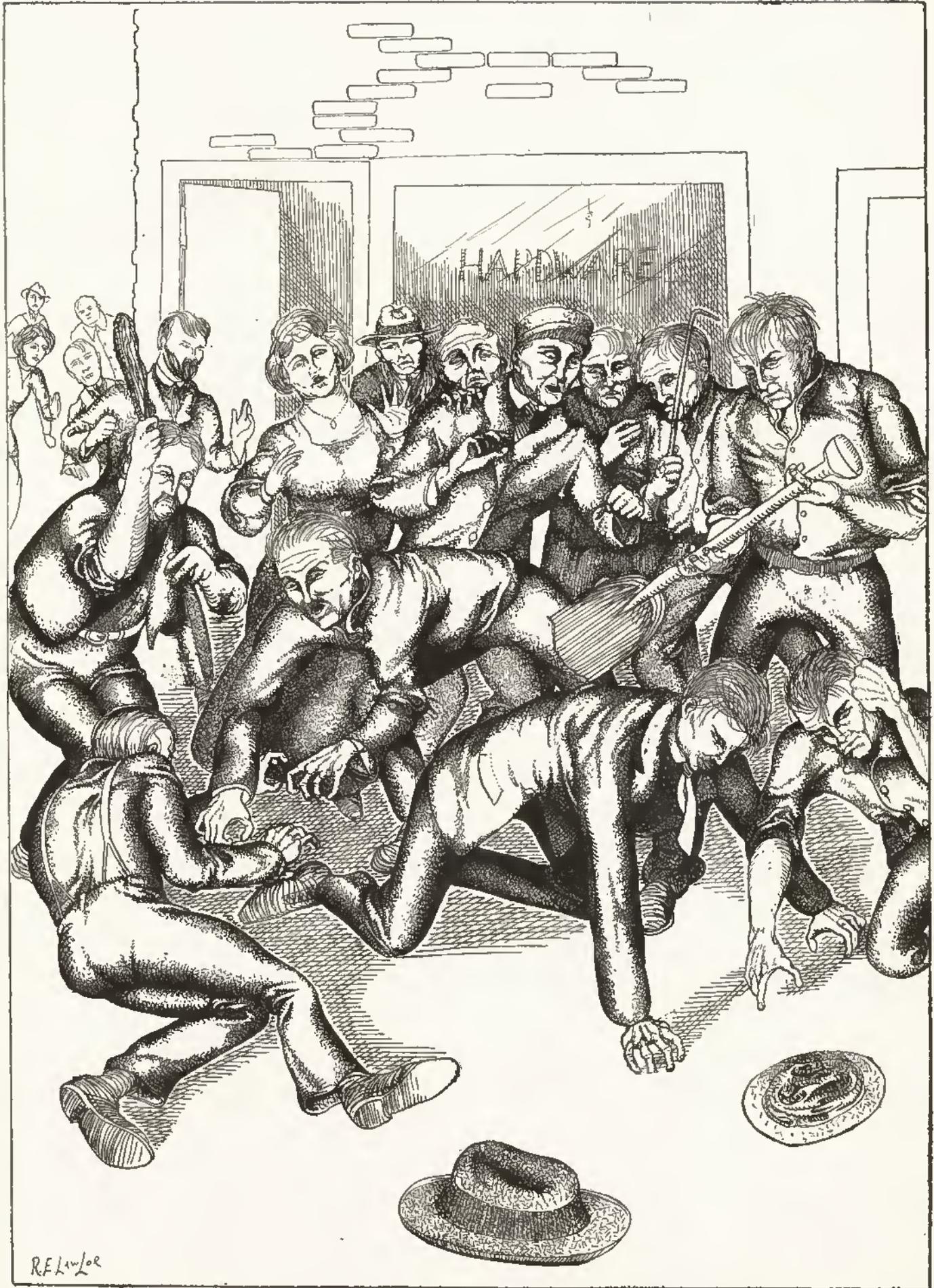
Kemp's face changed a little. "I thought I gave you my word," he said.

Kemp closed the door softly behind him, and the key was turned upon him forthwith. Then as he stood with an expression of passive amazement on his face, the rapid feet came to the door of the dressing-room,

WE have often been asked if it is within the realms of possibility for a man ever to make himself invisible. This question can be answered, we believe, in the affirmative, and while it may take many years to bring such a result about, it is not impossible.

Not so long ago, Dr. Vassilef, Russian scientist, performed some experiments, succeeding in making small animals practically invisible or transparent by injecting certain solutions into their systems. Of course, these animals were dead, but still, the principle remains.

Neither do we know at this time, that some new form of rays may not be discovered and developed, whereby persons subjected to such rays may become invisible. The X-ray may be said to be the forerunner of this, and while special apparatus are required in the first place to generate the rays, and in the second place to look through the human body, it is quite within the bounds of possibility that total invisibility may be achieved at some time.



"Don't you leave go of en!" cried the big navvy, holding a bloodstained spade; "he's shamming."

and that too was locked. Kemp slapped his brow with his hand. "Am I dreaming? Has the world gone mad, or have I?"

He laughed, and put his hand to the locked door. "Barred out of my own bedroom by a flagrant absurdity!" he said.

He walked to the head of the staircase, turned, and stared at the locked doors. "It's fact," he said. He put his fingers to his slightly bruised neck. "Undeniable fact!"

"But——"

He shook his head hopelessly, turned, and went downstairs.

He lit the dining-room lamp, got out a cigar, and began pacing the room, ejaculating. Now and then he would argue with himself.

"Invisible!" he said.

"Is there such a thing as an invisible animal? . . . In the sea—yes. Thousands—millions. All the larvæ, all the little nauplii and tornarias, all the microscopic things—the jelly-fish! In the sea there are more things invisible than visible! I never thought of that before. . . . And in the ponds too! All those little pond-life things—specks of colorless, translucent jelly! . . . But in air! No!

"It can't be.

"But after all—why not?"

"If a man were made of glass he would still be visible."

His meditation became profound. The bulk of three cigars had diffused as a white ash over the carpet before he spoke again. Then it was merely an exclamation. He turned aside, walked out of the room, because Dr. Kemp did not live by practice, and in it were the day's newspapers. The morning's paper lay carelessly opened and thrown aside. He caught it up, turned it over, and read the account of a "Strange Story from Iping" that the mariner at Port Stowe had spelt over so painfully to Marvel. Kemp read it swiftly.

"Wrapped up!" said Kemp. "Disguised! Hiding it! 'No one seems to have been aware of his misfortune.' What the devil is his game?"

He dropped the paper and his eye went seeking. "Ah! he said, and caught up the *St. James's Gazette*, lying folded up as it arrived. "Now we shall get at the truth," said Dr. Kemp. He rent the paper open. A couple of columns confronted him. "An Entire Village in Sussex Goes Mad," was the heading.

"Good heavens!" said Kemp, reading eagerly an incredulous account of the events in Iping of the previous afternoon, that have already been described. Over the leaf the report in the morning paper had been reprinted.

He re-read it. "Ran through the streets striking right and left. Juffers insensible. Mr. Huxter in great pain—still unable to describe what he saw. Painful humiliation—vicar. Woman ill with terror. Windows smashed. This extraordinary story probably a fabrication. Too good not to print—*cum grano*."

He dropped the paper and stared blankly in front of him. "Probably a fabrication!"

He caught up the paper again, and re-read the whole business.

"But when does the Tramp come in? Why the deuce was he chasing a tramp?"

He sat down abruptly on the surgical couch.

"He's not only invisible," he said, "but he's mad! Homicidal! . . ."

When dawn came to mingle its pallor with the lamp-light and cigar-smoke of the dining-room, Kemp was still pacing up and down, trying to grasp the incredible.

HE was altogether too excited to sleep. His servants, descending sleepily, discovered him, and were inclined to think that overstudy had worked this ill on him. He gave them extraordinary but quite explicit instructions to lay breakfast for two in the belvedere study, and then to confine themselves to the basement and ground floor. Then he continued to pace the dining-room until the morning's paper came. That had much to say and little to tell, beyond the confirmation of the evening before, and a very badly written account of another remarkable tale from Port Burdock. This gave Kemp the essence of the happenings at the "Jolly Cricketers," and the name of Marvel. "He has made me keep with him twenty-four hours," Marvel testified. Certain minor facts were added to the Iping story, notably the cutting of the village telegraph wire. But there was nothing to throw light on the connection between the Invisible Man and the tramp—for Mr. Marvel had supplied no information about the three books or the money with which he was lined. The incredulous tone had vanished, and a shoal of reporters and inquirers were already at work elaborating the matter.

Kemp read every scrap of the report, and sent his housemaid out to get every one of the morning papers she could. These also he devoured.

"He is invisible!" he said. "And it reads like rage growing to mania! The things he may do! The things he may do! And he's upstairs free as the air. What on earth ought I to do?"

"For instance, would it be a breach of faith if—No."

He went to a little untidy desk in the corner, and began a note. He tore this up half written, and wrote another. He read it over and considered it. Then he took an envelope and addressed it to "Colonel Adye, Port Burdock."

The Invisible Man awoke even as Kemp was doing this. He awoke in an evil temper, and Kemp, alert for every sound, heard his pattering feet rush suddenly across the bedroom overhead. Then a chair was flung over and the washhand-stand tumbler smashed. Kemp hurried upstairs and rapped eagerly.

CHAPTER XIX

Certain First Principles

"WHAT'S the matter?" asked Kemp, when the Invisible Man admitted him.

"Nothing," was the answer.

"But, confound it! The smash?"

"Fit of temper," said the Invisible Man. "Forgot this arm; and it's sore."

"You're rather liable to that sort of thing."

"I am."

Kemp walked across the room and picked up the fragments of broken glass. "All the facts are out about you," said Kemp, standing up with the glass in his hand. "All that happened in Iping and down the hill. The world has become aware of its invisible citizen. But no one knows you are here."

The Invisible Man swore.

"The secret's out. I gather it was a secret. I don't know what your plans are, but, of course, I'm anxious to help you."

The Invisible Man sat down on the bed.

"There's breakfast upstairs," said Kemp, speaking as easily as possible, and he was delighted to find his strange guest rose willingly. Kemp led the way up the narrow staircase to the belvedere.

"Before we can do anything else," said Kemp, "I must understand a little more about this invisibility of yours." He had sat down, after one nervous glance out of the window, with the air of a man who has talking to do. His doubts of the sanity of the entire business flashed and vanished again as he looked across to where Griffin sat at the breakfast-table, a headless, handless dressing-gown, wiping unseen lips on a miraculously held serviette.

"It's simple enough—and credible enough," said Griffin, putting the serviette aside.

"No doubt to you, but——" Kemp laughed.

"Well, yes, to me it seemed wonderful at first, no doubt. But now, Great God! . . . But we will do great things yet! I came on the stuff first at Chesilstowe."

"Chesilstowe?"

"I went there after I left London. You know I dropped medicine and took up physics? No; well, I did. *Light* fascinated me."

"Ah!"

"Optical density! The whole subject is a network of riddles—a network with solutions glimmering elusively through. And being but two-and-twenty and full of enthusiasm, I said: 'I will devote my life to this. This is worth while.' You know what fools we are at two-and-twenty?"

"Fools then or fools now," said Kemp.

"As though knowing could be any satisfaction to a man!"

"But I went to work—like a nigger. And I had hardly worked and thought about the matter six months before light came through one of the meshes suddenly—blindingly! I found a general principle of pigments and refraction—a formula, a geometrical expression involving four dimensions. Fools, common men—even common mathematicians, do not know anything of what some general expression may mean to the student of molecular physics. In the books—the books that tramp has hidden—there are marvels, miracles! But this was not a method, it was an idea that might lead to a method by which it would be possible without changing any other property of matter—except in some

instances colors—to lower the refractive index of a substance, solid or liquid, to that of air, so far as all practical purposes are concerned."

"Phew!" said Kemp. "That's odd! But still I don't see quite . . . I can understand that thereby you could spoil a valuable stone but personal invisibility is a far cry."

"PRECISELY," said Griffin. "But consider, visibility depends on the action of the visible bodies on light. Let me put the elementary facts to you as if you did not know. It will make my meaning clearer. You know quite well that either a body absorbs light or it reflects or refracts it or does all these things. If it neither reflects or refracts nor absorbs light, it cannot of itself be visible. You see an opaque red box, for instance, because the color absorbs some of the light and reflects the rest, all the red part of the light, to you. If it did not absorb any particular part of the light, but reflected it all, then it would be a shining white box. Silver! A diamond box would neither absorb much of the light nor reflect much from the general surface, but just here and there where the surfaces are favorable the light would be reflected and refracted, so that you would get a brilliant appearance of flashing reflections and translucencies. A sort of skeleton of light. A glass box would not be so brilliant, not so clearly visible as a diamond box, because there would be less refraction and reflection. See that? From certain points of view you would see quite clearly through it. Some kinds of glass would be more visible than others—a box of flint glass would be brighter than a box of ordinary window glass. A box of very thin, common glass would be hard to see in a bad light, because it would absorb hardly any light and refract and reflect very little. And if you put a sheet of common white glass in water, still more if you put it in some denser liquid than water, it would vanish almost altogether, because light passing from water to glass is only slightly refracted or reflected, or, indeed, affected in any way. It is almost as invisible as a jet of coal gas or hydrogen is in air. And for precisely the same reason!"

"Yes," said Kemp, "that is plain sailing. Any school-boy nowadays knows all that."

"And here is another fact any schoolboy will know. If a sheet of glass is smashed, Kemp, and beaten into a powder, it becomes much more visible while it is in the air; it becomes at last an opaque, white powder. This is because the powdering multiplies the surfaces of the glass at which refraction and reflection occur. In the sheet of glass there are only two surfaces, in the powder the light is reflected or refracted by each grain it passes through, and very little gets right through the powder. But if the white, powdered glass is put into water it forthwith vanishes. The powdered glass and water have much the same refractive index, that is, the light undergoes very little refraction or reflection in passing from one to the other.

"You make the glass invisible by putting it into a liquid of nearly the same refractive index, a transparent thing becomes invisible if it is put in any medium of al-

most the same refractive index. And if you will consider only a second, you will see also that the powder of glass might be made to vanish in air, if its refractive index could be made the same as that of air. For then there would be no refraction or reflection as the light passed from glass to air."

"Yes, yes," said Kemp. "But a man's not powdered glass!"

"No," said Griffin. "*He's more transparent!*"

"Nonsense!"

"That's from a doctor! How one forgets! Have you already forgotten your physics in ten years? Just think of all the things that are transparent and seem not to be so! Paper, for instance, is made up of transparent fibres, and it is white and opaque only for the same reason that a powder of glass is white and opaque. Oil white paper, fill up the interstices between the particles with oil, so that there is no longer refraction or reflection except at the surfaces, and it becomes as transparent as glass. And not only paper, but cotton fibre, linen fibre, wool fibre, woody fibre, and *bone*, Kemp, *flesh*, Kemp, *hair*, Kemp, *nails* and *nerves*, Kemp; in fact, the whole fabric of a man, except the red of his blood and the dark pigment of hair, are all made up of transparent, colorless tissue—so little suffices to make us visible one to the other. For the most part, the fibres of a living creature are no more opaque than water."

"Of course, of course!" cried Kemp. "I was thinking only last night of the sea larvæ and jelly-fish!"

"Now you have me! And all that I knew and had in mind a year after I left London—six years ago. But I kept it to myself. I had to do my work under frightful disadvantages. Hobbema, my professor, was a scientific bounder, a thief of ideas—he was always prying! And you know the knavish system of the scientific world. I simply would not publish and let him share my credit. I went on working; I got nearer and nearer making my formula into an experiment—a reality. I told no living soul, because I meant to flash my work upon the world with crushing effect and become famous at a blow. I took up the question of pigments to fill up certain gaps, and suddenly—not by design, but by accident—I made a discovery in physiology."

"Yes?"

"You know the red coloring matter of blood—it can be made white—colorless—and remain with all the functions it has now!"

Kemp gave a cry of incredulous amazement.

The Invisible Man rose and began pacing the little study. "You may well exclaim. I remember that night. It was late at night—in the daytime one was bothered with the gaping, silly students—and I worked there sometimes till dawn. It came suddenly, splendid and complete, into my mind. I was alone, the laboratory was still, with the tall lights burning brightly and silently. . . . 'One could make an animal—a tissue—transparent! One could make it invisible! All except the pigments. I could be invisible.' I said, suddenly realizing what it meant to be an albino with such knowledge. It was overwhelming. I left the filtering

I was doing, and went and stared out of the great window at the stars. 'I could be invisible,' I repeated.

"To do such a thing would be to transcend magic. And I beheld, unclouded by doubt, a magnificent vision of all that invisibility might mean to a man. The mystery, the power, the freedom. Drawbacks I saw none. You have only to think! And I, a shabby, poverty-struck, hemmed-in demonstrator, teaching fools in a provincial college, might suddenly become—this. I ask you, Kemp, if *you*. . . . Any one, I tell you, would have flung himself upon that research. And I worked three years, and every mountain of difficulty I toiled over showed another from its summit. The infinite details! And the exasperation! A professor, a provincial professor, always prying. 'When are you going to publish this work of yours?' was his everlasting question. And the students, the cramped means! Three years I had of it—"

"And after three years of secrecy and trouble, I found that to complete it was impossible—impossible."

"How?" asked Kemp.

"Money," said the Invisible Man, and went again to stare out of the window.

He turned round abruptly. "I robbed the old man—robbed my father.

"The money was not his, and he shot himself."

CHAPTER XX

At the House in Great Portland Street

FOR a moment Kemp sat in silence, staring at the back of the headless figure at the window. Then he started, struck by a thought, rose, took the Invisible Man's arm, and turned him away from the outlook.

"You are tired," he said, "and while I sit you walk about. Have my chair."

He placed himself between Griffin and the nearest window.

For a space Griffin sat silent, and then he resumed abruptly:

"I had left the Chesilstone College already," he said, "when that happened. It was last December. I had taken a room in London, a large unfurnished room in a big, ill-managed lodging-house in a slum near Great Portland Street. The room was soon full of the appliances I had bought with his money, and the work was going on steadily, successfully, drawing near an end. I was like a man emerging from a thicket, and suddenly coming on some unmeaning tragedy. I went to bury my father. My mind was still on this research, and I did not lift a finger to save his character. I remember the funeral, the cheap hearse, the scant ceremony, the windy, frost-bitten hillside, and the old college friend of his who read the service over him—a shabby, black, bent old man with a sniveling cold.

"I remember walking back to the empty home through the place that had once been a village and was now patched and tinkered by the jerry builders into the ugly likeness of a town. Every way the roads ran out at last into the desecrated fields and ended in rubble heaps and rank, wet weeds. I remember myself as a

gaunt, black figure, going along the slippery, shiny sidewalk, and the strange sense of detachment I felt from the squalid respectability, the sordid commercialism of the place. . . .

"I did not feel a bit sorry for my father. He seemed to me to be the victim of his own foolish sentimentality. The current cant required my attendance at his funeral, but it was really not my affair.

"But going along the High Street my old life came back to me for a space. I met the girl I had known ten years since. Our eyes met. . . .

"Something moved me to turn back and talk to her. She was a very ordinary person.

"It was all like a dream, that visit to the old place. I did not feel then that I was lonely, that I had come out from the world into a desolation. I appreciated my loss of sympathy, but I put it down to the general inanity of life. Re-entering my room seemed like the recovery of reality. There were the things I knew and loved. There stood the apparatus, the experiments arranged and waiting. And now there was scarcely a difficulty left, beyond the planning of details.

"I will tell you, Kemp, sooner or later, all the complicated processes. We need not go into that now. For the most part, saving certain gaps I chose to remember, they are written in cipher in those books that tramp has hidden. We must hunt him down. We must get those books again. But the essential phase was to place the transparent object, whose refractive index was to be lowered, between two radiating centers of a sort of ethereal vibration, of which I will tell you more fully later. No—not these Röntgen vibrations; I don't know that these others of mine have been described, yet they are obvious enough. I needed two little dynamos—principally, and these I worked with a cheap gas-engine. . . . My first experiment was with a bit of white wool fabric. It was the strangest thing in the world to see it soft and white in the flicker of the flashes, and then to watch it fade like a wreath of smoke and vanish.

"I could scarcely believe I had done it. I put my hand into the emptiness and there was the thing as solid as ever. I felt it awkwardly, and threw it on the floor. I had a little trouble finding it again.

"And then came a curious experience. I heard a miaow behind me, and, turning, saw a lean white cat, very dirty, on the cistern cover outside the window. A thought came into my head. 'Everything ready for you,' I said, and went to the window, opened it, and called softly. She came in, purring—the poor beast was starving—and I gave her some milk. All my food was in a cupboard in the corner of the room. After that she went smelling round the room, evidently with the idea of making herself at home. The invisible rag upset her a bit; you should have seen her spit at it! But I made her comfortable on the pillow of my truckle-bed, and I gave her butter to get her to wash."

"And you processed her?"

"I processed her. But giving drugs to a cat is no joke, Kemp! And the process failed."

"Failed?"

"In two particulars. These were the claws and the

pigment stuff—what is it? At the back of the eye in a cat. You know?"

"*Tapetum.*"

"Yes, the *tapetum*. It didn't go. After I'd given the stuff to bleach the blood and done certain other things to her, I gave the beast opium, and put her and the pillow she was sleeping on, on the apparatus. And after all the rest had faded and vanished, there remained the two little ghosts of her eyes."

"Odd."

"I can't explain it. She was bandaged and clamped of course—so I had her safe, but she awoke while she was still misty, and miaowed dismally, and some one came knocking. It was an old woman from downstairs, who suspected me of vivisection—a drink-sodden old creature, with only a cat to care for in all the world. I whipped out some chloroform, applied it, and answered the door. Did I hear a cat?" she asked. 'My cat?' 'Not here,' said I, very politely. She was a little doubtful, and tried to peer past me into the room—strange enough to her, no doubt, bare walls, uncurtained windows, truckle-bed, with the gas engine vibrating, and the seethe of the radiant points, and that faint stinging of chloroform in the air. She had to be satisfied at last, and went away again."

"How long did it take?" asked Kemp.

"Three or four hours—the cat. The bones and sinews and the fat were the last to go, and the tips of the colored hairs. And, as I say, the back part of the eye, iridescent stuff it is, wouldn't go at all.

"IT was night outside long before the business was over, and nothing was to be seen but the dim eyes and the claws. I stopped the gas-engine, felt for and stroked the beast, which was still insensible, released its fastenings, and then, being tired, left it sleeping on the invisible pillow and went to bed. I found it hard to sleep. I lay awake thinking weak, aimless stuff, going over the experiment again and again, or dreaming feverishly of things growing misty and vanishing about me until everything, the ground I stood on, vanished, and so I came to that sickly, falling nightmare one gets. About two the cat began miaowing about the room. I tried to hush it by talking to it, and then I decided to turn it out. I remember the shock I had striking a light—there were just the round eyes shining green—and nothing round them. I would have given it milk, but I hadn't any. It wouldn't be quiet, it just sat down and miaowed at the door. I tried to catch it, with an idea of putting it out of the window, but it wouldn't be caught, it vanished. It kept on miaowing in different parts of the room. At last I opened the window and made a bustle. I suppose it went out at last. I never saw nor heard any more of it.

"Then—Heaven knows why—I fell thinking of my father's funeral again, and the dismal, windy hillside, until the day had come. I found sleep was hopeless, and, locking my door after me, wandered out into the morning streets."

"You don't mean to say there's an Invisible Cat at large in the world?" said Kemp.

"If it hasn't been killed," said the Invisible Man. "Why not?"

"Why not?" said Kemp. "I didn't mean to interrupt."

"It's very probably been killed," said the Invisible Man. "It was alive four days after, I know, and down a grating in Great Tichfield Street, because I saw a crowd round the place trying to see whence the miaowing came."

He was silent for the best part of a minute. Then he resumed abruptly: "I remember that morning before the change very vividly.

"I must have gone up Great Portland Street—for I remember the barracks in Albany Street and the horse soldiers coming out, and at last I found myself sitting in the sunshine and feeling very ill and strange on the summit of Primrose Hill. It was a sunny day in January—one of those sunny, frosty days that came before the snow this year. My weary brain tried to formulate the position, to plot out a plan of action.

"I was surprised to find, now that my prize was within my grasp, how inconclusive its attainment seemed. As a matter of fact I was worked out, the intense stress of nearly four years' continuous work left me incapable of any strength or feeling. I was apathetic, and I tried in vain to recover the enthusiasm of my first inquiries, the passion of discovery that had enabled me to compass even the downfall of my father's gray hairs. Nothing seemed to matter. I saw pretty clearly this was a transient mood, due to overwork and want of sleep, and that either by drugs or rest it would be possible to recover my energies.

"All I could think clearly was that the thing had to be carried through; the fixed idea still ruled me. And soon, for the money I had was almost exhausted. I looked about me at the hillside with children playing and girls watching them, and tried to think of all the fantastic advantages an invisible man would have in the world. After a time I crawled home, took some food and a strong dose of strychnine, and went to sleep in my clothes on my unmade bed. . . . Strychnine is a grand tonic, Kemp, to take the flabbiness out of a man."

"It's the devil," said Kemp. "It's the palæolithic in a bottle."

I AWOKE vastly invigorated and rather irritable. You know?"

"I know the stuff."

"And there was some one rapping at the door. It was my landlord with threats and inquiries, an old Polish Jew in a long gray coat and greasy slippers. I had been tormenting a cat in the night, he was sure—the old woman's tongue had been busy. He insisted on knowing all about it. The laws of this country against vivisection were very severe—he might be liable. I denied the cat. Then the vibration of the little gas-engine could be felt all over the house, he said. That was true, certainly. He edged round me into the room peering about over his German silver spectacles, and a sudden dread came into my mind that he might carry away something of my secret. I tried to keep between him and the concentrating apparatus I had arranged,

and that only made him more curious. What was I doing? Why was I always alone and secretive? Was it legal? Was it dangerous? I paid nothing but the usual rent. His had always been a most respectable house—in a disreputable neighborhood. Suddenly my temper gave way. I told him to get out. He began to protest, to jabber of his right of entry. In a moment I had him by the collar—something ripped—and he went spinning out into his own passage. I slammed and locked the door and sat down quivering.

"He made a fuss outside, which I disregarded, and after a time he went away.

"But this brought matters to a crisis. I did not know what he would do, nor even what he had the power to do. To move to fresh apartments would have meant delay—altogether I had barely twenty pounds left in the world, for the most part in a bank—and I could not afford that. Vanish! It was irresistible. Then there would be an inquiry, the sacking of my room.

"At the thought of the possibility of my work being exposed or interrupted at its very climax, I became angry and active. I hurried out with my three books of notes, my check book—the tramp has them now—and directed them from the nearest post office to a house of call for letters and parcels in Great Portland Street. I tried to go out noiselessly. Coming in, I found my landlord going quietly upstairs—he had heard the door close, I suppose. You would have laughed to see him jump aside on the landing as I came tearing after him. He glared at me as I went by him, and I made the house quiver with the slamming of my door. I heard him come shuffling up to my door, hesitate, and go down. I set to work upon my preparations forthwith.

"It was all done that evening and night. While I was still sitting under the sickly, drowsy influence of the drugs that decolorize blood, there came a repeated knocking at the door. It ceased, footsteps went away and returned, and the knocking was resumed. There was an attempt to push something under the door—a blue paper. Then in a fit of irritation I rose, and went and flung the door wide open. 'Now then?' said I.

"It was the landlord, with a notice of ejection or something. He held it out to me, saw something odd about my hands, I expect, and lifted his eyes to my face.

"For a moment he gaped. Then he gave a sort of inarticulate cry, dropped candle and writ together, and went blundering down the dark passage to the stairs.

"I shut the door, locked it, and went to the looking-glass. Then I understood his terror. . . . My face was white—like white stone.

"But it was all horrible. I had not expected the suffering. A night of racking anguish, sickness, and fainting. I set my teeth, though my skin was presently afire, all my body afire, but I lay there like grim death. I understood now how it was the cat had howled until I chloroformed it. Lucky it was I lived alone and untended in my room. There were times when I sobbed, and groaned, and talked. But I stuck to it. . . . I became insensible, and woke languid, in the darkness.

"The pain had passed. I thought I was killing myself, and I did not care. I shall never forget that

dawn, and the strange horror of seeing that my hands had become as clouded glass, and watching them grow clearer and thinner as the day went by, until at last I could see the sickly disorder of my room through them, though I closed my transparent eyelids. My limbs became glassy, the bones and arteries faded, vanished, and the little white nerves went last. I gritted my teeth and stayed there to the end. . . . At last only the dead tips of the finger-nails remained, pallid and white, and the brown stain of some acid upon my fingers.

I STRUGGLED up. At first I was as incapable as a swathed infant—stepping with limbs I could not see. I was weak and very hungry. I went and stared at nothing in my shaving-glass—at nothing, save where an attenuated pigment still remained behind the retina of my eyes, fainter than mist. I had to hang on to the table and press my forehead to the glass.

“It was only by a frantic effort of will that I dragged myself back to the apparatus, and completed the process.

“I slept during the forenoon, pulling a sheet over my eyes to shut out the light, and about midday I was awakened again by a knocking. My strength had returned. I sat up and listened and heard a whispering. I sprang to my feet, and as noiselessly as possible began to detach the connections of my apparatus, and to distribute it about the room so as to destroy the suggestions of its arrangement. Presently the knocking was renewed and voices called, first my landlord’s and then two others. To gain time I answered them. The invisible rag and pillow came to hand, and I opened the window and pitched them out on to the cistern cover. As the window opened a heavy crash came at the door. Some one had charged it with the idea of smashing the lock. But the stout bolts I had screwed up some days before stopped him. That startled me—made me angry. I began to tremble and do things hurriedly.

“I tossed together some loose paper, straw, packing-paper, and so forth, in the middle of the room, and turned on the gas. Heavy blows began to rain upon the door. I could not find the matches. I beat my hands on the wall with rage. I turned down the gas again, stepped out of the window on the cistern cover, very softly lowered the sash, and sat down, secure and invisible, but quivering with anger, to watch events. They split a panel, I saw, and in another moment they had broken away the staples of the bolts and stood in the open doorway. It was the landlord and his two stepsons—sturdy young men of three or four-and-twenty. Behind them fluttered the old hag of a woman from downstairs.

“You may imagine their astonishment at finding the room empty. One of the younger men rushed to the window at once, flung it open and stared out. His staring eyes, and thick-lipped, bearded face came a foot from my face. I was half-minded to hit his silly countenance, but I arrested my doubled fist.

“He stared right through me. So did the others as they joined him. The old man went and peered under the bed, and then they all made a rush for the cupboard. They had to argue about it at length in Yiddish and

Cockney English. They concluded I had not answered them, that their imagination had deceived them. A feeling of extraordinary elation took the place of my anger as I sat outside the window and watched these four people—for the old lady came in, glancing suspiciously about her like a cat—trying to understand the riddle of my existence.

“The old man, so far as I could understand his polyglot, agreed with the old lady that I was a vivisectionist. The sons protested in garbled English that I was an electrician, and appealed to the dynamos and radiators. They were all nervous against my arrival, although I found subsequently that they had bolted the front door. The old lady peered into the cupboard and under the bed. One of my fellow-lodgers, a costermonger, who shared the opposite room with a butcher, appeared on the landing, and he was called in, and told incoherent things.

“It occurred to me that the peculiar radiators I had, if they fell into the hands of some acute, well-educated person, would give me away too much, and, watching my opportunity, I descended from the window-sill into the room and dodging the old woman tilted one of the little dynamos off its fellow on which it was standing, and smashed both apparatus. How scared they were! . . . Then, while they were trying to explain the smash, I slipped out of the room and went softly downstairs.

“I went into one of the sitting-rooms and waited until they came down, still speculative and argumentative, all a little disappointed at finding no ‘horrors,’ and all a little puzzled how they stood legally towards me. As soon as they had gone on down to the basement, I slipped up again with a box of matches, fired my heap of paper and rubbish, put the chairs and bedding thereby, led the gas to the affair by means of an india-rubber tube—”

“You fired the house?” exclaimed Kemp.

“Fired the house! It was the only way to cover my trail, and no doubt it was insured. . . . I slipped the bolts of the front door quietly and went out into the street. I was invisible, and I was only just beginning to realize the extraordinary advantage my invisibility gave me. My head was already teeming with plans of all the wild and wonderful things I had now impunity to do.

CHAPTER XXI

In Oxford Street

IN going downstairs the first time I found an unexpected difficulty because I could not see my feet; indeed, I stumbled twice, and there was an unaccustomed clumsiness in gripping the bolt. By not looking down, however, I managed to walk on the level passably well.

“My mood, I say, was one of exaltation. I felt as a seeing man might do, with padded feet and noiseless clothes, in a city of the blind. I experienced a wild impulse to jest, to startle people, to clap them on the back, fling people’s hats astray, and generally revel in my extraordinary advantage.

“But hardly had I emerged upon Great Portland

Street, however (my lodging was close to the big draper's shop there), when I heard a clashing concussion, and was hit violently behind, and turning, saw a man carrying a basket of soda-water siphons, and looking in amazement at his burden. Although the blow had really hurt me, I found something so irresistible in his astonishment that I laughed aloud. 'The devil's in the basket,' I said, and suddenly twisted it out of his hand. He left go incontinently, and I swung the whole weight up into the air.

"But a fool of a cabman, standing outside a public-house, made a sudden rush for this, and his extended fingers took me with excruciating violence under the ear. I let the whole down with a smash on the cabman, and then, with shouts and the clatter of feet about me, people coming out of shops, vehicles pulling up, I realized what I had done for myself, and cursing my folly, backed against a shop window and prepared to dodge out of the confusion. In a moment I should be wedged into a crowd and inevitably discovered. I pushed by a butcher boy, who luckily did not turn to see the nothingness that shoved him aside, and dodged behind the cabman's four-wheeler. I do not know how they settled the business. I hurried straight across the road, which was happily clear, and hardly heeding which way I went in the fright of detection the incident had given me, plunged into the afternoon throng of Oxford Street.

"I tried to get into the stream of people, but they were too thick for me, and in a moment my heels were being trodden upon. I took the gutter, the roughness of which I found painful to my feet, and forthwith the shaft of a crawling hansom dug me forcibly under the shoulder blade, reminding me that I was already bruised severely. I staggered out of the way of the cab, avoided a perambulator by a convulsive movement, and found myself behind the hansom. A happy thought saved me, and as this drove slowly along I followed in its immediate wake, trembling and astonished at the turn of my adventure, and not only trembling but shivering. It was a bright day in January, and I was stark naked, and the thin slime of mud that covered the road was near freezing. Foolish as it seems to me now, I had not reckoned that, transparent or not, I was still amenable to the weather and all its consequences.

"Then suddenly a bright idea came into my head. I ran round and got into the cab. And so, shivering, scared, and sniffing with the first intimations of a cold, and with the bruises in the small of my back growing upon my attention, I drove slowly along Oxford Street and past Tottenham Court Road. My mood was as different from that in which I had sallied forth ten minutes since as it is possible to imagine. *This* invisibility, indeed! The one thought that possessed me now was how to get out of the scrape I was in?

"We crawled past Mudie's, and there a tall woman, with five or six yellow-labeled books, hailed my cab, and I sprang out just in time to escape her, shaving a railway van narrowly in my flight. I made off up the roadway to Bloomsbury Square, intending to strike north beyond the Museum, and so get into the quiet district. I was now cruelly chilled, and the strangeness

of my situation so unnerved me that I whimpered as I ran. At the westward corner of the square a little white dog ran out of the Pharmaceutical Society's offices, and incontinently made for me, nose down.

"I had never realized it before, but the nose is to the mind of a dog what the eye is to the mind of a seeing man. Dogs perceive the scent of a man moving as men perceive his visible appearance. This brute began barking and leaping, showing, as it seemed to me only too plainly, that he was aware of me. I crossed Great Russell Street, glancing over my shoulder as I did so, and went some way along Montague Street before I realized what I was running towards.

"**T**HEN I became aware of a blare of music, and looking along the street saw a number of people advancing out of Russell Square, red jerseys and the banner of the Salvation Army to the fore. Such a crowd, chanting in the roadway and scoffing on the pavement, I could not hope to penetrate, and dreading to go back and farther from home again, and, deciding on the spur of the moment, I ran up the white steps of a house facing the Museum railings, and stood there until the crowd should have passed. Happily the dog stopped at the noise of the band, hesitated, and turned tail, running back to Bloomsbury Square again.

"On came the band, bawling with unconscious irony some hymn about 'When shall we see His face-' and it seemed an interminable time to me before the tide of the crowd washed along the pavement by me. Thud, thud, thud, came the drum with a vibrating resonance, and for the moment I did not notice two urchins stopping at the railings by me. 'See 'em,' said one. 'See what?' said the other. 'Why—them footmarks—bare. Like what you makes in mud.'

"I looked down and saw the youngsters had stopped and were gaping at the muddy footmarks I had left behind me, up the newly whitened steps. The passing people elbowed and jostled them, but their confounded intelligence was arrested. 'Thud, thud, thud, when, thud, shall we see, thud, His face, thud, thud.' 'There's a barefoot man gone up them steps, or I don't know nothing,' said one. 'And he ain't never come down again. And his foot was a-bleeding.'

"The thick of the crowd had already passed. 'Looky there, Ted,' quoth the younger of the detectives with the sharpness of surprise in his voice, and pointed straight at my feet. I looked down and saw at once the dim suggestion of their outline sketched in splashes of mud. For a moment I was paralyzed.

"'Why, that's rum!' said the elder. 'Dashed rum! It's just like the ghost of a foot, ain't it?' He hesitated and advanced with outstretched hand. A man pulled up short to see what he was catching, and then a girl. In another moment he would have touched me. Then I saw what to do. I made a step, the boy started back with an exclamation, and with a rapid movement I swung myself over into the portico of the next house. But the smaller boy was sharp enough to follow the movement, and before I was well down the steps and upon the pavement, he had recovered from his momentary astonishment, and was shouting out that the

feet had gone over the wall—that he had seen them go!

"They rushed round and saw my new footmarks flash into being on the lower step and upon the pavement.

"What's up?" asked some one.

"Feet! Look! Feet running!"

"Everybody in the road, except my three pursuers, was pouring along after the Salvation Army, and this flow not only impeded me but them. There was an eddy of surprise and interrogation. At the cost of bowling over one young fellow I got through, and in another moment I was running headlong round the circuit of Russell Square, with six or seven astonished people following my footmarks. There was no time for explanation, or else the whole host would have been after me.

"Twice I doubled round corners, thrice I crossed the road and came back on my tracks, and then as my feet grew hot and dry the damp impressions began to fade. At last I had a breathing space, and rubbed my feet clean with my hands, and so got away altogether. The last I saw of the chase was a little group of a dozen people, perhaps, studying with infinite perplexity a slowly drying footprint that had resulted from a puddle in Tavistock Square, a footprint as isolated and incomprehensible to them as Crusoe's solitary discovery.

"This running warmed me to a certain extent, and I went on with a better courage through the maze of less frequented roads that runs thereabout. My back had now become very stiff and sore, my tonsils were painful from the cabman's fingers, and the skin of my neck had been scratched by his nails; my feet hurt exceedingly, and I was lame from a little cut on one foot. I saw in time a blind man approaching me, and fled limping, for I feared his subtle intuitions. Once or twice accidental collisions occurred, and I left people amazed with unaccountable curses ringing in their ears. Then came something silent and quiet upon my face, and across the square fell a thin veil of slowly falling flakes of snow. I had caught a cold, and do as I would I could not avoid an occasional sneeze. And every dog that came in sight, with its pointing nose and curious sniffing, was a terror to me.

"Then came men and boys running, first one, then others, and shouting as they ran. It was a fire. They ran in the direction of my lodging, and looking back down a street I saw a mass of black smoke streaming up above the roofs and telephone wires. It was, I felt assured, my lodging that was burning; my clothes, apparatus, all my resources, indeed, except my check-book and the three volumes of memoranda that awaited me in Great Portland Street, were there. Burning! I had burnt my boats—if ever a man did! The place was blazing."

The Invisible Man paused and thought. Kemp glanced nervously out of the window. "Yes!" he said, "go on."

CHAPTER XXII

In the Emporium

"SO last January, with the beginning of a snow-storm in the air about me—and if it settled on me it would betray me!—weary, cold, pain-

ful, inexpressibly wretched, and still but half convinced of my invisible quality, I began this new life to which I am committed. I had no refuge, no appliances, no human being in the whole world in whom I could confide. To have told my secret would have given me away—made a mere show and rarity of me. Nevertheless I was half-minded to accost some passer-by and throw myself upon his mercy. But I knew too clearly the terror and brutal cruelty my advances would evoke. I made no plans in the street. My sole object was to get shelter from the snow, to get myself covered and warm, then I might hope to plan. But even to me, an Invisible Man, the rows of London houses stood latched, barred, and bolted impregably.

"Only one thing could I see clearly before me—the cold, exposure and misery of the snowstorm and night.

"And then I had a brilliant idea. I turned down one of the roads leading from Gower Street to Tottenham Court Road, and found myself outside Omniums, the big establishment where everything is to be bought—you know the place: meat, grocery, linen, furniture, clothing, oil paintings even—a huge, meandering collection of shops rather than a shop. I had thought I should find the doors open, but they were closed, and as I stood in the wide entrance a carriage stopped outside, and a man in uniform—you know the kind of personage with 'Omnium' on his cap—flung open the door. I contrived to enter, and walking down the shop—it was a department where they were selling ribbons and gloves and stockings and that sort of thing—came to a more spacious region, devoted to picnic baskets and wicker furniture.

"I did not feel safe there, however. People were going to and fro, and I prowled restlessly about until I came upon a huge section in an upper floor containing multitudes of bedsteads, and over these I clambered, and found a resting-place at last among a huge pile of folded flock mattresses. The place was already lit up and agreeably warm, and I decided to remain in hiding where I was, keeping a cautious eye on two or three sets of shopmen and customers who were meandering through the place, until closing time came. Then I should be able, I thought, to rob the place for food and clothing and disguise, prowl through it, and examine its resources, perhaps sleep on some of the bedding. That seemed an acceptable plan. My idea was to procure clothing to make myself a muffled but acceptable figure, to get money, and then to recover my books and parcels, where they awaited me, take a lodging somewhere, and elaborate plans for the complete realization of the advantages my invisibility gave me (as I still imagined) over my fellow-men.

"CLOSING time arrived quickly enough. It could not have been more than an hour after I took up my position on the mattresses before I noticed the blinds of the windows being drawn, and customers being marched doorward. And then a number of brisk young men began with remarkable alacrity to tidy up the goods that remained disturbed. I left my lair as the crowds diminished and prowled cautiously out into the less desolate parts of the shop. I was really surprised

to observe how rapidly the young men and women whipped away the goods displayed for sale during the day. All the boxes of goods, the hanging fabrics, the festoons of lace, the boxes of sweets in the grocery section, the displays of this and that, were being taken down, folded up, slapped into tidy receptacles, and everything that could not be taken down and put away had sheets of some coarse stuff like sacking flung over it. Finally all the chairs were turned up on the counters, leaving the floors clear. Directly each of these young people had done, he or she made promptly for the door with such an expression of animation as I have rarely observed in a shop-assistant before. Then came a lot of youngsters, scattering sawdust and carrying pails and brooms. I had to dodge to get out of the way, and as it was my ankle got stung with the sawdust. For some time, wandering through the swathed and darkened departments, I could hear the brooms at work. And at last, a good hour or more after the shop had been closed, came a noise of locking doors. Silence came upon the place, and I found myself wandering through the vast and intricate shops, galleries, and showrooms of the place alone. It was very still—in one place I remember passing near one of the Tottenham Court Road entrances and listening to the tapping boot-heels of the passers-by.

"My first visit was to the place where I had seen stockings and gloves for sale. It was dark, and I had the devil of a hunt after matches, which I found at last in a drawer of the little cash desk. Then I had to get a candle. I had to tear down wrappers and ransack a number of boxes and drawers, but at last I managed to turn out what I sought: the box label called them lambswool pants and lambswool vests. Then socks, a thick comforter, and then I went to the clothing place and got trousers, a lounge jacket, an overcoat, and a slouch hat—a clerical sort of hat with the brim turned down. I began to feel a human being again, and my next thought was food.

"Upstairs was a refreshment department, and there I got cold meat. There was coffee still in the urn, and I lit the gas and warmed it up again, and altogether I did not do badly. Afterwards, prowling through the place in search of blankets—I had to put up at last with a heap of down quilts—I came upon a grocery section with a lot of chocolate and crystallized fruits, more than was good for me, indeed, and some white burgundy. And near that was a toy department, and I had a brilliant idea. I found some artificial noses—dummy noses, you know, and I thought of dark spectacles. But Omniums had no optical department. My nose had been a difficulty indeed. I had thought of paint. But the discovery set my mind running on wigs and masks, and the like. Finally I went to sleep in a heap of down quilts, very warm and comfortable.

"My last thoughts before sleeping were the most agreeable I had had since the change. I was in a state of physical serenity, and that was reflected in my mind. I thought that I should be able to slip out unobserved in the morning with my clothes upon me, muffling my face with a white wrapper I had taken, purchase spectacles with the money I had stolen, and so complete my dis-

guise. I lapsed into disorderly dreams of all the fantastic things that had happened during the last few days. I saw the ugly little landlord vociferating in his rooms, I saw his two sons marveling, and the wrinkled old woman's gnarled face as she asked for her cat. I experienced again the strange sensation of seeing the cloth disappear, and so I came round to the windy hillside and the sniffing old clergyman mumbling, 'Earth to earth, ashes to ashes, dust to dust,' at my father's open grave.

"'You also,' said a voice, and suddenly I was being forced towards the grave. I struggled, shouted, appealed to the mourners, but they continued stonily following the service; the old clergyman, too, never faltered, droning and sniffing through the ritual. I realized I was invisible and inaudible, that overwhelming forces had their grip on me. I struggled in vain, I was forced over the brink, the coffin rang hollow as I fell upon it, and the gravel came flying after me in spadefuls. Nobody heeded me, nobody was aware of me. I made convulsive struggles and awoke.

"THE pale London dawn had come, the place was full of a chilly gray light that filtered round the edges of the window-blinds. I sat up, and for a time I could not think where this ample apartment, with its counters, its piles of rolled stuff, its heap of quilts, and cushions, its iron pillars, might be. Then, as recollection came back to me, I heard voices in conversation.

"Then far down the place, in the brighter light of some department which had already raised its blinds, I saw two men approaching. I scrambled to my feet, looking about me for some way of escape, and even as I did so the sound of my movement made them aware of me. I suppose they saw merely a figure moving quietly and quickly away. 'Who's that?' cried one, and 'Stop there!' shouted the other. I dashed round a corner and came full tilt—a faceless figure, mind you!—on a lanky lad of fifteen. He yelled and I bowled him over, rushed past him, turned another corner, and by a happy inspiration threw myself flat behind a counter. In another moment feet went running past and I heard voices shouting, 'All hands to the doors!' asking what was 'up,' and giving one another advice how to catch me.

"Lying on the ground, I felt scared out of my wits. But, odd as it may seem, it did not occur to me at the moment to take off my clothes, as I should have done. I made up my mind, I suppose, to get away in them, and that ruled me. And then down the vista of the counters came a bawling of, 'Here he is!'

"I sprang to my feet, whipped a chair off the counter, and sent it whirling at the fool who had shouted, turned, came into another round a corner, sent him spinning, and rushed up the stairs. He kept his footing, gave a view hallo, and came up the staircase hot after me. Up the staircase were piled a multitude of those bright-colored pot things—what are they?"

"Art pots," suggested Kemp.

"That's it! Art pots. Well, I turned at the top step and swung round, plucked one out of a pile, and smashed it on his silly head as he came at me. The whole pile of pots went headlong, and I heard shouting

and footsteps running from all parts. I made a mad rush for the refreshment place, and there was a man in white like a man cook, who took up the chase. I made one last desperate turn and found myself among lamps and ironmongery. I went behind the counter of this and waited for my cook, and as he bolted in at the head of the chase, I doubled him up with a lamp. Down he went, and I, crouching behind the counter, began whipping off my clothes as fast as I could. Coat, jacket, trousers, shoes, were all right, but a lambswool vest fits a man like a skin. I heard more men coming, my cook was lying quiet on the other side of the counter, stunned or scared speechless, and I had to make another dash for it, like a rabbit hunted out of a wood pile.

"'This way, Policeman,' I heard some one shouting. I found myself in my bedstead storeroom again, and at the end of a wilderness of wardrobes. I rushed among them, went flat, got rid of my vest after infinite wriggling, and stood a free man again, panting and scared, as the policeman and three of the shopmen came round the corner. They made a rush for the vest and pants and collared the trousers. 'He's dropping his plunder,' said one of the young men. 'He *must* be somewhere here.'

"But they did not find me all the same.

"I stood watching them hunt for me for a time, and cursing my ill-luck in losing the clothes. Then I went into the refreshment room, drank a little milk I found there, and sat down by the fire to consider my position.

"In a little while two assistants came in and began to talk over the business very excitedly, and like the fools they were. I heard a magnified account of my depredations, and other speculations as to my whereabouts. Then I fell to scheming again. The insurmountable difficulty of the place, especially now it was alarmed, was to get any plunder out of it. I went down into the warehouse to see if there was any chance of packing and addressing a parcel, but I could not understand the system of checking. About eleven o'clock, the snow having thawed as it fell, and the day being finer and a little warmer than the previous one, I decided that the Emporium was hopeless, and went out again exasperated at my want of success, and with only the vaguest plans of action in my mind.

CHAPTER XXIII

In Drury Lane

"**B**UT you begin to realize now," said the Invisible Man, "the full disadvantage of my condition. I had no shelter—no covering—to get clothing was to forgo all my advantage, to make of myself a strange and terrible thing. I was fasting; for to eat, to fill myself with unassimilated matter, would be to become grotesquely visible again."

"I never thought of that," said Kemp.

"Nor had I. And the snow had warned me of other dangers. I could not go abroad in snow—it would settle on me and expose me. Rain, too, would make me a watery outline, a glistening surface of a man—a bubble. And fog, a surface, a greasy glimmer of

humanity. Moreover, as I went abroad—in the London air—I gathered dirt about my ankles, floating smuts and dust upon my skin. I did not know how long it would be before I should become visible from that cause also. But I saw clearly it could not be very long."

"Not in London at any rate."

"I went into the slums towards Great Portland Street, and found myself at the end of the street in which I had lodged. I did not go that way because of the crowd half-way down it opposite to the still smoking ruins of the house I had fired. My most immediate problem was to get clothing. Then I saw in one of those little miscellaneous shops—news, sweets, toys, stationery, belated Christmas tomfoolery, and so forth—an array of masks and noses, and recalled the idea Omnium's toys had suggested. I turned about, no longer aimless, and went circuitously, in order to avoid the busy ways, towards the back streets north of the Strand; for I remembered, though not very distinctly where, that some theatrical costumiers had shops in that district.

"The day was cold, with a nipping wind down the northward running streets. I walked fast to avoid being overtaken. Every crossing was a danger, every passenger a thing to watch alertly. One man, as I was about to pass him at the top of Bedford street, turned upon me abruptly, and came into me, sending me into the road, and almost under the wheel of a passing hansom. The verdict of the cab-rank was that he had had some sort of stroke. I was so unnerved by this encounter that I went into Covent Garden Market and sat down for some time in a quiet corner by a stall of violets, panting and trembling. I found I had caught a fresh cold, and had to turn out after a time lest my sneezes should attract attention.

"At last I reached the object of my quest, a dirty, fly-blown little shop in a by-way near Drury Lane, with a window full of tinsel robes, sham jewels, wigs, slippers, dominoes, and theatrical photographs. The shop was old-fashioned and low and dark, and the house rose above it for four stories, dark and dismal. I peered through the window, and, seeing no one within, entered. The opening of the door set a clanking bell ringing. I left it open, and walked round a bare costume stand, into a corner behind a cheval glass. For a minute or so no one came. Then I heard heavy feet striding across a room, and a man appeared down the shop.

"My plans were now perfectly definite. I proposed to make my way into the house, secrete myself upstairs, watch my opportunity, and, when everything was quiet, rummage out a wig, mask, spectacles, and costume, and go into the world, perhaps a grotesque but still a creditable figure. And, incidentally, of course, I could rob the house of any money I could lay my hands on.

"**T**HE man who had entered the shop was a short, slightly hunched, beetle-browed man with long arms and very short bandy legs. Apparently I had interrupted a meal. He stared about the shop with an expression of expectation. This gave way to sur-

prise, and then anger, as he saw the shop empty. 'Damn the boys!' he said. He went to stare up and down the street. He came in again in a minute, kicked the door to with his foot spitefully, and went muttering back to the house door.

"I came forward to follow him, and at the noise of my movement he stopped dead. I did so, too, startled by his quickness of ear. He slammed the house door in my face.

"I stood hesitating. Suddenly I heard his quick footsteps returning, and the door re-opened. He stood looking about the shop like one who was still not satisfied. Then, murmuring to himself, he examined the back of the counter and peered behind some fixtures. Then he stood doubtful. He had left the house door open, and I slipped into the inner room.

"It was a queer little room, poorly furnished, and with a number of big masks in the corner. On the table was his belated breakfast, and it was a confoundingly exasperating thing for me, Kemp, to have to sniff his coffee and stand watching while he came in and resumed his meal. And his table manners were irritating. Three doors opened into the little room, one going upstairs and one down, but they were all shut. I could not get out of the room while he was there; I could scarcely move because of his alertness, and there was a draught down my back. Twice I strangled a sneeze just in time.

"The spectacular quality of my sensations was curious and novel, but for all that I was heartily tired and angry long before he had done his eating. But at last he made an end, and putting his beggarly crockery on the black tin tray upon which he had had his teapot, and gathering all the crumbs up on the mustard-stained cloth, he took the whole lot of things after him. His burden prevented his shutting the door behind him—as he would have done. I never saw such a man for shutting doors—and I followed him into a very dirty underground kitchen and scullery. I had the pleasure of seeing him begin to wash up, and then, finding no good in keeping down there, and the brick floor being cold to my feet, I returned upstairs and sat in his chair by the fire. It was burning low, and scarcely thinking, I put on a little coal. The noise of this brought him up at once, and he stood aglare. He peered about the room and was within an ace of touching me. Even after that examination he scarcely seemed satisfied. He stopped in the doorway and took a final inspection before he went down.

"I waited in the little parlor for an age, and at last he came up and opened the upstairs door. I crept close after him.

"On the staircase he stopped suddenly, so that I very nearly blundered into him. He stood looking back right into my face, and listening. 'I could have sworn,' he said. His long, hairy hand pulled at his lower lip; his eye went up and down the staircase. Then he grunted, and went on up again.

"His hand was on the handle of a door, and there he stopped again, with the same puzzled anger on his face. He was becoming aware of the faint sound of my movements about him. The man must have had

diabolically acute hearing. He suddenly flashed into rage: 'If there's any one in this house—' he cried, with an oath, and left the threat unfinished. He put his hand in his pocket, failed to find what he wanted, and, rushing past me, went blundering noisily and pugnaciously downstairs. But I did not follow him; I sat on the head of the staircase until his return.

"PRESENTLY he came up again, still muttering. He opened the door of the room, and, before I could enter, slammed it in my face.

"I resolved to explore the house, and spent some time in doing so as noiselessly as possible. The house was very old and tumbledown, damp, so that the paper in the attics was peeling from the walls, and rat-infested. Most of the door handles were stiff, and I was afraid to turn them. Several rooms I did inspect were unfurnished, and others were littered with theatrical lumber, bought secondhand, I judged from its appearance. In one room next to his I found a lot of old clothes. I began routing among these, and in my eagerness forgot again the evident sharpness of his ears. I heard a stealthy footstep, and, looking up just in time, saw him peeping in at the tumbled heap and holding an old-fashioned revolver in his hand. I stood perfectly still while he stared about open-mouthed and suspicious. 'It must have been her,' he said slowly. 'Damn her!'

"He shut the door quietly, and immediately I heard the key turn in the lock. Then his footsteps retreated. I realized abruptly that I was locked in. For a minute I did not know what to do. I walked from door to window and back, and stood perplexed. A gust of anger came upon me. But I decided to inspect the clothes before I did anything further, and my first attempt brought down a pile from an upper shelf. This brought him back, more sinister than ever. This time he actually touched me, jumped back with amazement, and stood astonished in the middle of the room.

"Presently he calmed a little. 'Rats,' he said in an undertone, fingers on lip. He was evidently a little scared. I edged quietly out of the room, but a plank creaked. Then the infernal little brute started going all over the house, revolver in hand, and locking door after door and pocketing the keys. When I realized what he was up to I had a fit of rage—I could hardly control myself sufficiently to watch my opportunity. By this time I knew he was alone in the house, and so I made no more ado, but knocked him on the head."

"Knocked him on the head?" exclaimed Kemp.

"Yes—stunned him—as he was going downstairs. Hit him from behind with a stool that stood on the landing. He went downstairs like a bag of old boots."

"But—I say! The common conventions of humanity——"

"Are all very well for common people. But the point was, Kemp, that I had to get out of that house in a disguise without his seeing me. I couldn't think of any other way of doing it. And then I gagged him with a Louis Quatorze vest, and tied him up in a sheet!"

"Tied him up in a sheet!"

"Made a sort of bag of it. It was rather a good idea to keep the idiot scared and quiet, and a devilish hard thing to get out of—head away from the string. My dear Kemp, it's no good your sitting and glaring as though I had done a murder. He had his revolver. If once he had seen me he would have been able to describe me——"

"But still," said Kemp, "in England—to-day! And the man was in his own house, and you were—well, robbing."

"Robbing! Confound it! You'll call me a thief next. Surely, Kemp, you're not fool enough to dance on the old strings. Can't you see my position?"

"And his too!" said Kemp.

The Invisible Man stood up sharply. "What do you mean to say?"

Kemp's face grew a trifle hard. He was about to speak, and checked himself. "I suppose, after all," he said, with a sudden change of manner, "the thing had to be done. You were in a fix. But still——"

"Of course I was in a fix—an infernal fix! And he made me wild too—hunting me about the house, fooling about with his revolver, locking and unlocking doors. He was simply exasperating. You don't blame me, do you? You don't blame me?"

"I never blame any one," said Kemp. "It's quite out of fashion. What did you do next?"

"I was hungry. Downstairs I found a loaf and some rank cheese—more than sufficient to satisfy my hunger. I took some brandy-and-water, and then went up past my impromptu bag—he was lying quite still—to the room containing the old clothes. This looked out upon the street, two lace curtains, brown with dirt, guarding the window. I went and peeped out through their interstices. Outside the day was bright—by contrast with the brown shadows of the dismal house in which I found myself, dazzlingly bright. A brisk traffic was going by—fruit carts, a hansom, a four-wheeler with a pile of boxes, a fishmonger's cart. I turned with spots of color swimming before my eyes to the shadowy fixtures behind me. My excitement was giving place to a clear apprehension of my position again. The room was full of a faint scent of benzine, used, I suppose, in cleaning the garments.

I BEGAN a systematic search of the place. I should judge the hunchback had been alone in the house for some time. He was a curious person. . . . Everything that could possibly be of service to me I collected in the clothes storeroom, and then I made a deliberate selection. I found a handbag I thought a suitable possession, and some powder, rouge, and sticking-plaster.

"I had thought of painting and powdering my face and all that there was to show of me, in order to render myself visible, but the disadvantage of this lay in the fact that I should require turpentine and other appliances and a considerable amount of time before I could vanish again. Finally I chose a nose of the better type, slightly grotesque, but not more so than that of many human beings, dark glasses, grayish whiskers, and a wig. I could find no underclothing, but that I could

buy subsequently, and for the time I swathed myself in calico dominoes and some white cashmere scarves. I could find no socks, but the hunchback's boots were rather a loose fit, and sufficed. In a desk in the shop were three sovereigns and about thirty shillings-worth of silver, and in a locked cupboard I burst in the inner room were eight pounds in gold. I could go forth into the world again, equipped.

"Then came a curious hesitation. Was my appearance really creditable? I tried myself with a little bedroom looking-glass, inspecting myself from every point of view to discover any forgotten chink, but it all seemed sound. I was grotesque to the theatrical pitch—a stage miser—but I was certainly not a physical impossibility. Gathering confidence, I took my looking-glass down into the shop, pulled down the shop blinds, and surveyed myself from every point of view with the help of the cheval glass in the corner.

"I spent some minutes screwing up my courage, and then unlocked the shop door, and marched out into the street, leaving the little man to get out of his sheet again when he liked. In five minutes a dozen turnings intervened between me and the costumier's shop. No one appeared to notice me very pointedly. My last difficulty seemed overcome."

He stopped again.

"And you troubled no more about the hunchback?" said Kemp.

"No," said the Invisible Man. "Nor have I heard what became of him. I suppose he untied himself or kicked himself out. The knots were pretty tight."

He became silent, and went to the window and stared out.

"What happened when you went out into the Strand?"

"Oh! Disillusionment again. I thought my troubles were over. Practically, I thought I had impunity to do whatever I chose, everything—save to give away my secret. So I thought. Whatever I did, whatever the consequences might be, was nothing to me. I had merely to fling aside my garments and vanish. No person could hold me. I could take my money where I found it. I decided to treat myself to a sumptuous feast, and then put up at a good hotel, and accumulate a new outfit of property. I felt amazingly confident; it's not particularly pleasant to recall that I was an ass. I went into a place and was already ordering a lunch, when it occurred to me that I could not eat unless I exposed my invisible face. I finished ordering the lunch, told the man I should be back in ten minutes, and went out exasperated. I don't know if you have ever been disappointed in your appetite."

"Not quite so badly," said Kemp, "but I can imagine it."

"I could have smashed the silly devils. At last, faint with the desire for tasteful food, I went into another place and demanded a private room. 'I am disfigured,' I said, 'badly.' They looked at me curiously, but of course it was not their affair—and so at last I got my lunch.

"It was not particularly well served, but it sufficed, and when I had eaten it, I sat over a cigar, try-

ing to plan my line of action. And outside a snow-storm was beginning.

"The more I thought it over, Kemp, the more I realized what a helpless absurdity an Invisible Man was—in a cold and dirty climate and a crowded, civilized city. Before I made this mad experiment I had dreamt of a thousand advantages. That afternoon it seemed all disappointment. I went over the heads of the things a man reckons desirable. No doubt invisibility made it possible to get them, but it made it impossible to enjoy them when they are got. Ambition—what is the good of pride of place when you cannot appear there? What is the good of the love of woman when her name must needs be Delilah? I have no taste for politics, for the blackguardisms of fame, for philanthropy, for sport. What was I to do? And for this I had become a wrapped-up mystery, a swathed and bandaged caricature of a man."

He paused, and his attitude suggested a roving glance at the window.

"But how did you get to Iping?" said Kemp, anxious to keep his guest busy talking.

"I went there to work. I had one hope. It was a half idea! I have it still. It is a full-blown idea now. A way of getting back! Of restoring what I have done. When I choose. When I have done all I mean to do invisibly. And that is what I chiefly want to talk to you about now——"

"You went straight to Iping?"

"Yes. I had simply to get my three volumes of memoranda and my check-book, my luggage and under-clothing, order a quantity of chemicals to work out this idea of mine—I will show you the calculations as soon as I get my books—and then I started. Jove! I remember the snowstorm now, and the accursed bother it was to keep the snow from damping my pasteboard nose——"

"At the end," said Kemp, "the day before yesterday, when they found you out, you rather—to judge by the papers——"

"I did. Rather. Did I kill that fool of a constable?"

"No," said Kemp. "He's expected to recover."

"That's his luck, then. I clean lost my temper, the fools! Why couldn't they leave me alone? And that grocer lout?"

"There's no death expected," said Kemp.

"I don't know about that tramp of mine," said the Invisible Man, with an unpleasant laugh.

"By heaven, Kemp, men of your stamp don't know what rage is! . . . To have worked for years, to have planned and plotted, and then to get some fumbling, purblind idiot messing across your course! . . . Every conceivable sort of silly creature that has ever been created has been sent to cross me. . . . If I have much more of it, I shall go wild—I shall start mowing 'em.

"As it is, they've made things a thousand times more difficult."

CHAPTER XXIV

The Plan That Failed

"**B**UT now," said Kemp, with a side-glance out of the window, "what are we to do?"

He moved nearer his guest to prevent the

possibility of a sudden glimpse of the three men who were advancing up the hill road—with an intolerable slowness, as it seemed to Kemp.

"What were you planning to do, when you were heading for Port Burdock? Had you any plan?"

"I was going to clear out of the country. But I have altered that plan rather since seeing you. I thought it would be wise, now the weather is hot and invisibility possible, to make for the south. Especially as my secret was known, and every one would be on the look-out for a masked and muffled man. You have a line of steamers from here to France. My idea was to get aboard one and run the risks of the passage. Thence I could go by train into Spain, or else to Algiers. It would not be difficult. There a man might be invisible always, and yet live. And do things. I was using that tramp as a money-box and luggage carrier, until I decided how to get my books and things sent over to meet me."

"That's clear."

"And then the filthy brute must needs try to rob me! He *has* hidden my books, Kemp. Hidden my books!

"If I can lay my hands on him! . . ."

"Best plan to get the books out of him first."

"But where is he? Do you know?"

"He's in the town police station, locked up, by his own request, in the strongest cell in the place."

"Cur!" said the Invisible Man.

"But that hangs up your plans a little."

"We must get those books; those books are vital."

"Certainly," said Kemp, a little nervously, wondering if he heard footsteps outside. "Certainly we must get those books. But that won't be difficult, if he doesn't know they're for you."

"No," said the Invisible Man, and thought.

Kemp tried to think of something to keep the talk going, but the Invisible Man resumed of his own accord.

"Blundering into your house, Kemp," he said, "changes all my plans. For you are a man that can understand. In spite of all that has happened, in spite of this publicity, of the loss of my books, of what I have suffered, there still remain great possibilities, huge possibilities——"

"You have told no one I am here?" he asked abruptly.

Kemp hesitated. "That was implied," he said.

"No one?" insisted Griffin.

"Not a soul."

"Ah! Now——" The Invisible Man stood up, and sticking his arms akimbo, began to pace the study.

"I made a mistake, Kemp, a huge mistake, in carrying this thing through alone. I have wasted strength, time, opportunities. Alone; it is wonderful how little a man can do alone! To rob a little, to hurt a little, and there is the end.

"What I want, Kemp, is a goal-keeper, a helper, and a hiding-place; an arrangement whereby I can sleep and eat and rest in peace and unsuspected. I must have a confederate. With a confederate, with food and rest, a thousand things are possible.

"Hitherto I have gone on vague lines. We have to consider all that invisibility means; all that it does not mean. It means little advantage for eavesdropping and

so forth—one makes sounds. It's of little help—a little help, perhaps—in house-breaking and so forth. Once you've caught me you could easily imprison me. But on the other hand I am hard to catch. This invisibility, in fact, is only good in two cases. It's useful in getting away; it's useful in approaching. It's particularly useful, therefore, in killing. I can walk round a man, whatever weapon he has, choose my point, strike as I like, dodge as I like, escape as I like."

Kemp's hand went to his moustache. Was that a movement downstairs?

"And it is killing we must do, Kemp."

"It is killing we must do," repeated Kemp. "I'm listening to your plan, Griffin; but I'm not agreeing, mind. *Why* killing?"

"Not wanton killing, but a judicious slaying. The point is: They know there is an Invisible Man—as well as we know there is an Invisible Man—and that Invisible Man, Kemp, must now establish a Reign of Terror. Yes; no doubt it's startling, but I mean it. A Reign of Terror. He must take some town, like your Burdock, and terrify and dominate it. He must issue his orders. He can do that in a thousand ways—scraps of paper thrust under doors would suffice. And all who disobey his orders he must kill, and kill all who would defend them."

"**H**UMPH!" said Kemp, no longer listening to Griffin, but to the sound of his front door opening and closing.

"It seems to me, Griffin," he said, to cover his wandering attention, "that your confederate would be in a difficult position?"

"No one would know he was a confederate," said the Invisible Man eagerly. And then suddenly, "*Hush!* What's that downstairs?"

"Nothing," said Kemp, and suddenly began to speak loud and fast. "I don't agree to this, Griffin," he said. "Understand me, I don't agree to this. Why dream of playing a game against the race? How can you hope to gain happiness? Don't be a lone wolf. Publish your results—take the world—take the nation at least into your confidence. Think what you might do with a million helpers—"

The Invisible Man interrupted—arm extended. "There are footsteps coming upstairs," he said.

"Nonsense," said Kemp.

"Let me see," said the Invisible Man, and advanced, arm extended, to the door.

And then things happened very swiftly. Kemp hesitated for a second, and moved to intercept him. The Invisible Man started and stood still. "Traitor!" cried the Voice, and suddenly the dressing-gown opened, and, sitting down, the unseen began to disrobe. Kemp made three swift steps to the door, and forthwith the Invisible Man—his legs had vanished—sprang to his feet with a shout. Kemp flung the door open.

As it opened, there came a sound of hurrying feet downstairs and voices.

With a quick movement Kemp thrust the Invisible Man back, sprang aside, and slammed the door. The key was outside and ready. In another moment Griffin

would have been alone in the belvedere study a prisoner—save for one little thing. The key had been slipped in hastily that morning. As Kemp slammed the door it fell noisily upon the carpet.

Kemp's face became white. He tried to grip the door-handle with both hands. For a moment he stood lugging. Then the door gave six inches. But he got it closed again. The second time it was jerked a foot wide, and the dressing-gown came wedging itself into the opening. His throat was gripped by invisible fingers, and he left his hold on the handle to defend himself. He was forced back, tripped, and pitched heavily into the corner of the landing. The empty dressing-gown was flung on the top of him.

Half-way up the staircase was Colonel Adye, the recipient of Kemp's letter, the chief of the Burdock police. He was staring aghast at the sudden appearance of Kemp, followed by the extraordinary sight of clothing tossing empty in the air. He saw Kemp drop and struggle to his feet. He saw Kemp reel, rush forward, and go down again, felled like an ox.

Then suddenly he was struck violently. By nothing! A vast weight, it seemed, leapt upon him, and he was hurled headlong down the staircase, with a grip on his throat and a knee in his groin. An invisible foot trod on his back, a ghostly patter passed downstairs, he heard the two police officers in the hall shout and run, and the front door of the house slammed violently.

He rolled over and sat up staring. He saw, staggering down the staircase, Kemp, dusty and dishevelled, one side of his face white from a blow, his lip bleeding, and a pink dressing-gown and some other clothing held in his arms.

"My God!" cried Kemp, "the game's up! He's gone!"

CHAPTER XXV

The Hunting of the Invisible Man

FOR a space Kemp was too inarticulate to make Adye understand the swift things that had just happened. They stood on the landing, Kemp speaking hurriedly, the grotesque swathings of Griffin still on his arm. But presently Adye began to grasp something of the situation.

"He is mad," said Kemp; "inhuman. He is pure selfishness. He thinks of nothing but his own advantage, his own safety. I have listened to such a story this morning of brutal self-seeking. . . . He has wounded men. He will kill them unless we can prevent him. He will create a panic. Nothing can stop him. He is going out now—furious!"

"He must be caught," said Adye. "That is certain."

"But how?" cried Kemp, and suddenly became full of ideas. "You must begin at once; you must set every available man to work; you must prevent his leaving this district. Once he gets away he may go through the countryside as he wills, killing and maiming. He dreams of a reign of terror! A reign of terror, I tell you. You must set a watch on trains and roads and shipping. The garrison must help. You must wire for help. The only thing that may keep him here is the thought of recovering some books of notes he counts of

value. I will tell you of that! There is a man in your police station—Marvel!”

“I know,” said Adye, “I know. Those books—yes. But the tramp. . . .”

“Says he hasn’t them. But he thinks the tramp has. And you must prevent him from eating or sleeping—day and night the country must be astir for him. Food must be locked up and secured, all food, so that he will have to break his way to it. The houses everywhere must be barred against him. Heaven send us cold nights and rain! The whole countryside must begin hunting and keep hunting. I tell you, Adye, he is a danger, a disaster. Unless he is pinned down and secured, it is frightful to think of the things that may happen.”

“What else can we do?” said Adye. “I must go down at once and begin organizing. But why not come? Yes—you come too! Come, and we must hold a sort of council of war—get Hopps to help—and the railway managers. By Jove! it’s urgent. Come along—tell me as we go. What else is there we can do? Put that stuff down.”

In another moment Adye was leading the way downstairs. They found the front door open and the policemen standing outside staring at empty air. “He’s got away, sir,” said one.

“We must go to the central station at once,” said Adye. “One of you go on down and get a cab to come up and meet us—quickly. And now, Kemp, what else?”

“Dogs,” said Kemp. “Get dogs. They don’t see him, but they wind him. Get dogs.”

“Good,” said Adye. “It’s not generally known, but the prison officials over at Halstead know a man with bloodhounds. Dogs. What else?”

“Bear in mind,” said Kemp, “his food shows. After eating, his food shows until it is assimilated. So that he has to hide after eating. You must keep on beating. Every thicket, every quiet corner. And put all weapons—all implements that might be weapons, away. He can’t carry such things for long. And what he can snatch up and strike men with must be hidden away.”

“Good again,” said Adye. “We shall have him yet!”

“And on the roads——” said Kemp, and hesitated.

“Yes?” said Adye.

“Powdered glass,” said Kemp. “It’s cruel, I know. But think of what he may do!”

Adye drew the air in between his teeth sharply. “It’s unsportsmanlike. I don’t know. But I’ll have powdered glass got ready. If he goes too far. . . .”

“The man’s become inhuman, I tell you,” said Kemp. “I am as sure he will establish a reign of terror—so soon as he has got over the emotions of this escape—as I am sure I am talking to you. Our only chance is to be ahead. He has cut himself off from his kind. His blood be upon his own head.”

CHAPTER XXVI

The Wicksteed Murder

THE Invisible Man seems to have rushed out of Kemp’s house in a state of blind fury. A little child playing near Kemp’s gateway was violently

caught up and thrown aside, so that its ankle was broken—and thereafter for some hours he passed out of human perceptions. No one knows where he went nor what he did. But one can imagine him hurrying through the hot June forenoon, up the hill and on to the open downland behind Port Burdock, raging and despairing at his intolerable fate, and sheltering at last, heated and weary, amid the thickets of Hintondean, to piece together again his shattered schemes against his species. That seems the most probable refuge for him, for there it was he reasserted himself in a grimly tragical manner about two in the afternoon.

One wonders what his state of mind may have been during that time and what plans he devised. No doubt he was almost ecstatically exasperated by Kemp’s treachery, and though we may be able to understand the motives that led to that deceit, we may still imagine, and even sympathize a little with the fury the attempted surprise must have occasioned. Perhaps something of the stunned astonishment of his Oxford Street experiences may have returned to him, for evidently he had counted on Kemp’s co-operation in his brutal dream of a terrorized world. At any rate, he vanished from human ken about midday, and no living witness can tell what he did until about half-past two. It was a fortunate thing, perhaps, for humanity, but for him it was a fatal inaction.

During that time a growing multitude of men scattered over the countryside were busy. In the morning he had still been simply a legend, a terror; in the afternoon, by virtue chiefly of Kemp’s dryly worded proclamation, he was presented as a tangible antagonist, to be wounded, captured, or overcome, and the countryside began organizing itself with inconceivable rapidity. By two o’clock even, he might still have removed himself out of the district by getting aboard a train, but after two that became impossible, every passenger train along the lines on a great parallelogram between Southampton, Winchester, Brighton and Horsham, traveled with locked doors, and the goods traffic was almost entirely suspended. And in a great circle of twenty miles round Port Burdock men armed with guns and bludgeons were presently setting out in groups of three and four, with dogs, to beat roads and fields.

MOUNTED policemen rode along the country lanes, stopping at every cottage and warning the people to lock up their houses and keep indoors unless they were armed, and all the elementary schools had broken up by three o’clock, and the children, scared and keeping together in groups, were hurrying home. Kemp’s proclamation—signed, indeed, by Adye—was posted over almost the whole district by four or five o’clock in the afternoon. It gave briefly but clearly all the conditions of the struggle, the necessity of keeping the Invisible Man from food and sleep, the necessity for incessant watchfulness, and for a prompt attention to any evidence of his movements. And so swift and decided was the action of the authorities, so prompt and universal was the belief in this strange being, that before nightfall an area of several hundred square miles was in a stringent state of siege. And before nightfall,

too, a thrill of horror went through the whole watching, nervous countryside, and going from whispering mouth to mouth, swift and certain over the length and breadth of the country passed the story of the murder of Mr. Wicksteed.

If our supposition that the Invisible Man's refuge was the Hintondean thickets is correct, then we must suppose that in the early afternoon he sallied out again, bent upon some project that involved the use of a weapon. We cannot know what the project was, but the evidence that he had the iron rod in his hand before he met Wicksteed is to me, at least, overwhelming.

Of course we can know nothing of the details of that encounter. It occurred on the edge of a gravel pit, not two hundred yards from Lord Burdock's lodge gate. Everything points to a desperate struggle—the trampled ground, the numerous wounds Mr. Wicksteed received, his splintered walking-stick—but why the attack was made, save in a murderous frenzy, it is impossible to imagine. Indeed, the theory of madness is almost unavoidable. Mr. Wicksteed was a man of forty-five or forty-six, steward to Lord Burdock, of inoffensive habits and appearance, and the very last person in the world to provoke such a terrible antagonist. Against him it would seem the Invisible Man used an iron rod, dragged from a piece of broken fence. He stopped this quiet man, going quietly home to his midday meal, attacked him, beat down his feeble defences, broke his arm, felled him, and smashed his head to a jelly.

Of course, he must have dragged this rod out of the fencing, before he met his victim—he must have been carrying it ready in his hand. Only two details beyond what has already been stated seem to bear on the matter. One is the circumstance that the gravel-pit was not in Mr. Wicksteed's direct path home, but nearly a couple of hundred yards out of his way. The other is the assertion of a little girl, to the effect that going to her afternoon school she saw the murdered man "trotting" in a peculiar manner across a field towards the gravel-pit. Her pantomime of his action suggests a man pursuing something on the ground before him and striking at it ever and again with his walking stick. She was the last person to see him alive. He passed out of her sight to his death, the struggle being hidden from her only by a clump of beech trees and a slight depression in the ground.

NOW this, to the present writer's mind at least, certainly lifts the murder out of the realm of the absolutely wanton. We may imagine that Griffin had taken the rod as a weapon indeed, but without any deliberate intention of using it to murder. Wicksteed may then have come by and noticed this rod inexplicably moving through the air. Without any thought of the Invisible Man—for Port Burdock is ten miles away—he may have pursued it. It is quite conceivable that he may not even have heard of the Invisible Man. One can, then, imagine the Invisible Man making off quietly in order to avoid discovering his presence in the neighborhood, and Wicksteed, excited and curious, pursuing this unaccountably locomotive object, finally striking at it.

No doubt the Invisible Man could easily have distanced his middle-aged pursuer under ordinary circumstances, but the position in which Wicksteed's body was found suggests that he had the ill-luck to drive his quarry into a corner between a drift of stinging nettles and the gravel-pit. To those who appreciate the extraordinary irascibility of the Invisible Man the rest of the encounter will be easy to imagine.

But this is a pure hypothesis. The only undeniable facts—for stories of children are often unreliable—are the discovery of Wicksteed's body, done to death, and of the blood-stained iron rod flung among the nettles. The abandonment of the rod by Griffin suggests that in the emotional excitement of the affair the purpose for which he took it—if he had a purpose—was abandoned. He was certainly an intensely egotistical and unfeeling man, but the sight of his victim, his first victim, bloody and pitiful at his feet, may have released some long pent fountain of remorse to flood for a time whatever scheme of action he had contrived.

After the murder of Mr. Wicksteed, he would seem to have struck across the country towards the downland. There is a story of a voice heard about sunset by a couple of men in a field near Fern Bottom. It was wailing and laughing, sobbing and groaning, and ever and again it shouted. It must have been queer hearing. It drove up across the middle of a clover field and died away towards the hills.

In the interim the Invisible Man must have learnt something of the rapid use Kemp had made of his confidences. He must have found houses locked and secured, he may have loitered about railway stations and prowled about inns, and no doubt he read the proclamations and realized something of the nature of the campaign against him. And as the evening advanced the fields became dotted here and there with groups of three or four men, and noisy with the yelping of dogs. These men-hunters had particular instruction in the case of an encounter as to the way they should support one another. But he avoided them all. We may understand something of his exasperation, and it could have been none the less because he himself had supplied the information that was being used so remorselessly against him. For that day at least he lost heart; for nearly twenty-four hours, save when he turned on Wicksteed, he was a hunted man. In the night he must have eaten and slept, for in the morning he was himself again, active, powerful, angry and malignant, prepared for his last great struggle against the world.

CHAPTER XXVII

The Siege of Kemp's House

KEMP read a strange missive, written in pencil on a greasy sheet of paper.

"You have been amazingly energetic and clever," this letter ran, "though what you stand to gain by it I cannot imagine. You are against me. For a whole day you have chased me—you have tried to rob me of a night's rest. But I have had food in spite of you, I have slept in spite of you, and the game is only beginning. The game is only beginning. There is

nothing for it but to start the Terror. This announces the first day of the Terror. Port Burdock is no longer under the Queen, tell your Colonel of Police, and the rest of them; it is under me—the Terror! This is day one of year one of the new epoch—the Epoch of the Invisible Man. I am Invisible Man the First. To begin with, the rule will be easy. The first day there will be one execution for the sake of example—a man named Kemp. Death starts for him today. He may lock himself away, hide himself away, get guards about him, put on armor if he likes—Death, the unseen Death, is coming. Let him take precautions—it will impress my people. Death starts from the pillar-box by mid-day. The letter will fall in as the postman comes along, then off! The game begins. Death starts. Help him not, my people, lest Death fall upon you also. To-day Kemp is to die."

Kemp read this letter twice. "It's no hoax," he said. "That's his voice! And he means it."

He turned the folded sheet over and saw on the addressed side of it the postmark Hintondean and the prosaic detail, "*2d. to pay.*"

He got up slowly, leaving his lunch unfinished—the letter had come by the one o'clock post—and went into his study. He rang for his housekeeper, and told her to go round the house at once, examine all the fastenings of the windows, and close all the shutters. He closed the shutters of his study himself. From a locked drawer in his bedroom he took a little revolver, examined it carefully, and put it into the pocket of his lounge jacket. He wrote a number of brief notes, one to Colonel Adye, gave them to his servant to take, with explicit instructions as to her way of leaving the house. "There is no danger," he said, and added a mental reservation, "to you." He remained meditative for a space after doing this, and then returned to his cooling lunch.

He ate with gaps of thought. Finally he struck the table sharply. "We will have him!" he said, "and I am the bait. He will come too far."

He went up to the belvedere, carefully shutting every door after him. "It's a game," he said, "an odd game—but the chances are all for me, Mr. Griffin, in spite of your invisibility. And pluck. Griffin *contra mundum* . . . with a vengeance!"

He stood at the window staring at the hot hillside. "He must get food every day—and I don't envy him. Did he really sleep last night? Out in the open somewhere—secure from collisions. I wish we could get some good cold, wet weather instead of the heat.

"He may be watching me now."

He went close to the window. Something rapped smartly against the brickwork over the frame, and made him start violently back.

"I'm getting nervous," said Kemp. But it was five minutes before he went to the window again. "It must have been a sparrow," he said.

Presently he heard the front door bell ringing and hurried downstairs. He unbolted and unlocked the door, examined the chain, put it up, and opened cautiously without showing himself. A familiar voice

hailed him. It was Adye. "Your servant's been assaulted, Kemp," he said round the door.

"What!" exclaimed Kemp.

"Had that note of yours taken away from her. He's close about here. Let me in."

Kemp released the chain, and Adye entered through as narrow an opening as possible. He stood in the hall, looking with infinite relief at Kemp refastening the door. "Note was snatched out of her hand. Scared her horribly. She's down at the station. Hysterics. He's close here. What was it about?"

Kemp swore.

"What a fool I was!" said Kemp. "I might have known. It's not an hour's walk from Hintondean. Already!"

"What's up?" said Adye.

"Look here!" said Kemp, and led the way into his study. He handed Adye the Invisible Man's letter. Adye read it, and whistled softly. "And you——?" said Adye.

"Proposed a trap—like a fool," said Kemp, "and sent my proposal out by a maidservant. To him."

Adye followed Kemp's profanity.

"He'll clear out," said Adye.

"Not him," said Kemp.

A RESOUNDING smash of glass came from upstairs. Adye had a silvery glimpse of a little revolver half out of Kemp's pocket. "It's a window upstairs!" said Kemp, and led the way up. There came a second smash while they were still on the staircase. When they reached the study they found two of the three windows smashed, half the room littered with splintered glass, and one big flint lying on the writing-table. The two men stopped in the doorway contemplating the wreckage. Kemp swore again, and as he did so the third window went with a snap like a pistol, hung starred for a moment, and collapsed in jagged, shivering triangles into the room.

"What's this for?" said Adye.

"It's a beginning," said Kemp.

"There's no way of climbing up here?"

"Not for a cat," said Kemp.

"No shutters?"

"Not here. All the downstairs rooms—Hallo!"

Smash, and then the whack of boards hit hard came from downstairs. "Confound him!" said Kemp. "That must be—yes—it's one of the bedrooms. He's going to do all the house. But he's a fool. The shutters are up and the glass will fall outside. He'll cut his feet."

Another window proclaimed its destruction. The two men stood on the landing perplexed.

"I have it!" said Adye. "Let me have a stick or something, and I'll go down to the station and get the bloodhounds put on. That ought to settle him.

Another window went the way of its fellows.

"You haven't a revolver?" asked Adye.

Kemp's hand went to his pocket. Then he hesitated. "I haven't one—at least to spare."

"I'll bring it back," said Adye. "You'll be safe here."

Kemp, ashamed of his momentary lapse from truthfulness, handed him the weapon.

"Now for the door," said Adye.

As they stood hesitating in the hall, they heard one of the first-floor bedroom windows crack and clash. Kemp went to the door and began to slip the bolts as silently as possible. His face was a little paler than usual.

"You must step straight out," said Kemp.

In another moment Adye was on the doorstep and the bolts were dropping back into the staples. He hesitated for a moment, feeling more comfortable with his back against the door. Then he marched, upright and square, down the steps. He crossed the lawn and approached the gate. A little breeze seemed to ripple over the grass. Something moved near him.

"Stop a bit," said a Voice, and Adye stopped dead, and his hand tightened on the revolver.

"Well?" said Adye, white and grim, and every nerve tense.

"Oblige me by going back to the house," said the Voice, as tense and grim as Adye's.

"Sorry," said Adye, a little hoarsely, and moistened his lips with his tongue. The voice was on his left front, he thought; suppose he were to take his luck with a shot.

"What are you going for?" said the Voice, and there was a quick movement of the two, and a flash of sunlight from the open lip of Adye's pocket.

Adye desisted and thought. "Where I go," he said slowly, "is my own business." The words were still on his lips, when an arm came round his neck, his back felt a knee, and he was sprawling backward. He drew clumsily and fired absurdly, and in another moment he was struck in the mouth and the revolver wrested from his grip. He made a vain clutch at a slippery limb, tried to struggle up and fell back. "Damn!" said Adye. The Voice laughed.

"I'd kill you now if it wasn't the waste of a bullet," it said. He saw the revolver in midair, six feet off, covering him.

"Well?" said Adye, sitting up.

"Get up," said the Voice.

Adye stood up.

"Attention!" said the Voice, and then firmly, "Don't try any games. Remember I can see your face, if you can't see mine. You've got to go back to the house."

"He won't let me in," said Adye.

"That's a pity," said the Invisible Man. "I've got no quarrel with you."

Adye moistened his lips again. He glanced away from the barrel of the revolver, and saw the sea far off, very blue and dark under the midday sun, the smooth green down, the white cliff of the head, and the multitudinous town, and suddenly he knew that life was very sweet. His eyes came back to this little metal thing hanging between heaven and earth, six yards away. "What am I to do?" he said sullenly.

"What am I to do?" asked the Invisible Man. "You will get help. The only thing is for you to go back"

"I will try. If he lets me in will you promise not to rush the door?"

"I've got no quarrel with you," said the Voice.

KEMP had hurried upstairs after letting Adye out, and now, crouching among the broken glass, and peering cautiously over the edge of the study window-sill, he saw Adye stand parleying with the unseen. "Why doesn't he fire?" whispered Kemp to himself. Then the revolver moved a little, and the glint of the sunlight flashed in Kemp's eyes. He shaded his eyes and tried to see the course of the blinding beam.

"Surely!" he said. "Adye has given up the revolver."

"Promise not to rush the door. Adye was saying. "Don't push a winning game too far. Give a man a chance."

"You go back to the house. I tell you flatly I will not promise anything."

Adye's decision seemed suddenly made. He turned towards the house, walking slowly with his hands behind him. Kemp watched him—puzzled. The revolver vanished, flashed again into sight, vanished again, and became evident on a closer scrutiny as a little dark object following Adye. Then things happened very quickly. Adye leapt backwards, swung round, clutched at this little object, missed it, threw up his hands and fell forward on his face, leaving a little puff of blue in the air. Kemp did not hear the sound of the shot. Adye writhed, raised himself on one arm, fell forward, and lay still.

For a space Kemp remained staring at the quiet carelessness of Adye's attitude. The afternoon was very hot and still, nothing seemed stirring in all the world save a couple of yellow butterflies chasing each other through the shrubbery between the house and the road gate. Adye lay on the lawn near the gate. The blinds of all the villas down the hill road were drawn, but in one little green summer-house was a white figure, apparently an old man asleep. Kemp scrutinized the surroundings of the house for a glimpse of the revolver, but it had vanished. His eyes came back to Adye—the game was opening well.

Then came a ringing and knocking at the front door, that grew at last tumultuous, but, pursuant to Kemp's instructions, the servants had locked themselves into their rooms. This was followed by a silence. Kemp sat listening and then began peering cautiously out of the three windows, one after another. He went to the staircase head and stood listening uneasily. He armed himself with his bedroom poker, and went to examine the interior fastenings of the ground-floor windows again. Everything was safe and quiet. He returned to the belvedere. Adye lay motionless over the edge of the gravel just as he had fallen. Coming along the road by the villas were the housemaid and two policemen.

Everything was deadly still. The three people seemed very slow in approaching. He wondered what his antagonist was doing.

He started. There was a smash from below. He hesitated and went downstairs again. Suddenly the house resounded with heavy blows and the splintering of wood. He heard a smash and the distinctive clang of the iron fastenings of shutters. He turned the key and opened the kitchen door. As he did so the shutters,

split and splintering, came flying inward. He stood aghast. The window frame, save for one cross-bar, was still intact, but only little teeth of glass remained in the frame. The shutters had been driven in with an axe, and now the axe was descending in sweeping blows upon the window frame and the iron bars defending it. Then suddenly it leapt aside and vanished.

He saw the revolver lying on the path outside, and then the little weapon sprang into the air. He dodged back. The revolver cracked just too late, and a splinter from the edge of the closing door flashed over his head. He slammed and locked the door, and as he stood outside he heard Griffin shouting and laughing. Then the blows of the axe with their splitting and smashing accompaniments were resumed.

KEMP stood in the passage trying to think. In a moment the Invisible Man would be in the kitchen. This door would not keep him a moment, and then—

A ringing came at the front door again. It would be the policemen. He ran into the hall, put up the chain, and drew the bolts. He made the girl speak before he dropped the chain, and the three people blundered into the house in a heap, and Kemp slammed the door again.

"The Invisible Man!" said Kemp. "He has a revolver with two shots—left. He's killed Adye. Shot him anyhow. Didn't you see him on the lawn? He's lying there."

"Who?" said one of the policemen.

"Adye," said Kemp.

"We came round the back way," said the girl.

"What's that smashing?" asked one of the policemen.

"He's in the kitchen—or will be. He has found an axe—"

Suddenly the house was full of the Invisible Man's resounding blows on the kitchen door. The girl stared towards the kitchen and stepped into the dining-room. Kemp tried to explain in broken sentences. They heard the kitchen door give.

"This way," cried Kemp, bursting into activity, and bundled the policemen into the dining-room doorway.

"Poker," said Kemp, and rushed to the fender.

He handed the poker he had carried to one policeman, and the dining-room one to the other.

He suddenly flung himself backward. "Whup," said one policeman, ducked, and caught the axe on his poker. The pistol snapped its penultimate shot and ripped a valuable Sidney Cooper.* The second policeman brought his poker down on the little weapon, as one might knock down a wasp, and sent it rattling to the floor.

At the first clash the girl screamed, stood screaming for a moment by the fireplace, and then ran to open the shutters—possibly with an idea of escaping by the shattered window.

The axe receded into the passage and fell to a position about two feet from the ground. They could hear the Invisible Man breathing. "Stand away you two," he said. "I want that man Kemp."

"We want you," said the first policeman, making a quick step forward and wiping with his poker at the

Voice. The Invisible Man must have started back, and he blundered into the umbrella stand.

Then, as the policeman staggered with the swing of the blow he had aimed, the Invisible Man countered with the axe, the helmet crumpled like paper, and the blow sent the man spinning to the floor at the head of the kitchen stairs.

But the second policeman, aiming behind the axe with his poker, hit something soft that snapped. There was a sharp exclamation of pain, and then the axe fell to the ground. The policeman wiped again at the vacancy and hit nothing; he put his foot on the axe and struck again. Then he stood, poker clubbed, listening, intent for the slightest movement.

He heard the dining-room window open, and a quick rush of feet within. His companion rolled over and sat up, with the blood running down between his eye and ear. "Where is he?" asked the man on the floor.

"Don't know. I've hit him. He's standing somewhere in the hall unless he's slipped past you. Dr. Kemp—sir!"

"Dr. Kemp," cried the policeman again.

The second policeman began struggling to his feet. He stood up. Suddenly the faint pad of bare feet on the kitchen stairs could be heard. "Yap!" cried the first policeman, and flung his poker. It smashed a little gas-bracket.

He made as if he would pursue the Invisible Man downstairs. Then he thought better of it, and stepped into the dining-room.

"Dr. Kemp—" he began, and stopped short.

"Dr. Kemp's a hero," he said, as his companion looked over his shoulder.

The dining-room window was wide open, and neither handmaid nor Kemp was to be seen.

The second policeman's opinion of Kemp was terse and vivid.

CHAPTER XXVIII

The Hunter Hunted

MR. HEELAS, Mr. Kemp's nearest neighbor among the villa holders, was asleep in his summerhouse when the siege of Kemp's house began. Mr. Heelas was one of the sturdy majority who refused to believe in "all this nonsense" about an Invisible Man. His wife, however, as he was to be reminded subsequently, did. He insisted upon walking about his garden just as if nothing was the matter, and he went to sleep in the afternoon, in accordance with the custom of years. He slept through the smashing of the windows, and then woke up suddenly, with a curious persuasion of something wrong. He looked across at Kemp's house, rubbed his eyes, and looked again. Then he put his feet to the ground and sat listening. He said he was damned, but still the strange thing was visible. The house looked as though it had been deserted for weeks—after a violent riot. Every window was broken, and every window, save those of the belvedere study, was blinded by internal shutters.

"I could have sworn it was all right"—he looked at his watch—"twenty minutes ago."

* Thomas Sydney Cooper; b. 1803, d. 1902. An English painter of animal life.

He became aware of a measured concussion, and the clash of glass far away in the distance. And then, as he sat open-mouthed, came a still more wonderful thing. The shutters of the dining-room window were flung open violently, and the housemaid, in her outdoor hat and garments, appeared struggling in a frantic manner to throw up the sash. Suddenly a man appeared beside her, helping her—Dr. Kemp! In another moment the window was open and the housemaid was struggling out; she pitched forward and vanished among the shrubs. Mr. Heelas stood up, exclaiming vaguely and vehemently at all these wonderful things. He saw Kemp stand on the sill, spring from the window, and reappear almost instantaneously running along a path in the shrubbery and stooping as he ran, like a man who evades observation. He vanished behind a laburnum, and appeared again clambering a fence that abutted on the open down. In a second he had tumbled over, and was running at a tremendous pace down the slope towards Mr. Heelas.

"Lord!" cried Mr. Heelas, struck with an idea, "it's that Invisible Man brute! It's all right after all!"

With Mr. Heelas to think things like that was to act, and his cook, watching him from the top window, was amazed to see him come pelting towards the house at a good nine miles an hour. There was a slamming of doors, a ringing of bells, and the voice of Mr. Heelas bellowing like a bull. "Shut the doors, shut the windows, shut everything—the Invisible Man is coming!" Instantly the house was full of screams and directions and scurrying feet. He himself ran to shut the French windows that opened on the veranda, and as he did so Kemp's head and shoulders and knee appeared over the edge of the garden fence. In another moment Kemp had ploughed through the asparagus, and was running across the tennis-lawn to the house.

"You can't come in," said Mr. Heelas, shooting the bolts. "I'm very sorry if he's after you—but you can't come in!"

Kemp appeared with a face of terror close to the glass, rapping and then shaking frantically at the French window. Then, seeing his efforts were useless, he ran along the veranda, vaulted the end, and went to hammer at the side door. Then he ran round by the side gate to the front of the house, and so into the hill road. And Mr. Heelas staring from his window—a face of horror—had scarcely witnessed Kemp vanish ere the asparagus was being trampled this way and that by feet unseen. At that Mr. Heelas fled precipitately upstairs, and the rest of the chase is beyond his purview. But as he passed the staircase window he heard the side gate slam.

Emerging into the hill road, Kemp naturally took the downward direction, and so it was that he came to run in his own person the very race he had watched with such a critical eye from the belvedere study only four days ago.

He ran it quite well for a man out of training, and though his face was white and wet his wits were cool to the last. He ran with wide strides, and wherever a patch of rough ground intervened, wherever there came a patch of raw flints, or a bit of broken glass

shone dazzling, he crossed it, and left the bare invisible feet that followed to take what line they would.

FOR the first time in his life Kemp discovered that the hill road was indescribably vast and desolate, and that the beginnings of the town far below at the hill foot were strangely remote. Never had there been a slower or more painful method of progression than running. All the gaunt villas, sleeping in the afternoon sun, looked locked and barred; no doubt they were locked and barred by his own orders. But at any rate they might have kept a lookout for an eventuality like this! The town was rising up now, the sea had dropped out of sight behind it, and people below were stirring. A tram was just arriving at the hill foot. Beyond that was the police station. Were those footsteps he heard behind him? Spurt.

The people below were staring at him, one or two were running, and his breath was beginning to saw in his throat. The tram was quite near now, and the "Jolly Cricketers" was noisily barring its doors. Beyond the tram were posts and heaps of gravel—the drainage works. He had a transitory idea of jumping into the tram and slamming the doors, and then he resolved to go for the police station. In another moment he had passed the door of the "Jolly Cricketers," and was in the blistering fag end of the street, with human beings about him. The tram driver and his helper—astounded by the sight of his furious haste—stood staring with the tram horses unhitched. Farther on the astonished features of navvies appeared above the mounds of gravel.

His pace broke a little, and then he heard the swift pad of his pursuer, and leapt forward again. "The Invisible Man!" he cried to the navvies, with a vague indicative gesture, and by an inspiration leapt the excavation, and placed a burly group between him and the chase. Then, abandoning the idea of the police station, he turned into a little side street, rushed by a greengrocer's cart, hesitated for the tenth of a second at the door of a sweet-stuff shop, and then made for the mouth of an alley that ran back into the main Hill Street again. Two or three little children were playing here, and shrieked and scattered running at his apparition, and forthwith, doors and windows opened, and excited mothers revealed their hearts. Out he shot into Hill Street once more, three hundred yards from the tram-line end, and immediately he became aware of a tumultuous vociferation and running people.

He glanced up the street towards the hill. Hardly a dozen yards off ran a huge navvy, cursing in fragments and slashing viciously with a spade, and hard behind him came the tram conductor with his fists clenched. Up the street others followed these two, striking and shouting. Down towards the town men and women were running, and he noticed clearly one man coming out of a shop door with a stick in his hand. "Spread out! Spread out!" cried some one. Kemp suddenly grasped the altered condition of the chase. He stopped and looked round, panting. "He's close here!" he cried. "Form a line across——"

He was hit hard under the ear, and went reeling, try-

ing to face round towards his unseen antagonist. He just managed to keep his feet, and he struck a vain counter in the air. Then he was hit again under the jaw, and sprawled headlong on the ground. In another moment a knee compressed his diaphragm, and a couple of eager hands gripped his throat, but the grip of one was weaker than the other; he grasped the wrists, heard a cry of pain from his assailant, and then the spade of the navy came whirling through the air above him, and struck something with a dull thud. He felt a drop of moisture on his face. The grip at his throat suddenly relaxed, and with a convulsive effort Kemp loosed himself, grasped a limp shoulder, and rolled uppermost. He gripped the unseen elbows near the ground. "I've got him!" screamed Kemp. "Help! help—hold! He's down! Hold his feet!"

IN another second there was a simultaneous rush upon the struggle, and a stranger coming into the road suddenly might have thought an exceptionally savage game of Rugby football was in progress. And there was no shouting after Kemp's cry—only a sound of blows and feet and a heavy breathing.

Then came a mighty effort, and the Invisible Man staggered to his feet. Kemp clung to him in front like a hound to a stag, and a dozen hands clutched and tore at the unseen. The tram conductor got the neck, and lugged him back.

Down went the heap of struggling men again. There was, I am afraid, some savage kicking. Then suddenly a wild scream of "Mercy, mercy!" that died down swiftly to a sound like choking.

"Get back, you fools!" cried the muffled voice of Kemp, and there was a vigorous shoving back of stalwart forms. "He's hurt, I tell you. Stand back."

There was a brief struggle to clear a space, and then the circle of eager faces saw the doctor kneeling, as it seemed, fifteen inches in the air, and holding invisible arms to the ground. Behind him a constable gripped invisible ankles.

"Don't you leave go of en!" cried the big navy, holding a bloodstained spade; "he's shamming."

"He's not shamming," said the doctor, cautiously raising his knee, "and I'll hold him." His face was bruised, and already turning red; he spoke thickly, because of a bleeding lip. He released one hand, and seemed to be feeling at the face. "The mouth's all wet," he said. And then, "Good Lord!"

He stood up abruptly, and then knelt down on the ground by the side of the thing unseen. There was a pushing and shuffling, a sound of heavy feet as fresh people came to increase the pressure of the crowd. Men were coming out of the houses. The doors of the "Jolly Cricketers" stood suddenly wide open. Very little was said. Kemp felt about, his hand seeming to pass through empty air. "He's not breathing," he said, and then, "I can't feel his heart. His side—ugh!"

An old woman, peering under the arm of the big navy, screamed sharply. "Looky there!" she said, and thrust out a wrinkled finger. And looking where she pointed, every one saw, faint and transparent, as though made of glass, so that veins and arteries, and

bones and nerves could be distinguished, the outline of a hand—a hand limp and prone. It grew clouded and opaque even as they stared.

"Hallo!" cried the constable. "Here's his feet a-showing!"

And so, slowly, beginning at his hands and feet, and creeping slowly along his limbs to the vital centers of his body, that strange change to visible fleshliness continued. It was like the slow spreading of a poison. First came the little white veins tracing a hazy gray sketch of a limb, then the glassy bones and intricate arteries, then the flesh and skin, first a faint fogginess and then growing rapidly dense and opaque. Presently they could see his crushed chest and his shoulders, and the dim outline of his drawn and battered features.

When at last the crowd made way for Kemp to stand erect, there lay, naked and pitiful on the ground, the bruised and broken body of a young man about thirty. His hair and brow were white—not gray with age, but white with the whiteness of albinism—and his eyes were like garnets. His hands were clenched, his eyes wide open, and his expression was one of anger and dismay.

"Cover his face!" cried a man. "For Gawd's sake, cover that face!"

Someone brought a sheet from the "Jolly Cricketers," and having covered him, they carried him into that house. And there it was, on a shabby bed in a tawdry, ill-lighted bedroom, surrounded by a crowd of ignorant and excited people, broken and wounded, betrayed and unpitied, that Griffin, the first of all men to make himself invisible, Griffin, the most gifted physicist the world has ever seen, ended in infinite disaster his strange and terrible career.

The Epilogue

SO ends the story of the strange and evil experiment of the Invisible Man. And if you would learn more of him you must go to a little inn near Port Stowe and talk to the landlord. The sign of the inn is an empty board save for a hat and boots, and the name is the title of this story. The landlord is a short and corpulent little man with a nose of cylindrical protrusion, wiry hair, and a sporadic rosiness of visage. Drink generously, and he will tell you generously of all the things that happened to him after that time, and of how the lawyers tried to "do him out of" the treasure found upon him.

"When they found they couldn't prove who's money was which, I'm blessed," he says, "if they didn't try to make me out a blooming treasure trove! Do I *look* like a Treasure Trove? And then a gentleman gave me a guinea a night to tell the story at the Empire Music 'All—just tell 'em in my own words—barring one."

And if you want to cut off the flow of his reminiscences abruptly, you can always do so by asking if there weren't three manuscript books in the story. He admits there were, and proceeds to explain with assertions that everybody thinks *he* has 'em. But, bless you! he hasn't. "The Invisible Man it was took 'em off to hide 'em when I cut and ran for Port Stowe.

It's that Mr. Kemp put people on with the idea of *my* having 'em."

He subsides into a pensive state, watches you furtively, bustles nervously with glasses, and presently leaves the bar.

He is a bachelor man—his tastes were ever bachelor, and there are no women folk in the house. Outwardly he buttons—it is expected of him—but in his more vital privacies, in the matter of braces, for example, he still turns to string. He conducts his house without enterprise, but with eminent decorum. His movements are slow, and he is a great thinker. But he has a reputation for wisdom and for a respectable parsimony in the village, and his knowledge of the roads of the South of England would beat Cobbett.*

On Sunday mornings, every Sunday morning, all the year round, while he is closed to the outer world, and every night after ten, he goes into his bar parlor, bearing a glass of gin faintly tinged with water, and having placed this down, he locks the door and examines the blinds, and even looks under the table. And then, being satisfied of his solitude, he unlocks the cupboard, and a box in the cupboard, and a drawer

* An English author, William Cobbett; b. 1762, d. 1835. In 1830 published *Rural Rides*, descriptive of English countryside. One of the most voluminous of English authors.

in that box, and produces three volumes bound in brown leather, and places them solemnly in the middle of the table. The covers are weather-worn and tinged with an algal green—for once they sojourned in a ditch, and some of the pages have been washed blank by dirty water. The landlord sits down in an armchair, fills a long clay pipe slowly—gloating over the books the while. Then he pulls one towards him and begins to study it, turning over the leaves backwards and forwards.

His brow is knit and his lips move painfully. "Hex, little two up in the air, cross and a fiddle-de-dee. Lord! what a one he was for intellect!"

Presently he relaxes and leans back, and blinks through his smoke across the room at things invisible to other eyes. "Full of secrets," he says. "Wonderful secrets!"

"Once I get the haul of them—*Lord!*

"I wouldn't do what *he* did; I'd just—well!" He pulls at his pipe.

So he lapses into a dream, the undying, wonderful dream of his life. And though Kemp has fished unceasingly, no human being save the landlord knows those books are there, with the subtle secret of invisibility and a dozen other strange secrets written therein. And none other will know of them until he dies.

THE END.

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BARON MÜNCHHAUSEN'S SCIENTIFIC ADVENTURES

By Hugo Gernsback

11. Martian Amusements



PROMPTLY as usual, on the second of 11 p. m., his Excellency "called." Perhaps it would be more correct if I had said "hol-lered" instead of "called," for I have become mighty tired of wearing those head receivers that make one look like a horse with blinkers over his head. A few days ago I installed my new *Audi-Amplifonc*,* and, in "Radio Bug" language, it is "some peach." Why, if a half dead radio waif wave strays anywhere within a thousand miles of my station, I will hear it over my Audi-Amplifone as loudly as a young brass band in a cemetery at 2. a. m.

I can now sit twenty-five feet away from the horn of the Audi-Amplifone and hear the slightest "rustling" in the ether perfectly plainly. No matter how emaciated or how consumptive that wavelet is, I will hear it.

Well, anyway, Münchhausen was talking. His dear, croaking, sepulchral voice seemed to fill my radio laboratory, and I shivered when I tried to realize that his voice originated sixty million miles away from earth, and that I heard it as plainly as if the dear old soul were sitting five feet away from me instead of talking to me from the Planet Mars.

"My dear Alier," he began, "you are the only human being to whom I can rave about our many Martian wonders, and I assure you it is a great relief to do so. It does not help much to voice my constant astonishments to Flitternix, for his brain is in a whirl much the same as mine is all of the time. But it is a relief to pour out one's heart to someone who is not fortunate enough to have been transported into a civilization hundreds of thousands of years ahead of yours. But alas, I am raving again and you want to hear facts.

"Well, after our host had shown us a close view of the Earth and the planets by means of his extraordinary amplifying 'telescope,' he took us to an after-dinner 'show.' You see certain habits and customs are, after all, much the same on the two

planets. Only the 'show' was a bit different from the ones to which we are accustomed on earth!

"In one of the superb flyers of the Ruler, we flew over the magnificent illuminated city and after a few minutes descended on an immense, slightly curved dome, forming the top of a building. This dome must have measured at least 2,000 feet across and it was constructed out of a single piece of transparent *tos*. The dome itself must have been fully 400 feet above the ground. We walked towards its edge, where at one point a powerful yellow ray was playing on the arena below. Arriving at the source of the ray, we peered down into the house, and we involuntarily caught our breaths. What a sight! There must have been at least 200,000 Martians below. And there was no noise, no talk, no sound of any kind! For the Martians do not talk aloud; all conversation is carried on by thought transference. It was uncanny to look at all these thousands of "speechless" Martians.

"The house was entirely circular, built in the style of an ancient Roman amphitheatre; in other words like a circus. There were twenty distinct tiers, one above the other, with comfortable seats abounding.

The arena seemed to be constructed entirely of transparent *tos* as far as I could ascertain from the great height at which we were stationed at the time. While we were still marveling, our host had stepped between us and had walked us directly into the yellow ray. Before we could find time to think, a peculiar feeling of lightness had permeated us and we were wafted down the yellow beam, as if we had been so many dust particles floating in a sun ray. Down, down we went at a fair rate of speed, like angels floating in space, 500 or 600 feet—I don't know

exactly how much—till we landed on a brilliantly illuminated platform. The second we touched it, the yellow ray was turned off and our original weight was restored to us. We then mounted a few steps and took seats in the luxuriously appointed "box" of the Ruler of the Planet Mars. The seats as well as the upholstery

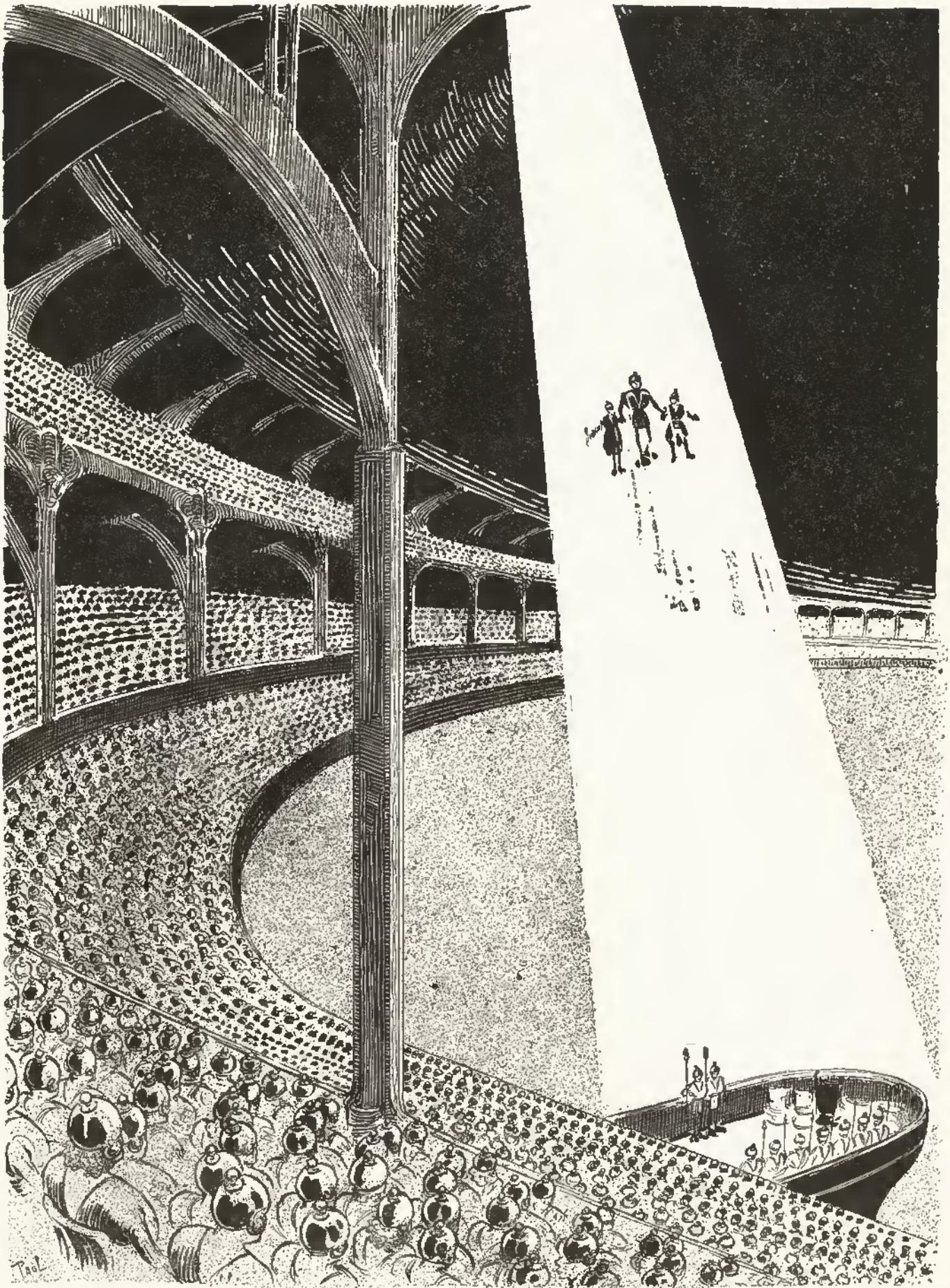
THE majority of our scientists today are in accord with Lowell's theory that the Martian canals really exist. No one doubts their existence any longer. That they are artificial and made by a superior intelligence, and that they carry water to keep a thirsting planet from perishing, seems pretty well established today.

But how such immense waterways, 3,000 miles long, and often over twenty-five miles wide would be constructed, has long been one of the greatest puzzles in modern science.

In this instalment, the author advances a new and fantastic theory on the subject. Will it seem so extravagant a hundred years from now?

In the concluding chapter, the author speculates on how the airless Moon gives us a graphic demonstration of what happens to a world when it grows old. The Moon doubtless had an atmosphere once, just as our own Earth today. The atmosphere has long since vanished into outer space. What will our descendants do ages from now, when their air supply dwindles down to nothing? Will they generate and manufacture their own air, as Baron Münchhausen tells us the Martians do?

* At the time this was written there existed no loud speakers—Author.



"Before we could find time to think, a peculiar feeling of lightness had permeated us; we were wafted down the yellow beam, as if we had been so many dust particles floating in a Sun ray."

were white and soft, silk-like transparent *tos*. The box itself was about forty feet above the arena, and was so placed that we could see nearly every one of the 200,000 Martians assembled in the House. No sooner had the Ruler sat down than every Martian saluted the chief, which they did by merely raising the left hand straight up, pointing skyward. The hands were kept in this position for a few seconds. The Ruler returned the salute in a like manner for about five seconds. The salutation over, the show began instantly.

"The house was plunged into darkness, when suddenly an immense, dazzlingly illuminated ball appeared over the center of the arena, about twenty feet above the ground, where it hung suspended in space. In a few seconds another, very much smaller brown ball appeared as if from nowhere. It was some fifty feet distant from the illuminated globe, and it was lighted upon its face by the latter. Another ball, slightly larger than the former, then appeared about twenty feet away from the second globe. Next, still another globe, a little larger than the preceding one, appeared, but this one had a tiny globe of its own accompanying it, but a foot or so distant from the parent one. Suddenly, we understood. *This was a mimic world.* The large illuminated ball represented the Sun. The first small ball was the planet Mercury, the second ball Venus, the third the Earth with its moon.

"In quick succession 'Mars,' with its two tiny moons; then the myriad of small asteroids appeared, followed by a much larger ball—Jupiter, which was larger than all the planets combined, not counting in its many moons. Next came Saturn, with its rings and its moons; then Uranus, and finally Neptune. No sooner had the last planet appeared than all of the planets began to rotate around their 'sun', a most magnificent spectacle. After revolving for a few minutes, several of the planets slowed down, and finally all stood still.

"Our host explained to us (by thought transference) that these positions of the planets were absolutely accurate for the present time of the year, and that every Martian show opens with the mimic world exhibition, so that all Martians are kept informed of the relative positions of the planets and their respective distances from each other.

"What interested us most, however, was the fact that this mimic world was exactly proportioned, and that the distance between the mimic planets and their sun was also in proportion. By means of anti-gravitational means below the arena, as well as beneath the *tos* dome, all exterior attractions and outside planetary gravitational effects were done away with, with the result that the globes hung suspended in space with nothing to make them fall down, exactly as our planetary system, which hangs freely suspended in space.

"Nor was the revolving of the mimic planets around their 'sun' accomplished by artificial means. It is true they were started revolving artificially, by invisible rays, directed from behind the scenes. But once started, they kept on their elliptical courses, exactly as the real planets do, in strict accordance with the motion of such bodies suspended in free space. After the mimic planets had reached the desired positions (which their real brothers occupy in space), they were stopped by means

of the same invisible rays which started them originally.

"The next act was a beautifully rendered concert by some fifty young male Martians. It was a 'vocal' concert, no instruments being used. Nor did they open their mouths! Yet they sang—by thought transference! This, of course, sounds violently impossible. Just the same, I assure you it was the best 'singing' I ever had the pleasure of 'hearing.'

"I am equally certain that our lack of experience and training caused us to miss most of the beauty of the concert, for our mental capacity of receiving all of the impulses is of necessity much lower than that of a Martian.

"We probably heard the concert in the same manner as an intelligent monkey hears a Beethoven Symphony. He hears it perfectly—as perfectly as a human being—but he cannot understand its full meaning, because his mind cannot grasp it. Exactly so with us. Our minds were filled with the beautiful music, and while we caught much of the rhythm, the full meaning was necessarily lost upon us.

"The next act was also mostly lost upon us. From what I could grasp from our host, it was a wonderful symphony of odors. It is well known to you that every smell or odor or scent causes a certain mind reflex or association; thus you are aware of the fact that certain perfumes or scents produce certain emotions upon our nerve centers. Certain scents will immediately impress a definite trend of thought upon you, all depending upon the intensity of your feelings. In the present day humans, this faculty of *correctly* associating thoughts with certain scents is still but little developed. In the Martian, however, it seems very highly developed; each scent, every modification of scent has a certain well-defined meaning.

"This is how the 'symphony of scents' was enacted. Perforated pipes were placed on top of the railing of all the tiers. This piping ran continuously through the entire house, while large supply mains led to a mixing and generating plant behind the scenes. The scents and perfumes were led into large mixing chambers, here to be blended scientifically by accomplished artists performing the 'symphony.' By means of pumps, the scents were driven into the perforated pipes, only a few feet away from the audience, which simultaneously became enveloped in clouds of invisible scents and perfumes. The 'clouds' came at times in puffs, at times they were sustained, sometimes they were long drawn-out, changing from one scent into another. We could detect a certain rhythm throughout, and from the ecstatic expressions on the Martians' faces we understood how deep their feelings were during the performance, which lasted well over half an hour.

"Upon us, of course, the full meaning was lost, for we did not understand it all, nevertheless our sensations were delightful in the extreme, and exceedingly pleasant. Just exactly what the feelings of the Martians were, and just what mental pictures or emotions the various scents produced upon their nerve centers, we have no means of knowing, but we did know that their systems responded powerfully to the performance.

"The next act was a dazzling acrobatic performance of several Martians, who went through marvelous evo-

lutions in free space with no visible means of supporting their bodies. It seems that they were kept floating by means of invisible rays, their bodies gyrating in a wonderful manner, darting hither and thither. Now they would enact a charming sort of aerial ballet; next they would join hands and form a living wheel to rotate at a dizzy speed all over the house. They would dance, writhe, glide and perform the most unexpected and impossible aerial stunts, to the delight of the Martians. Finally, their bodies seemed to become transparent and suddenly they vanished from view entirely, not to come back. Here we had a realistic demonstration produced by unseen rays of how a body may become invisible in the fashion of our children's fairy tales. Altogether it was a very delightful performance.

"The next act, I am sorry to say, I cannot explain at all. Although our host tried to visualize it to us, we failed entirely to understand. To this minute I don't know what it was all about, but the Martians seemed to enjoy it hugely. As far as we could make it out, the Martians have a certain sixth sense, which we lack entirely, and for that reason the act in question produced no effect upon us.

"In the center of the arena there were placed three strange contrivances, with dazzling, scintillating balls suspended from metallic chains. The house was then darkened and three strangely garbed Martians with transparent rods would touch the balls at certain points in a certain (to us) queer fashion. I had never before seen a Martian laugh, but something or other must have aroused their risibilities, for I never heard such another uproarious laughter in all my life. They were convulsed, they shouted and hee-heed in their peculiar high falsetto voices. It did one good. Even the otherwise stern, august Martian ruler shook with merriment. Our lacking sixth sense, however, prevented us from entirely enjoying the act. We neither felt nor saw anything in particular, aside from a somewhat faint tart taste at the tip of our tongue and an occasional very slight twitching of our face muscles. That was all.

"The following act was another 'musical' production, not in sounds, but in colors. 'Color-music' is, of course, known somewhat on earth already—the underlying idea being that certain colors correspond to certain fixed musical notes; thus it is claimed that C equals red, D is yellow, F-sharp blue, B-flat steel gray, and so forth. The Martians have long known this and have elaborated greatly on the original idea. They also found out early that certain notes are apt to produce certain 'tastes' on the tongue. Thus one note may produce a slight sweetish taste and another one a tart taste. As color-music is supposed to give the same effect as sound-music, both must act alike.

"The act in question resolved itself in 'music,' not to be heard, *but to be seen and tasted*. Paradoxical as this may seem, you would be surprised to know how well we, with our untrained faculties, understood and enjoyed this strange 'music.'

"The colors which produced the effect seemed not unduly strong, on the contrary they were soft and very pleasing. They seemed to originate from nowhere in particular, but they enveloped every one in the house.

The colors seemed to melt from one into another, with seldom a sharp transition. Sometimes we would see one color right through another, then again the various colors would seem to chase one another, but at no time would we see beams or shafts of colored lights. The colors simply seemed to be all around us, they even seemed to permeate us. While we were enveloped in them, we could readily 'taste' each one distinctly, the most delightful experience being when there was a ripple of colors. This would produce a corresponding 'taste ripple' on the tongue, the taste varying from fresh hazel nuts to tart apricots. It is odd to relate, but most of the 'tastes' seemed to be those of fruits, only once in a while there was a steely or metallic taste, which always was prevalent when the 'music' assumed sombre 'tones'. During this performance, by some hidden electrical means, our bodies were kept a-tingling and aglow in a most remarkably delightful manner, producing a very pleasing effect of well-being impossible to describe.

"The final act was a grand series of water plays. The arena floor was lowered and in so doing produced a gigantic tank which was filled to the top with water.

"It seems that as water is so exceedingly scarce on Mars, its inhabitants love nothing better than to gaze at the precious fluid. This is, of course, easily understood in a world which is slowly dying for lack of it.

"These water plays were almost entirely physical, few performers taking part. By cutting off all external gravitation the water became naturally devoid of weight. Thus, if you scooped up a pailful and turned it upside down, you could shake the water out, but it would not fall down, for there was no attraction below it. Instead, the water would slowly begin to shape itself into a sphere, due to the phenomenon called 'surface tension.' It is this property that shapes small drops of water into almost perfect spheres when dropped upon a piece of cloth or velvet.

"By means of the yellow emanation rays, of which I spoke already, the water could be pushed in any desired direction, up or down or sideways. By directing several rays in a certain manner, the water would be made to rise like a waterspout, but it kept its shape without dropping back to the tank. Thus wonderful water arches, rings, spirals, bridges, pyramids, etc., were created in rapid succession, to be followed by marvelous geometrical designs and all sorts of patterns. During the performance, colored lights constantly played upon the water figures.

"Towards the end, several clever Martians, propelled by unseen rays, built a delightful water palace about thirty feet up in the air. The palace itself was no mean structure, being about twenty feet or more in height. It was amazing how quickly these performers built the structure and how realistic it appeared, although being made of nothing but pure, though plastic water. When it was finished, a myriad of colored light shafts were played upon it and a huge *tos* rod began to emit the peculiar beautiful Martian strains of real sound-music. At that moment, every Martian stood up and gazed intently at the water palace, which still hung freely suspended in space. Suddenly, without warning, the anti-gravitational power below was switched off

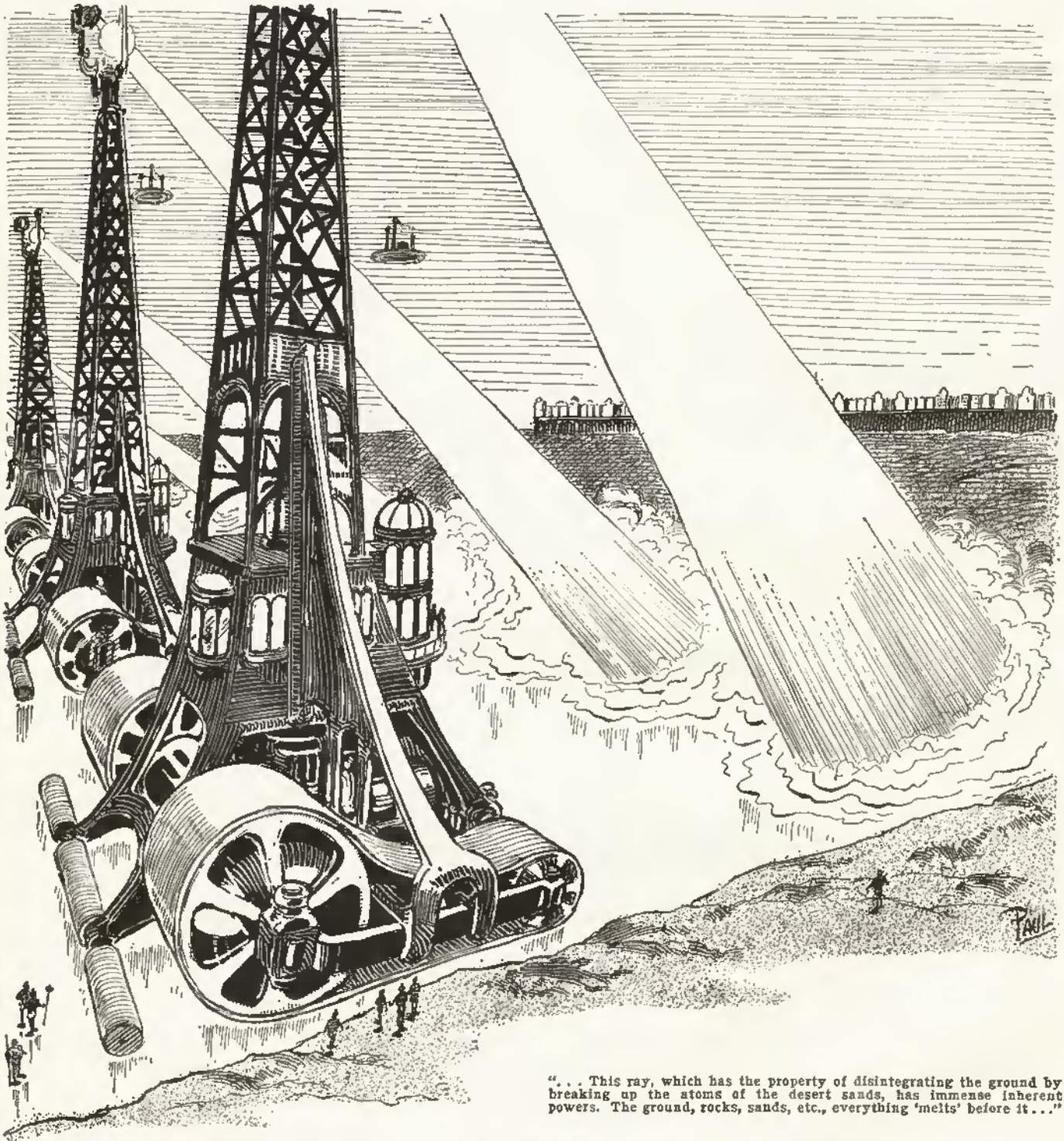
and the palace became a shapeless form in a fraction of a second. With a loud splash, the water—its weight now restored—dropped into the tank, sending a huge spray to all sides.

"The Martian 'show' was over. . . ."

It seems that the Baron's sending plant on the moon

must have been full to capacity. At any rate, I missed his usual goodbye. I am beginning to feel peeved that his daily reports are so short and always stop so abruptly.

Ah! here's a good idea. Guess I'll be "short" on the Editor once and stop abruptly.



"... This ray, which has the property of disintegrating the ground by breaking up the atoms of the desert sands, has immense inherent powers. The ground, rocks, sands, etc., everything 'melts' before it..."

12. How the Martian Canals Are Built

B EING the chief chronicler of a world-famous man is never an easy task. Famous men, as a rule, are most difficult of approach, as they have a mean trick of keeping aloof from the ordinary garden variety of humans. Not that they do not wish to have themselves chronicled in due and accepted man-

ner—on the contrary—they do. And they crave for publicity, more even than a stub-nosed society débütante, but they want the public to believe that they are far above such material things. They wish you to think that they are as modest as a spring violet, though down in their innermost innermostness, they would like

you to climb to the top of a skyscraper to proclaim their greatness. Of course, they can't do it themselves, but they like to have it done for them by some fool chronicler. This induces them to think that they are real modest, but I have found out long ago that modesty, like many another vice, is a business, a pretty little business at that, carefully studied and carefully plied to fool the public at large.

Now to chronicle the usual species of great man—see first paragraph, line one—is far from simple, even if you know the trick of chronicling. A simple recipe on the subject, therefore, might not be amiss. Proceed as follows:

Obtain a first-class introduction to the Great Man. Next mix a fair amount of tact with a little of the G. M.'s accomplishments and his work. Mix with a generous quantity of soft salve and carefully cover the G. M. with same. The thicker you lay it on, the better the result. Do not fail to tell him several hundred times that the public is starving for a message from him.

Once prepared in this manner, he will, as a rule, start to gush, hesitatingly at first. Apply more salve plentifully, rubbing it with the grain, *never* against it. As a rule, the G. M. will now talk freely. All that is necessary then is to pull out your notebook and take down the precipitate as quickly as he talks. Embellish with scraps of your own imagination and the chronicle-compound is ready to be sold to the highest bidding magazine Editor-Gazink-in-Chief.

Which brings us down to earth, or rather away from it. For, if your great man is Baron Münchhausen and if the said Baron has taken it into his head to make the planet Mars his abode, how can you chronicle him if he doesn't want to be chronicled, or rather can't?

What good is it that Baron Münchhausen has appointed me as his chief and uppermost chronicler, if the planet Mars persists in rushing on through space, getting further away from the earth every day? Of course, I can't blame the Baron in the least, for he probably did his best to get his radio messages down to me, but just consider for a moment what he is up against.

When I first began to take down my nightly reports from Münchhausen, the planet Mars was near opposition to the earth. It was then about sixty-five million miles away from us. Gradually the distance was cut down to sixty million miles and his radio messages easily bridged this distance, enormous as it was. As will be recalled, the radio-telephone messages were recorded on the Baron's *Radiotomatic* plant, on the moon, erected there by him. This was done because the moon has practically no atmosphere to interfere with the weak impulses, after they traveled across the sixty odd million intervening miles. Recorded on the *Radiotomatic* plant, the messages were in turn amplified several thousand times and thence relayed across the comparatively short distance of 238,000 miles separating the moon from the earth.

Thus every night I took down the Baron's messages and everything ran along like clock-work for many days. Münchhausen, of course, knew exactly whether the messages reached me or not, as he could readily

check them. The *Radiotomatic* plant on the moon, as will be remembered, recorded the message, but did not send out the amplified message itself till several hours later, being regulated by clock-work to do this. The impulses never were sent out till 11 p. m., Eastern terrestrial time. Thus the Baron, who, of course, had a very fine radio plant of his own on Mars, could hear his own message, as well as I could. For, if the radio waves were powerful enough to travel from Mars to the moon, naturally they could travel from the moon to Mars, because the sending plant on the moon was even more powerful than the first one which Münchhausen had on Mars. It is just like an echo. Thus the Baron heard his own message every day, just as well as I did.

But there came a time when the planet Mars, which travels in a vastly wider orbit than our earth, became outdistanced by the latter. Every day the two planets became separated further and further till finally Baron Münchhausen's radio messages could no longer bridge the gap. It must be remembered here that the Baron made his trip in the *Interstellar* at the time of opposition of the two planets, i. e., when the two were but sixty million miles separated from each other. But when the last message reached me, Mars, and the earth were already over seventy million miles apart—almost twice as far distant from each other as when I took down the first message.

For days and weeks I waited nightly for the usual 11 p. m. message but not a sound came from my Radio Plant. I installed hyper-sensitive detectors, which became so sensitive that I could hear the waves sent out by a Ford Magneto at Melbourne, Australia! But all to no avail.

Of course, I knew that sooner or later the Baron would erect a higher powered sending machine on Mars, but it took him some months before he finished it.

In the meantime I was a chronicler without having anything to chronicle and everyone poked fun at me, as was usual when something went wrong with my plant.

Also, as was their habit, the Yankton papers began to lambaste me in their usual style. The editors, it seems, had made it a point, before taking on reporters, to first try them out on me, and thus many rare and beautiful literary flowers bloomed in our local press. This is a fair sample taken from the Yankton *Trench Raider*:

PSEUDO SCIENTIST LOSES ETHERICAL WAVE-CONNECTION

Claims Earth and Mars Estranged. Are Suing
for Separation!

Wuxtra! Wuxtra!! Lost! Wireless Waves be-
tween Earth and Mars.

Anyone finding stray wireless waves from Mars should promptly return same to 197 Mifflins Manor Road. Fabulous Reward. No answers questioned!

Perhaps, gentle readers, you won't believe it, but our self-appointed chronicler of the wondrous imagination, the Honorable I. M. Alier, the illus-

trious citizen of this Burg, lost his connection with that dear old friend of his, the venerable Baron von Münchenstiner. Our star reporter, who called on Honorable I. M. Alier yesterday to ascertain why the dear Baron has of late been so extraordinarily quiet, was informed that the earth and Mars were on the "outs" again. You wouldn't suspect it of such an old married couple, but I. M. Alier informs us that every time the fossilized pair get together—opposition he called it—right away, instant, they begin to oppose each other. She goes this way, he goes that. Shocking! And they won't "make up" for two years to come. Isn't it scandalous?

At any rate, I. M. Alier says Münchenheimer is now seventy million miles away from us, whereas a few months ago he was only fifty million miles away. And he furthermore proclaims to all of humanity, and others, that Münchenhauser's wireless waves are no longer pow'ful enough to bridge the extra distance. Such are the fickle wavelets. Won't stretch a point; just like the instalment house broker when the 269th payment is overdue.

Our reporter suggested to Honorable I. M. Alier that perhaps the waves could be pieced together endwise and thus make them reach, but he received the suggestion coldly and without enthusiasm. The Honorable I. M. Alier seems to mourn greatly over the lost wavelets and the interrupted connection. But what would you do?

Cheer up, Honorable I. M. Alier. What's thirty or forty million miles and a few billion etheric waves between friends? Just think, the Baron might be on the Planet Neptune. And that old boy is 2,654,000,000 miles away! Just think of it!

Well, here's hoping that the Baron will soon find out a new brand of waves, to shoot at us. And let's hope that they are of the cold variety. Hot (air) waves have a short periodicity!

BUT everything comes to an end sooner or later. So one evening after I had resigned myself to the idea that I would not hear from Münchenhausen again till the next opposition, two years hence, I was suddenly electrified by an unfamiliar shrill, high-pitched note, coming through my head receivers. The clock had just begun striking the eleventh hour, and I immediately knew that it must be the Baron.

The whistling note continued for almost ten seconds, running higher and higher till it finally went above audibility. Almost instantly the familiar sepulchral but sympathetic voice of Baron Münchenhausen broke in my ears and I was overjoyed to hear him talk once more!

"Well, at last! How are you my dear Alier? Exhausted from waiting for my message that never came? I can readily sympathize with you, my dear boy, but you can imagine that it could not be helped. Bridging seventy million miles by radio waves is no cinch, as you Americans are fond of saying. You will believe me when I tell you that my new Wireless Plant is a pretty little affair. It takes but a trifle of 300,000 kilowatts to operate it. A mere 400,000 horsepower! But

you can rest assured that I will maintain communication with you even when Mars is in conjunction, that is, when the earth and Mars will be at their furthest separation, which is 240 million miles. That is the reason of the enormous energy. Of course, I am not using the entire 300,000 kilowatts as yet, but I will need the full energy when the two planets will be at their furthest separation. Professor Flitternix figured it all out, and he thinks too that we will be able to maintain communication when the sun comes between Mars and the earth. It is a task to send waves almost around and past the sun, which ionizes the ether for millions of miles about it, but we have fond hopes of maintaining an uninterrupted interplanetary radio service in spite of the handicap.

"However, I am certain that my new radio plant, with its many unique innovations, does not interest you half as much as our doings on Mars. And, as the recorder on the moon does not hold long and extended messages, I must of necessity be short.

"In my last message I spoke about Martian amusements and our visit to a Martian 'showhouse.' I will now try to explain to you how these wonderful people build their stupendous canals. I have already told you how the waters are moved in these canals on Mars, due to the indirect agency of the sun. I am happy to be able to tell you from personal experience how these ponderous engineering feats are undertaken.

"You know, of course, how incredulous your scientists were when the Martian waterways theory was first expounded by Professor Percival Lowell. Lowell, of course, was right when he stated that the Martian Canals were immense artificial waterways, crisscrossing the face of the thirsting planet. As there is practically no rain on Mars, Lowell reasoned correctly that the canals brought the waters from the melting Polar snow-caps, to the temperate as well as to the tropical zones, thus furnishing the planet with its only possible water supply. During one season the waters would move from north to south, during the next season from south to north. Your mundane scientists had no fault to find with this theory, but what they could not reconcile with their feeble intelligence was the tremendous dimensions of these artificial waterways.

"How could any living creatures, no matter how strong physically, build canals 2,000 to 3,500 miles long and from six to twenty miles wide? And not only one such gigantic canal, but hundreds of them! Such engineering feats surpassed all bounds of human understanding. It was simply impossible. Some of your scientists, I well remember, even set up intricate calculations demonstrating that it would take thousands of years to construct such brobdingnagian canals, if dug by an army of shovelers! Another demonstrated to his entire satisfaction, that to dig a water channel 3,000 miles long and twenty miles wide, using 5,000 of the monster Panama Canal pattern steam-shovelers, would require at least 500 years of uninterrupted effort!

"I must admit, that when I first read those figures on earth, I was much impressed and began myself to doubt Lowell's theory. But you see, the great trouble with us humans is that we always compare everything to our existing means, never thinking what superior in-

telligence might accomplish with means unknown to us. Everything is termed impossible because it is not understood at once.

"Necessity is the mother of invention on Mars as well as on earth. If a great and ancient people of a highly advanced civilization see death staring them in the face because of the rapidly dwindling water supply, you may rest assured that such a people will employ its best talent towards warding off such disaster against insurmountable difficulties, even contending with inexorable nature.

"I have since satisfied myself that the Martians are not going to die of thirst for centuries to come. I have also noted with satisfaction how puny your most important engineering feats are, such as the Panama Canal, when compared to a Martian waterway. When I think of your little steam-shovels which I called monsters while on earth, I am convulsed with laughter. They seem so ridiculous, so childlike after what I saw yesterday; a child's tin train, standing in front of one of your 'Twentieth Century' fliers, could not be more foolish by comparison.

"You see, the trouble with your scientists and others was, they never considered that great canals could be dug quite nicely without shovels and steam engines. They never thought of it, because they had never heard of it, hence it was, of course, impossible. You have probably seen an oxy-hydrogen flame at work, cutting through a solid bar of steel as if it had been butter. Well, this is what my first impression was when I saw a new canal under construction yesterday.

"The Planet Governor, our august host, after we had managed to make clear our wish, conducted us in one of his gravitational flyers towards the site of the new canal. It was explained to us that this new waterway was to be only a 'small' lateral affair, 'but' 600 miles long and four miles wide, connecting two of the larger canals together. This particular canal was to open up new fertile territory through an existing part of a desert, by supplying the lands along its banks with water.

"Floating at a height of about 3,000 feet, we observed miles and miles of the new, already-completed, but as yet waterless, canal stretching to the horizon. The canal was perfectly straight, as if laid out with rule and pencil.

"In front and below us we saw the strange agency that "dug" the canal with a rapidity that was as disconcerting as it was uncanny. Imagine immense metal latticed towers over one thousand feet high rolling forward on wide colossal wheels. And from the top of these towers you observe bursting forth a broad purple electro-chemical emanation ray playing on the ground below in front of it. This ray, which has the property of disintegrating the ground by breaking up atoms of the desert sands, has immense inherent powers. The ground, rocks, sands, etc., everything, 'melt' before it, as snow goes up in steam before an oxyhydrogen flame.

"Of course, this ray is not hot in itself; it simply reduces all objects to their very atoms. It is a sort of atomic volatilization effect—the rocks and sand simply vanish into thin air. The wheeled towers which ad-

vance at the rate of about fifteen miles an hour, never stop. Their rays cut through the soil steadily and with an astonishing precision. But the rays do not penetrate deeply, their adjustment being such that the depth of the finished canal measures but ten feet. No waterways on Mars are more than twenty-five feet deep, for they are used solely for the transportation of water; no ships or vessels of any kind ever appear on a canal.

"Of course, you will ask immediately, 'What becomes of the 'excavated' material? Though 'volatilized' atomically, it still must needs exist, for in Nature nothing is ever lost.'

"The answer is simple. Take water for example. If you decompose a gallon of it by electrolysis, it vanishes completely. Naturally it has not become lost; it has merely been transformed into its constituent elements, i.e., two gases—oxygen and hydrogen.

"While you on earth know how to split up the water in its two constituent gases by means of electricity, you have not as yet succeeded in disintegrating water by breaking up its atoms. Decomposing water, you see, is but a crude mechanical process. It is as if you had cut an ear of corn into two portions by means of a knife; in this operation you have not cut in two all the hundreds of kernels (atoms). This, of course, is but a homely analogy, but it serves quite well to illustrate the idea.

"In breaking it up into atoms, matter is transformed into energy, consequently nothing is lost. On Mars the secret of this accomplishment is the purple electro-chemical emanation ray, an invention several thousand years old on this planet.

"Upon touching the ground or sands, the rays instantly break up the atoms of the minerals, which explode with a terrific hissing noise, like escaping steam. The heat liberated by this process is so enormous that at the point of the ray's deepest penetration, the sand or ground is fused to a lava-like substance impervious to water which the Martians termed *sgos*. That this is so is indeed fortunate. For, if the Martians were merely employing a simple excavating process, they would have to water-proof the entire canal, to prevent the waters from seeping into the sands. The reason for this is very obvious.

"Water on Mars is very scarce. None must ever be lost by seepage into subterranean soils, to vanish forever as far as the Martians are concerned. This has already happened on the moon, where no water is to be found along its surface; even in the interior, most of it is ice.

"By guiding the waters in waterproof canals, practically no loss is occasioned by seepage. Even where the waters are finally conducted to fertile grounds, there to grow grain, vegetables, trees, etc., they are not allowed to seep into the sub-soil. The method of doing this is as simple as it is efficient. By means of the purple disintegrating rays, the site to be used later for agricultural purposes is treated exactly as is the canal proper. This site, connected to the parent canal by narrow feeders, is as deep as the former and is, of course, waterproof. It is then filled in with fertile soil and is now ready to grow plants, trees, vegetables, etc. Thus no water is ever lost.

"I must also add that when the emanation ray has transformed the bed of the new canal into its lava-like condition, this crust becomes conductive to the Martian *Ion* currents; the rest is an insulator.

"I have explained to you before, that the waters in the Martian Canals are made weightless by nullifying the gravitational effect of the planet, by conducting an *Ion* current through the bed of the canal.

"The waters, now being weightless, are easily pushed along by the rays coming from the stationary towers which line the canal, as reported some months ago.

"While this explains much of the mystery, you probably are still puzzled, as are all our scientists, as to why the Martian Canals are so tremendously wide. You know that several of the larger canals measuring 3,000 miles in length are from ten to twenty miles wide. Why such an extraordinary width? Would it not be better to make the canals very deep and but a few hundred feet wide, thereby saving an immense area of land, which is none too plentiful on Mars?

"Again the answer is simplicity itself, although none of your scientists ever guessed it. Our host explained it to us in a few seconds. The answer to the riddle is: Evaporation.

"For on Mars there are no oceans, not even lakes if you except the small circular ponds at the junction of several canals, or wherever canals cross each other.

"Now, if the canals were not so wide the water would not evaporate quickly enough into the air, here to form water vapor, the latter to be deposited finally at the two poles in form of snow and ice. The great width is absolutely necessary in order to obtain the required evaporating surface.

"So nicely has all this been adjusted that by the time the canals reach their furthest north or south extensions, they carry practically no water in their shallow beds. It has been used up mainly for irrigation purposes and the balance has evaporated, to be re-used next season and so on.

"Thus have these intelligent people wrestled with a tremendously vital problem and by their superior intelligence, their water supply seems secure for thousands of years to come.

"But my chronometer tells me that the recording wire of the Radiomatic Plant on the moon is almost full to capacity. I must break off till tomorrow. Good bye, my boy. Professor Flitternix joins me in my salute. *Au revoir* and once more good night. . . ."

13. Martian Atmosphere Plant

GAZING through my faithful three-inch telescope upon the dazzling plains and extinct volcano ranges of the Moon, often set me wondering in the past. Everything appears dead, everything spells desolation on a tremendous scale. No atmosphere seems to exist, no green or brown patches greet our eyes from which we might infer that the moon harbored vegetation. Nothing but brilliant, white uniform wastes. For there cannot be vegetation, as we understand the term, where there is no atmosphere to support the plant life.

But was it always thus? Geological science here spells an emphatic NO. Eons upon eons ago the moon must have had an atmosphere as has our earth. Gradually, due to the very small gravitational attraction of the moon, its air must have slowly left it to vanish into space, never to return. A slow process, to be sure, but steady nevertheless.*

What dramas must have been enacted on our now dead satellite before the last creature died, gasping its last breath! What tragedies there must have been enacted before the last intelligent creature—if there were such—finally bowed to relentless nature. Did these creatures put up a fight against certain extinction before they accepted the inevitable, or did they let nature have her own way?

These were questions I frequently asked myself when gazing upon our dead companion world.

I was more than pleased for this reason, that the moon, not being willing to tell me her riddle, another dying world—Mars—should volunteer certain information which might shed new light upon the question.

* * *

I had scarcely hooked up my latest Radium Amplifier

* It is assumed that the exceedingly attenuated "atmosphere" which Münchhausen reported during his visit to the moon, is of comparatively recent origin; it is probably of a volcanic nature.

to my Ultra-sensitive Radio receiver, and balanced the vibrant Photostator, when dear old Münchhausen's voice filled my laboratory through the loud-talking telephone relay. His voice came in clear as a bell and even I had difficulty in realizing that this voice did not originate a few miles away from my aerial, but some 80,000,000 miles distant, hurled through an unthinkably vast ether-ocean, a distance so great that the human mind fails to comprehend it.

"Greetings, my dear boy," Münchhausen's sonorous and sympathetic voice was sounding, "am rather lonesome this afternoon and anxious for a one-sided chat. If only I could hear that dear voice of yours, as I did when I was still on *Luna!* You see I actually have not heard a human voice for days. Professor Flitternix and I are becoming so *Martianized* that it is no longer good form to talk aloud when it is easier to converse by thought transmission. We are so proficient in the (to us) new art, that it is now a rare occasion when we utter a word. This is more an ancient habit than a necessity, because we can converse ever so much faster by thought transference than by spoken words. But our barbaric custom still clings to us, and for that reason it does me real good whenever I have occasion to talk to you! If only you had a sufficiently powerful sender to talk back to me. Ah! would that not be delightful? But on second thought, who knows that it is not better as it is? You might ask me too many pertinent questions. And besides, we have not been on Mars sufficiently long to know much. We are still very, VERY young puppies, blinking uncomprehendingly about us in a wonderful and ancient world, with far too few senses to appreciate all that continuously goes on about us.

"What we see and hear I am convinced is insignificant as compared to what we cannot see and cannot

hear. This was thoroughly demonstrated to us today.

"Flitternix and myself, accompanied by two of the Planet Governor's attendants, were walking about the elevated streets of the Capital City, taking in the sights. We had not gone far when we came to an open 'square' which, however, was not square but round. All about it were towering structures, but there did not appear to be any living being in the square itself. We were to ascertain the reason at once. The floor or ground of the square was steel gray and polished. It was perfectly round and measured perhaps 600 feet across. In the center was what appeared to be a transparent *tos* structure, having the form of a sharp cone. As we walked up to the circular square, one of our companions motioned us to stand still. The other Martian then walked on rapidly and as we watched him, the most remarkable phenomenon took place.

"Ten feet from us he suddenly assumed a hazy appearance and in a few seconds had become almost transparent. We could still see the outline of his body for a few seconds, and then he vanished entirely and completely before our very eyes. He had dissolved into nothing! The square appeared empty and deserted and we could look right across it. If anything ever appeared deserted, that square certainly did. After a few minutes, our companion suddenly appeared again in exactly the same fashion as he disappeared. We first saw the hazy outline of his body, then he became transparent and finally he assumed his former shape. Seeing our utter amazement, our two companions tried to convey to us that what we thought an empty circular spot was in reality a public health establishment. Moreover, our attendant's daily duty was to start its mechanism at a certain hour after sunrise, after which the establishment was open for all during the entire day until sunset. Indeed, while we were still looking on, myriads of Martians appeared from everywhere, walking briskly into the circular square, all of them vanishing before our eyesight as soon as they had walked in a few paces.

"In they walked in never ending streams, to be swallowed up in the blue air, only to reappear a few minutes later. Still the square looked empty and deserted, despite the fact that thousands of Martians were actually walking across it—a phenomenon as uncanny as it was astounding. Those that emerged looked flushed and invigorated, for seemingly whatever was happening to them must have had a decidedly invigorating effect upon their systems.

"Upon a gesture from our two attendants, we in turn marched in. The experience was indescribable. No sooner had we set foot on the bright steel-like metal surface, than we felt a curious but very powerful vibration, which increased as we walked towards the *tos* cone in the center of the square. We seemed to tingle and 'itch' from head to foot and our heads 'swam.' I was watching Flitternix closely. Slowly his form grew less distinct, then hazy—now he was almost transparent and I could just make out the outline of one of our companions, right through Flitternix's body. In another second he had vanished completely! I talked to him, then shouted. Not a sound left my lips. Still my lips were there, I knew that because I licked them. I looked down where I knew my feet to be,

then I waved my arms in front of my face. Nothing whatever could be seen. My entire body had become astral. I knew I had not dissolved, for I still had feet and could think, although but very vaguely. I then tried to converse with Flitternix by thought transference, but the experiment proved to be a failure. Whatever influence surrounded us no doubt deprived us of sending thought-waves across the space separating our invisible bodies.

"Shortly we came abreast the *tos* cone and as we approached it, tremendously powerful waves of unknown properties engulfed us and vibrated every atom in our bodies, shaking us from head to foot. Our bodies became insufferably hot from the titanic energy set loose upon us and when we finally emerged at the other side of the square, having become ourselves once more, we were almost exhausted from our new experience. This effect, however, wore off in less than one minute and we could not help noticing that we felt wonderfully invigorated, a feeling of indescribable well being and strength permeating our bodies which had been tired and lax before.

"**N**OW for the explanation. As soon as we set foot on the metallic flooring, our bodies were vibrated at a tremendous rate of speed, the wave motion being much faster than the frequency of light waves. This explains why our bodies became transparent to our eyes, which become blind as soon as the wave motion goes beyond that of light.

"A similar analogy is had with our hearing. Thus it is well known that the human ear cannot hear any sounds once sound waves go beyond 38,000 vibrations a second. Of course, there is still sound, but the mechanism in our ears is such that we no longer hear. In other words, we are 'deaf' for all sounds above 38,000 vibrations per second.

"Exactly the same holds true in optics. Take for instance red light rays; these vibrate with a frequency of 395 billions per second. The frequency of green rays is 569 billions per second, violet rays 764 billions per second and so on. Ultra-violet rays, which follow the violet rays closely, already are invisible as is well known. Our eyes can no longer perceive their presence, although a photographic plate—more sensitive to these rays than the eye—can 'see' ultra-violet rays as readily as our eyes see red or green light.

"Of course, the process of making our bodies invisible, or rather transparent, was not vibration alone. Certain *tos* current effluvia were let loose upon our bodies simultaneously and this effluvia, combined with the *tos* current vibratory-waves, produced the result.

"Making the Martian bodies transparent is not a spectacular trick, but it is rather the direct result of what happens when the bodies are treated in a certain necessary manner.

"On Mars, where everything is carefully regulated for the benefit of the entire populace, it had been ascertained thousands of years ago that the greatest enemies of all living creatures were the invisible germs and microbes infesting the bodies. In the early days of Mars, germ diseases were fought the same as you fight them on Earth today; that is, principally by cer-

tain serums injected into the veins. While such serums no doubt often save lives, they also frequently leave after-effects not wholly desirable. Of course, in the absence of anything better, serums will do, but they have been discontinued here on Mars ages ago.

"The great and fundamental Martian idea is to *prevent* all germ diseases by absolutely killing all germs in the body at a tremendously high frequency; and furthermore by treating it with certain *tos*-currents, as already explained above, all germ life is annihilated within twenty seconds. Even powerful germs, such as the Martian equivalent for anthrax, are killed in less than fifteen seconds. Hence no Martian ever dies of any possible germ disease, for he is compelled to have his body treated once every day, as long as he lives. Should he be unable to be treated publicly, the Martian authorities will then send a flyer with the necessary apparatus to his abode and treat him there once a day. Animals are of course treated in a similar manner, as are all public places which Martians frequent. In fact anything that is handled by more than one person, such as tools, machines, conveyances, etc., is subjected to the germ killing treatment; the Martians never take chances of allowing diseases to be transmitted. It is an admirable custom and one well worth imitating on earth.

"When our inspection of the Martian public health 'bath' terminated, one of our two companions sharply looked at the top of one of the tall structures, on which were stationed a number of flyers. He closed his eyes for a second and almost immediately one of the flyers had swooped down alongside of us. Our companion had 'hailed' the flyer by *thought transference*, the same as you whistle for a taxi on earth.

"This flyer, similar in nature to the one we had used before in company with the Planet Governor, but much smaller, rose at once like a rocket, the minute we had boarded it. It made off in a southwesterly direction at a tremendous speed, and as we flew along, Flitternix and I suddenly became aware of a curious change in the air we were breathing.

"I have already mentioned the fact to you that the Martian air is rich in *ozone*, and although much thinner than the terrestrial air, it is far easier to inhale. Similarly, I told you some time ago the Martian atmosphere reminds one of the air you breathe in a pine forest on earth.

"As we progressed in our flight, the air seemed to become much denser and stronger, and upon signaling this to one of our companions, he silently pointed to an immense conglomeration of structures which we were approaching rapidly.

"Both of our companions during the next few minutes tried to explain the matter to us, and I think that by the time we finally landed at the immense plant we understood in a fair manner what this latest wonder consisted of.

"To explain: On earth, the atmosphere consists roughly of 20 parts oxygen and 79 parts nitrogen. Mixed with those gases are certain others such as carbonic acid gas, helium, argon, krypton and xenon. Another important part of the terrestrial atmosphere is water vapor, which varies from as much as 5 per cent to nothing, depending upon the temperature and

locality. Also, on earth, all animal life gives up poisonous carbonic acid gas and takes up the oxygen from the air.

Furthermore, the total available atmosphere is slowly becoming smaller and smaller through the ages, by absorption into the earth as well as by loss into space. Consequently, if the atmosphere were not automatically purified all of the time of the poisonous carbonic acid gas, no animal life could be supported on earth in an appreciable time. Luckily for you, however, living plants absorb the carbonic acid gas and give up the oxygen to the atmosphere; furthermore, it has been calculated that any excess of ammonia and carbonic acid gas in the terrestrial atmosphere would be completely absorbed by the oceans, even if there were no plants. Thus, at least for the present, you need not be worried greatly lest one nice morning the entire terrestrial population will find itself asphyxiated due to lack of oxygen. On Mars, however, conditions are vastly different. To begin with, Mars is a much smaller body than the earth. Consequently, its gravitational attraction is but a fraction of that of the earth. For that reason, the Martian atmosphere is not held down to the planet as securely as is the case on earth. Given relatively the same amount of air on Mars as on earth, it is easy to prove that Mars will lose an equal amount of atmosphere into space ten times more quickly than does the earth.

"This loss may not be more than 100 cubic feet a day (though it is probably a great deal more), but in the course of several million years—which is but a short time in the life of a planet—the atmosphere will be seriously reduced.

"Mars, being a much older planet than the earth, it follows that its supply of air must be near the vanishing point, which in fact it is. Moreover, there are no oceans on Mars today and no great forests, nor abundant plant life to purify the air from carbonic acid gas.

"Just the same, we are not complaining of a lack of air just yet, and as far as I can see, the Martians will sooner die from lack of water than from lack of air. A race that is intelligent enough to tap the planet's poles for its water supply, and to build waterways which carry this water from one side of the globe to the other, must be sufficiently intelligent to wrestle with Nature for its air supply.

"And this the Martians actually accomplish. Not only do they manufacture their own atmosphere, but they keep it clean besides, ridding it of all poisonous gases from day to day.

"Scattered over the planet's surface and spaced apart at equal distances, the Martians have erected sixty atmospheric plants, which generate the oxygen and nitrogen and a gas called *toslon*. This latter, a gas similar to ozone, gives the Martian air its peculiar invigorating pine-needle smell.

"The generation of the oxygen and nitrogen is almost entirely *tos*-chemical. On Mars, however, the *tos*-currents act entirely differently from your electric currents, the Martian currents being inter-atomic, and for that reason infinitely more economical in their action, besides being tremendously more powerful.

"Our flyer had now come to within several hundred

yards of one of these wonderful air plants, and circling around it, we could see how tremendous its size and how miraculous the minds that built it.

"For miles and miles we saw huge metallic spheres, each some 600 feet in diameter. These spheres were supported by monstrous towers, while the spheres themselves rotated around their axes rapidly. The axis, moreover, was hollow at each end, and its opening discharged into high flaring funnel-like contrivances.

"Every two and one-half hours the spheres stopped revolving and through a stationary chute, the necessary chemicals would be shot into the interior. Immediately the huge globe would start spinning anew while powerful *tos* rays played upon each side of the sphere. These rays, by direct contact through the metallic body of the sphere, produced the oxygen or the nitrogen, it being understood that those spheres generating oxygen were charged with different chemicals from the ones generating nitrogen.

"The two gases, by the centrifugal force of the rotating spheres are then shot out through the funnels into the surrounding atmosphere and intermingle with it. The surprising part was that the plant, huge as it was, was almost noiseless. The materials in the spheres were of course liquid, and the propelling mechanism was of the usual Martian atomic design and for that reason noiseless.

"Another thing at which we marveled was the small number of attendants in charge of the plant. Everything seemed to work entirely automatically and with an astonishing precision. The entire colossal plant, as was explained to us later, was in charge of only sixty Martians. And these attendants did not walk about, but were sent along on aerial wires, from one sphere to another.

"Even the chemicals used were mined and mixed almost entirely automatically, but of this I will speak at another time. After mixing to a fluid state, the products were conveyed automatically to huge reservoirs from which large distributing mains conveyed them to the final destination—the rotating spheres.

"These wonderful plants work uninterruptedly day and night, each one of them supplying the Martian atmosphere with millions of cubic yards of air every day.

"On our return to the 'city' we made a detour and visited one of the numerous air-purifying plants.

"From what I understand, there are several hundred of these plants in existence, all of them scattered equidistantly over the planet.

"These plants are as simple as they are unique. Each plant has several million yards of a certain metallic wire cloth suspended several feet above the surface of the ground. This wire netting is about 2,000 feet high and forms a huge wire cube, the sides of which are about 2,000 feet long. The netting is held in place by towers spaced equal distances apart and the top and bottom of the wire-netting cube are closed. In other words, we have a metallic wire-cloth cube 2,000 feet long by 2,000 feet high by 2,000 feet wide.

"The netting is charged with a *tos* current to such

a high tension that the entire netting glows with a purple light, which is especially startling at night.

"As the air moves on Mars, as it does on most planets that have an atmosphere, due to the heat of the sun, the air will flow through the wire netting also. Now it is the function of the *tos* currents in the netting to destroy the carbonic acid gas and the latter is precipitated in a chemical compound when it falls down in receptacles underneath the wire bottom. It is collected here and is used over again for special agricultural requirements.

"These atmospheric cleaning plants are erected in sufficient numbers over the face of the planet in such an ingenious manner that all of the air must flow sooner or later through one of the wire cubes to be purified.

"Thus does Martian intelligence safeguard the planet's air supply. How long will it be with your coal burning machinery till the earth's atmosphere will need cleaning plants?"

For several more minutes the record ran on, but the voice grew so indistinct and so weak, that it was impossible for me to hear the balance of Baron Münchhausen's message. All I heard distinctly was the final low click, when the recording mechanism on the moon had switched itself off.

I suddenly began to realize that Mars was rapidly going further and further from the Earth. That evening, Mars had been some 80 million miles distant. This distance would now rapidly increase, and unless the Baron realized this and installed a more powerful transmitter, it will be impossible for me to hear his messages hereafter.

* * *

For several nights now, I have listened to Münchhausen's messages, but I have not been able to understand any of them. The recording apparatus on the moon was working in its usual manner, because I got the starting click sharply at 11 o'clock every night, and I got the sign off **click** as well. But in between, the voice of Münchhausen was so low, that it sounded much like static and it was impossible to make out a word except now and then, and as time went by, it got worse.

Every day, Mars retreats further into the heavens, until finally, it will be at its maximum distance from the earth, nearly 240,000,000 miles. Moreover, Mars will be directly behind the sun, and it would seem impossible that even a Martian radio transmitter could shoot radio signals around the sun at this tremendous distance and have them register on the recording apparatus on the moon.

I am, of course, desolate and heartbroken, but what can I do? Every night I strain my ears to the utmost, but I hear nothing. I know the world is waiting for further messages, and for more about the high culture of Mars, but it seems that for some time to come I will not be able to get in touch with the glorious old Baron.

Whenever I hear from him again, you will find me ready to give the news to the world.

JUST AROUND *the* CORNER

By Raymond Knight

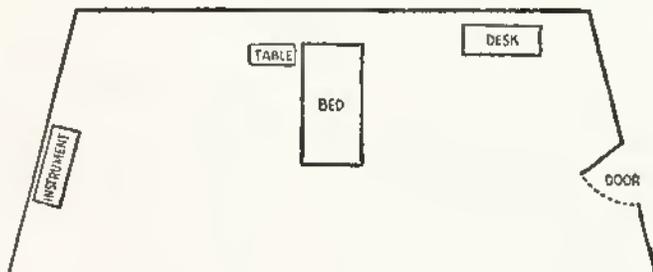
The Characters

THE PROFESSOR
HIS ASSISTANT

THE DOCTOR
THE STUDENT

The curtain rises on the bedroom of a sick man. The bed is center stage. It is slightly raised at the back so that we can see its occupant plainly. There is a door in the left wall and a desk at the left of the bed against the rear wall. At the right of the bed is a small table with a glass of water and two or three books. Against the right wall is a queer, cabinet-like instrument with wires and bits of mechanism and polished pieces of metal visible here and there. Surmounting it is a horn similar to a loud speaker, which is a part of the instrument. The instrument itself stands on a small four-legged table.

The room is severely furnished and decorated, and the only notes of color are provided by two rich oriental hangings on the rear wall at either side of the bed and an orchid on the table. Two or three chairs complete the furnishings.



The owner of the room lies in the bed, clad in night clothes and beneath the covers. He is a tall, spare man of 55. Above his waxen, emaciated cheeks are dark, intense eyes. An iron-grey beard and hair of the same color almost completely frame his features. He is holding his left wrist with his right hand and is eagerly scanning his wrist watch.

A young man is at the right making some sort of an adjustment on the unusual instrument. He is carefully but not distinctively dressed and wears a turn-down collar with a four-in-hand necktie. He has an unemotional face, topped by light yellow hair, and his general impression is a pale watery blue, like the color of his eyes.

The man in bed is the first to speak:

THE PROFESSOR (after a moment's silent stare at the watch): Kraussner—I believe—at last—it's coming! (The young man turns.)

THE ASSISTANT: You mean, Professor—

THE PROFESSOR (eagerly): I mean that I believe this time I really am dying. After so many false alarms—I hope it's true this time.

THE ASSISTANT: How do you know?

THE PROFESSOR: Fool! I've been taking my pulse. I can feel that I'm weaker—it's getting in—getting in! Is the instrument ready?

THE ASSISTANT: Yes, sir. I was just making sure.

THE PROFESSOR: Then leave it alone. Get the envelope.

THE ASSISTANT: Yes, sir.

(He hurries to the desk and takes out a large sealed envelope which he brings to the sick man, who raises himself slightly to examine it, then drops back as if exhausted.)

THE PROFESSOR: Call the Doctor—wait a minute—Has Meyer been around here this morning?

THE ASSISTANT: I saw him outside when I came back from breakfast.

THE PROFESSOR: Little fool! If he interferes this time—I should have let him go sooner. He knows too much. Don't let him in whatever happens.

THE ASSISTANT: No, sir.

THE PROFESSOR: Good—now get the Doctor.

(The Assistant goes to the door and leaves. The sick man reaches out a hand without looking and takes the orchid, which he holds before him for a moment. The Assistant returns, followed by the Doctor, a young, carefully groomed man in formal morning clothes. He carries a small professional bag.)

THE DOCTOR (heartily): Good morning, Professor. I thought they told me you were sick! I certainly didn't expect to find you looking so well.

THE PROFESSOR: Don't be an ass, Johnson. I'm not one of your patients. I'm my own doctor. I just called you in for consultation. How's business? Making lots of money these days?

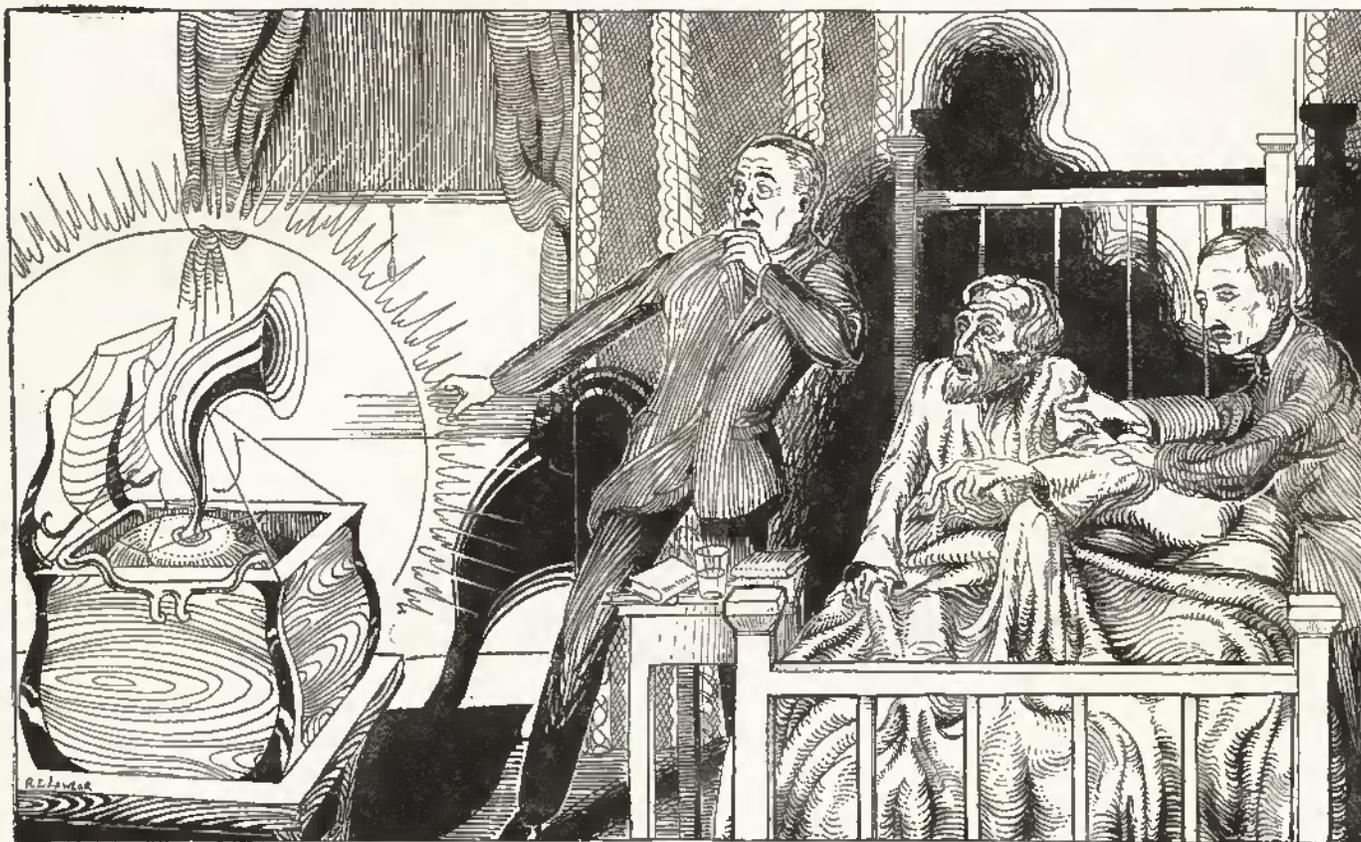
THE DOCTOR: Oh—so-so.

The weather's too decent just now.

THE PROFESSOR: Cheer up, you're going to get a post-mortem examination fee out of me, or rather out of my estate.

THIS month we produce a novelty in this magazine in the form of a play. This play is not offered as a science-fiction story proper; it is published for those who would like to produce a play, based on science in a sense, for the amusement and entertainment of their friends. It is a most interesting playlet. It requires little experience in producing and yet will give any audience a great thrill. The scientific paraphernalia is easy to procure. Any radio fan will have enough of the material on hand without having to buy any of it—or at least very little.

As we offer this as an experiment in AMAZING STORIES, the editor would very much like to have the opinion of his readers on a play of this kind.



. . . the three are startled by the sound of a whistle which comes distinctly from the horn. . . . Each is tense until it has finished and the Professor raises himself in bed.

THE DOCTOR: As Mark Twain said—

THE PROFESSOR: Shut up—the reports of *my* death are *not* going to be greatly exaggerated. Feel that pulse.

(*He extends his left arm toward the Doctor, who takes it as if to humor him, at the same time pulling out his watch. As he waits, his face becomes grave. Quickly he leans over and listens to the patient's heart, then rises decisively.*)

THE DOCTOR: Professor McAndrew, unless you do as I say, you will not live another hour!

THE PROFESSOR: Doctor Johnson, unless you listen to me, you will never hear what I have to tell you.

THE DOCTOR: But don't you understand—

THE PROFESSOR: Yes-yes-yes! I *know* I am dying and I called you here to verify it. You can't stop it—no one can—you could only prolong it. I've been doing that myself until my invention was perfected. (*He waves toward the instrument.*) Now it's finished. I'm going to test it.

(*The Doctor looks in bewilderment from the patient to the instrument and then to the Assistant. The Professor beckons to the Assistant.*)

THE PROFESSOR: Tell him, Kraussner, and hurry it up. (*To the Doctor.*) He's my assistant in this—experiment. Kraussner—Dr. Johnson.

(*The Assistant bows stiffly.*)

THE DOCTOR: Mr. Kraussner.

THE ASSISTANT: *Dr.* Kraussner, if you please.

THE DOCTOR: I beg your pardon. If I had realized you were a physician I should not have—

THE PROFESSOR: He's not one of you veterinaries, Johnson. He's a Ph.D., and Heidelberg at that. Have to get learned ones for this kind of work. Go ahead.

THE ASSISTANT (*speaking unemotionally and in a stilted manner, as one who has to think of his words*): Professor McAndrew retired from active teaching in the university ten years ago—

THE PROFESSOR: He knows all that!

THE ASSISTANT: For the last eight years he has been experimenting in an attempt to communicate with—the other world.

THE DOCTOR: So that is what you've been doing, locked away in here all this time!

THE ASSISTANT: He tried various methods of approach without success—the dead would not speak to him. Five years ago he invented a chemical which he believed, if taken into the human system, would enable him to detach his soul from his body and so come in contact with that world of which we know nothing. The experiment failed—

THE PROFESSOR (*unable to remain quiet*): But the chemical continued to work, Johnson. For five years it has been slowly destroying my tissues—my own invention! How's that for filial ingratitude?

THE ASSISTANT (*pointing to the instrument*): Shortly after this he attempted a *new* approach: An instrument which would enable the dead to speak to him through its medium. Generally speaking, it resembles the wireless telephone, but only the Professor and I know the secret of its composition.

THE PROFESSOR: I *hope* we are the only ones, John-

son. I have something to speak about since you are to be in on this experiment. Did you see a black-haired, rather wild-eyed young fellow when you came in?

THE DOCTOR: Yes. I nearly bumped into him when I came through the door downstairs. He seemed to be listening for something.

THE PROFESSOR: He's a student here in the university. A Russian Jew by the name of Meyer. He started working with me eight years ago, but last December he got a bit too crazy, even for me, and I had to let him go. The work got on his mind. I had to have Kraussner step in just when the thing crystallized. Meyer has been hanging around ever since. Keep your eye on him. There's no telling what he may do. Go ahead, Kraussner.

THE ASSISTANT: This instrument can be used only by the Professor and myself. Otherwise only by accident.

THE DOCTOR (*eagerly*): Have you tried to—well, it sounds like talking about a radio—but have you tried to get anything on it?

THE PROFESSOR: No! I must be sure. I knew I was dying, so I waited—to use it in person. (*He laughs grimly.*) But I'd give my soul if I could be on the receiving end instead of the sending!

THE DOCTOR (*enthusiastically*): If you could live you'd be famous!

THE PROFESSOR: Famous, hell! I'm not interested in fame. I want to see if it works—but I *would* like to live long enough to get the results myself. When you've worked years on something—

THE DOCTOR: I know—I know—

THE PROFESSOR: The great hour is approaching. It's just around the corner. I feel young once more—What the devil! Kraussner, you're letting me get sentimental again!

THE ASSISTANT: I'm sorry, sir.

THE PROFESSOR: Now, here's where you come in, Johnson.

THE DOCTOR: Let me give you a heart stimulant. It will help you to talk.

THE PROFESSOR: No! It will only keep me going a few minutes more. I'm impatient to be on the way. (*The Doctor shrugs his shoulders impotently.*) First, I've been watching you. You are going to be successful. Some of you young doctors have brains as well as education. I've been taking notes of the effects of this chemical on my body for several years. You are to summarize and publish them and the formula of the chemical is to be your property. Get the notes, Kraussner.

(*The Assistant goes to the desk, extracts a bulky folder of notes and gives them to the Doctor.*)

THE PROFESSOR: That's the medical aspect of this—er—touching incident. The second and most important—to me—is the, we'll call it the spiritual aspect, psychic, what you will—I am dying. Immediately after my death I will attempt to communicate with this world through that instrument. (*Here he holds up the sealed envelope.* In this envelope are written a set of pre-arranged signals by which it is to be determined that the communication is genuine. Only Kraussner and I know them now. You are to be present—that's why

you are here now. I shall continue to record my impressions from the moment of death until I have revealed—who knows?—what there is to be revealed.

THE DOCTOR: You will *talk* to us?

THE PROFESSOR: Of course. This table rapping and clanging of bells is all bunk. I am convinced that communication can be established by word of mouth—by one who knows how to use that instrument. And if I fail—well, I was going to die anyway.

THE DOCTOR: And the signals—what are they like?

THE PROFESSOR: That I cannot tell you. You will read them later—but I *will* tell you the first one so that you may see what a sentimental old fool I am. (*He whistles the two opening bars of "Roaming in the Gloaming."*) When I was young, I used to sing that song—about the only one I can remember, I guess.

THE DOCTOR: You intend to whistle that from—beyond?

THE PROFESSOR (*smiling queerly*): If I can pucker up my lips. (*He stops and listens intently.*)

THE ASSISTANT: There is something, Professor?

(*In answer, the Professor points toward the door. The Assistant goes to it silently and throws it open. A young man who has been listening there stumbles into the room.*)

THE STUDENT: Damn you! (*He recovers himself and with a contemptuous look at the Assistant, approaches the bed. He is about 28, pale of face, dressed carelessly. The Doctor seeks to interpose himself between the Professor and the Student, but the Professor waves him away. The Student addresses the sick man.*)

You caught me listening. All right. I'm entitled to know what's going on. This is as much my work as it is yours. (*Turning to the Assistant.*) And as for you, you damned German—six months' work and you get all the credit, whereas I worked eight years—and get kicked out. Just because you're a Ph.D. I suppose it will sound better when it's published!

THE DOCTOR: Professor McAndrew is dying.

THE STUDENT: Don't I know it? Haven't I been waiting for it? Just as he has, for five years. Do you think I am going to let all my work and sacrifice go for nothing?

THE DOCTOR (*soothingly*): I am sure that the Professor regrets that he is unable to use you further.

THE STUDENT: Then why doesn't he show it? I gave up everything for him. My doctor's degree—my career—everything. And now he throws me aside just as the goal is about to be reached.

THE PROFESSOR (*brutally*): Meyer—you're crazy!

THE STUDENT: That's what I've thought again and again these last weeks, but I know it's not true. I've tested myself. I'm as sane as you are.

THE PROFESSOR: I tell you you're crazy. Get out of here.

THE STUDENT: You can't fool me. I've worked with you too long. You think you can frighten me by making me believe myself crazy and so get rid of me. But my fear of you is all gone. You taught me too much.

THE DOCTOR: I must insist that you control yourself or leave.

THE STUDENT: I'll leave when I'm treated like a

man and not like a dog. Six months ago I came here one morning as usual and this dolt here shut the door in my face without a word of explanation.

THE ASSISTANT: Shall I do it again, Professor?

THE STUDENT (*screaming*): Try it—you dunce.

THE PROFESSOR: No. Kraussner, I'll take care of him.

THE DOCTOR: But you are in no condition—

THE PROFESSOR: That's why. The excitement may hurry my—demise. Meyer, don't you know when you're not wanted?

THE STUDENT: I've tried to have some pride but ever since then I've been doing nothing but think—think—

THE PROFESSOR: You think too much!

THE STUDENT (*defiantly*): Who taught me?

THE PROFESSOR: I wasted my time. You're no scientist—you're a mystic. Listen to me—you want to know why you were kicked out. It was because you were of no more use to me. I am no sentimentalist. As long as you could do the work—good. But when you began to run down—it meant someone else.

THE STUDENT: But I never tired!

THE PROFESSOR: Not physically. But your brain weakened. You didn't have the stamina. This work requires a clear head at all times. Your thoughts became too involved. I am doing the thinking in this experiment. My assistant does the mechanical work.

THE STUDENT: So I became too clever, did I?

THE PROFESSOR: If you choose to put it that way.

THE STUDENT (*mocking*): I did too much thinking for the great Professor. (*He turns to the Assistant.*) That's something you'll never do, Kraussner. (*He laughs tauntingly.*)

THE PROFESSOR: You are too temperamental, Meyer. You wanted to know too much. As far as I am concerned, you are a failure.

THE STUDENT: A failure! Yes? Very well, I agree. I'm getting the dirt end of this—but not for long—I'll win yet! I'll beat you at your own game. Look out for me. I warn you, I'm dangerous—you think you've eliminated me from this thing that I've spent years working on—this thing that has crept into my head until I think of it day and night. But you haven't—you haven't—I'll beat you yet. (*He shrieks with rage. The Doctor and the Assistant move hastily toward the instrument. The Student laughs.*) Don't fear for your precious instrument. I won't touch it. A man like our unimaginative Kraussner would try to break it to pieces, but not I—I think things out. I am too subtle—too mystical—ask the Professor. He'll tell you I'm neurotic and lots of other things—and should be watched. You'd better watch me—remember, I know more about this than the Professor would like me to know—and with every passing hour I know more and more. Damn you! Damn you all!

(*Again his voice rises to a crescendo and he sinks into a chair trembling with rage. The Doctor looks toward the Professor to see if he shall put him out.*)

THE PROFESSOR: No—leave him alone for a few minutes . . . he'll get over it. Then send him out—you can see he's just on the verge. He doesn't know what he's saying. Weakling!

THE ASSISTANT: But the instrument—

THE PROFESSOR: It's safe. You heard what he said. Johnson, take my pulse again—I think I'm slipping. (*The doctor takes his pulse. The Assistant moves protectingly toward the instrument, and hovers about it. The Professor calls.*) Meyer!

(*The Student does not move. He calls again.*)

Meyer! (*The Student raises his head slowly.*) Get yourself a glass of wine over there on the desk. Pull yourself together—be a man—then get out. I want to get this dying over with.

(*After a moment's hesitation the Student moves to the desk and mechanically pours himself a glass of wine. He drinks it slowly and it seems to refresh him. Again the Professor calls to him.*) Bring me some—my throat is dry.

(*The Student pours some wine in a glass and takes it to the Professor. The Doctor watches the Student carefully for signs of violence.*) Come to think of it, get some for all of us. We'll toast my departure. What could be more appropriate?

(*The Doctor looks at the Professor and points doubtfully at the Student without being seen by him. The Professor nods reassuringly and speaks.*) Give him something to do to take his mind off himself. He feels better already—don't you, Meyer?

(*The Student does not answer. He stands, back to the audience, hands poised on the bottle.*)

THE PROFESSOR: How's the pulse?

THE DOCTOR: Weak.

THE PROFESSOR: Good.

THE DOCTOR: This is the queerest case I ever had!

THE PROFESSOR: Cheer up—you won't have it long.

(*The Doctor, after a glance at him, takes a stethoscope from his bag and applies it to the Professor's chest. He listens intently with it. The Student takes a swift look about the room. The Doctor is bending over his patient. The Professor cannot see him, and the Assistant is inspecting the instrument. With a quick movement of decision the Student turns his back and for a moment is huddled over the desk. When he turns around he has two glasses of wine in his hand. He comes down to the Doctor who has now finished his examination and gives him a glass. Then he goes to the Assistant and hands him the other. As he takes it, the Assistant stares at him silently and uncomprehendingly. The Student returns the stare with a touch of bravado.*)

THE PROFESSOR: That's more like it, Meyer. Now get me some and we'll all drink to success.

(*The Student brings a glass to the Professor and has one for himself. Silently the four men turn to each other and drink. Suddenly the silence is broken by a wild laugh from the Student as he hurls his empty glass across the room where it breaks with a crash.*)

THE STUDENT: Success! (*He laughs again and dashes to the door, turning as he reaches it, to shout*): It's just around the corner!

(*He rushes out and the closed door shuts out his weird laughter.*)

THE DOCTOR (*looking after him*): Poor chap!

THE PROFESSOR: You see how much use he would

be to me? He probably would go to pieces at the crucial moment.

THE DOCTOR: I'll look out for him—afterwards.

(They are interrupted by the sharp sound of a pistol shot outside the door. The three men look at each other in a second's bewilderment, then the Doctor rushes out. The Assistant moves to the bedside and the two men watch the open door. The Doctor returns.)

THE PROFESSOR (sarcastically): Did he succeed?

THE DOCTOR: Yes—he's dead.

THE PROFESSOR: Idiot! It's his own fault. Such men have no right to take up science—eh, Kraussner?

THE ASSISTANT: No, sir.

THE PROFESSOR: This isn't going to be a cheerful place for you with two corpses lying around.

(The Assistant looks at him with a faint touch of concern in his face. Suddenly the Professor starts and presses a hand to his heart.)

THE PROFESSOR: Johnson! (The Doctor jumps to the bed. Then the Professor relaxes as the pain cases.) Ah—that got me for a minute. I guess I haven't long to wait now.

(The Doctor takes his pulse. While he is doing so the Assistant, with a vague expression on his face, goes to the door and leaves. He reenters almost immediately, much more disturbed and passes across to the instrument where he stands in troubled thought. He is interrupted by the Professor.)

THE PROFESSOR: Kraussner. Wake up. It's approaching. Come here. (The Assistant comes to him. The Professor takes his hand and shakes it briefly.) Thank you for your help. Now set the instrument, I must be sure it is ready.

(The Assistant returns to the instrument and makes an adjustment while the Professor and the Doctor watch him. He stands back, and as he does so, the three are startled by the sound of a whistle which comes distinctly from the horn. It is the first two bars of "Roaming in the Gloaming" and is whistled slowly, as the Professor first whistled it. Each is tense until it has finished. Then the Professor raises himself in the bed.)

THE PROFESSOR: Johnson—Kraussner—did I imagine it or—(He is interrupted by a cool and sinister Voice which comes from the instrument.)

THE VOICE: No, Professor—you heard correctly. It is possible to pucker one's lips here. I thought you might like to know.

THE PROFESSOR: Meyer!

THE VOICE: Yes. Meyer—the thinker—I beat you to it, didn't I? (A loud laugh follows.)

THE DOCTOR (whispering to the Professor): Is it possible?

THE VOICE: Don't bother to whisper, Doctor. I can even hear your thoughts.

THE PROFESSOR (in answer to the Doctor): Yes. He must have known the secret of the instrument.

THE VOICE: My dear Professor, you do me an injustice.

THE PROFESSOR (pointing to the door): Johnson—make sure that he is dead.

THE VOICE: Yes, Doctor. Do make sure. Step out and look at the remains. Perhaps they have moved.

(The Doctor goes out. Kraussner, who has shrunk away from the instrument, stands watching it in awe. The Doctor returns and nods his head in confirmation.)

THE VOICE: Take his word for it, Professor? Very soon the Doctor will have the pleasure of doing the same to you. (A low laugh.)

THE PROFESSOR: Meyer—you are a fool!

THE VOICE (in mock reproof): Professor! Have you no respect for the dead?

THE PROFESSOR: You are a coward. You took the easiest way.

THE VOICE: I use a pistol—you use a chemical—what's the difference?

THE PROFESSOR: But Meyer—listen to me. You have failed again. You can not defeat the experiment. I will soon be where you are and I am stronger than you.

THE VOICE: Remember what you said about me yourself, my erudite experimenter? Do you think I would do such a banal thing as commit suicide without thinking it all out first?

THE PROFESSOR: I give you up. I repeat—you are a fool. Kraussner, shut off the instrument. I have other things to think about.

(The Assistant moves cautiously toward the machine. Just as he puts out a hand to turn the connection, the Professor halts him.) Kraussner. Stop. Wait a minute. (He is lost in a moment's thought.)

THE VOICE: Ah! Just what I was waiting for. The great Idea has come.

THE PROFESSOR (deliberately): Meyer.

THE VOICE: Your obedient servant, my dear sir.

THE PROFESSOR: You are not such a fool as I thought. You can help me.

THE VOICE (mocking): I, help you?

THE PROFESSOR: Yes. Kraussner, prop me up. (The Assistant and the Doctor push the pillows under him.) Meyer, this is the opportunity I have never dared hope for. I never expected to live and hear this communication. I have but a short time to live. Tell me everything.

THE VOICE: You want my assistance, eh?

THE PROFESSOR (excitedly): Doctor, quickly, give me the heart stimulant. Kraussner, paper and pencil . . . hurry—move! Meyer, stay with me—you still have your chance to accomplish something for humanity.

THE VOICE: Humanity? Hah-hah-hah—

(The Doctor hastily prepares a stimulant. The Assistant excitedly manages to get the writing materials and hurries with them to the bed.)

THE PROFESSOR: Meyer—are you there?

THE VOICE: Yes, I'm here.

THE PROFESSOR: Give the message to me—to me. I shall take it myself, after all these years—speak, Meyer!

THE VOICE (tauntingly): You are dying, Professor.

THE PROFESSOR (rising excitedly): I will to live. I shall not die until I have accomplished my task. Speak, for God's sake.

THE VOICE: Why should I?

THE PROFESSOR: Can't you see after all these years what it means to me? I am dying. I demand it of you. What right have you to be silent?

THE VOICE (*louder*): What right had you to deny me my work? I suffered—why shouldn't you?

THE PROFESSOR: This is not personal—it is for the whole world.

THE VOICE: I was willing to work for the whole world until you turned me out.

THE PROFESSOR: I am stronger than you. I command you to give me the message. I command you!

THE VOICE: You want the message?

THE PROFESSOR: Yes—yes!

THE VOICE: After all, I have one for you—

THE PROFESSOR: Speak—now!

THE VOICE: Listen carefully, Professor. Miss not one word of it. Pencil and paper ready? I say are you ready, Professor?

THE PROFESSOR: Yes, yes—quickly.

THE VOICE: The message is—GO—TO—HELL! (*Mocking laughter floats out into the room. In violent anger the Professor rises in the bed.*)

THE PROFESSOR: Damn you, Meyer—damn you meddling—I'll fix you, you fool—you ingrate—you shall not interfere longer. I'll settle with you soon. The instrument—shut it off—shut—it—off—

(*He falls back on the pillows. Both the Assistant and the Doctor rush to the instrument, but are halted just as they reach it, by the Voice.*)

THE VOICE: STOP—gentlemen! Do you not fear Death?

THE DOCTOR: Not you—whatever you are— (*He reaches for the connection.*)

THE VOICE: Oh—not I—not I—gentlemen—behind you!

(*In apprehension the two men turn about and look at the Professor. He has fallen back among the pillows and is lying still. They cross cautiously to him. The Assistant is torn between dread of the Voice of the instrument and the body on the bed. The Doctor makes a hasty examination, then pulls the bedclothes up over the head.*)

THE DOCTOR: He's dead. I must get an ambulance. We can't leave them both here this way— (*He turns to the door.*) You stay here—I'll return immediately—

(*At this the Assistant breaks down completely, trembling and sobbing*)

THE ASSISTANT: I can't stay here alone, Doctor—this is terrible—I didn't expect to feel like this—it's not human—

THE DOCTOR: Nonsense—pull yourself together—I'll be right back. (*He goes to the door.*)

THE ASSISTANT (*rushing to him*): No-no—I tell you I can't stay here! If you go, I must.

THE DOCTOR: Be a man! You have work to do. The Professor is counting on you. You have seen that the instrument works—

THE ASSISTANT: That's it—that other man means to do something—his voice is terrible—

THE DOCTOR: Stay here, you coward!

(*He throws him to the floor and rushes out the door. We can hear the click of the key in the lock. The Assistant follows him and furiously tries to open the door but is unsuccessful. He falls to the floor in fright. For a moment the room is silent except for his*

sobs. Then from the instrument comes the Voice. It is low, coaxing, malevolent.)

THE VOICE: Kraussner—(*The Assistant hears it without at first realizing what it is. Then he starts in fear. Again comes the caressing voice.*) Kraussner—(*The Assistant cowers against the door. When the Voice speaks again it has a purring quality.*) Ah—such self control—remember what the Professor said? A clear head at all times—my dear Kraussner—

THE ASSISTANT: What do you want with me?

THE VOICE: I am just watching you—Kraussner—(*The Assistant pounds on the door, then rushes to the corner of the room away from the instrument.*)

THE VOICE: How cool you are—how cool!

THE ASSISTANT (*with shaking hands*): For God's sake—leave me alone.

THE VOICE: Such a steady hand. You've dropped your pencil. Pick it up. You'll need it to take notes for the experiment. My experiment—Kraussner—

THE ASSISTANT: I will not do it.

THE VOICE: But you are so dependable—*Doctor Kraussner!*

THE ASSISTANT: Stop—stop that voice.

THE VOICE: A simple turn of the mechanism will do it. (*The Assistant attempts a step toward the machine but falls back in the corner, trembling. The Voice taunts him.*) Too weak? or is it something else? Surely—you're not afraid, Kraussner—(*then, simulating incredulity*) or perhaps you are thinking—thinking of something. Don't let the Professor catch you thinking. He'll be here any minute.

(*At this the Assistant suddenly remembers the figure on the bed and with a shudder, he rushes away from it to the door.*)

THE ASSISTANT: Let me out—

THE VOICE (*in mock dismay*): You want to leave me? When I have postponed exploring this great mystery just to talk to you? Why I haven't even tried to find out yet what it's all about, because I thought you would be lonesome. But I must see now—I can wait no longer.

THE ASSISTANT: Go—go—

THE VOICE: Before I go I have something to tell you—something of great importance—of more importance to you, my friend, than to the world (*he laughs*). Listen very intently, Doctor—you wanted to take over my work, didn't you?—and reap the results of my years of labor—yes? well, you have it—but I believe that you will not have it long.

THE ASSISTANT: I don't want it—

THE VOICE: You are frightened—over what? Very little, you will say, when you hear what I have to tell you. Listen Kraussner—Here is something to be really frightened over—THE—WINE—I—GAVE—YOU—WAS—POISONED!

(*The Assistant rises from his crouching position on the floor, horror in his face, and takes a staggering step to the center of the room. He stands there as if frozen. The Voice laughs at him as he stands in the grip of fear. The laughter is interrupted by the sound of a second Voice—sharp—decisive.*)

THE SECOND VOICE: Kraussner—it is I—McAndrew—listen—quickly—

THE FIRST VOICE: Yes, Kraussner—it is your master's voice—calmness and coolness in the crucial moment—

THE SECOND VOICE: Meyer—that is enough—you have done your evil—go now—find out what awaits you—

THE FIRST VOICE: Yes, Professor, I turn him over to you—

THE SECOND VOICE: Go at once—your eyes have yet to be opened.

THE FIRST VOICE: Ta-ta, Kraussner—and *au revoir*, Professor—we shall meet again, no doubt—good luck in your experiment.

(He laughs again and the laugh dies away as though the speaker were departing in the distance.)

THE SECOND VOICE: Now, Kraussner. There is no time to lose. You are poisoned. I know. I know everything now. But if you hurry, we can finish this—Kraussner! It is of the utmost importance. What I have to tell you is beyond my greatest imagination. It is the secret of life itself!—take you pencil and write—all humanity depends on you—Kraussner—hear me!

(But the Assistant, still standing center stage, is slowly becoming paralyzed and is unable to hear or realize what is being said. He convulsively clutches at his heart and staggers a step or two toward the right. The Voice rises, pleading.) Don't you realize what you are doing? Try, man, try! Your will power—I have counted on you—

(Suddenly as if in the distance and coming nearer is heard the first voice—)

THE FIRST VOICE *(sobbing)*: Professor—wait—wait—it is I—Meyer—*(Then the First Voice is at full intensity, as if present)* Professor—what have I done?—I was blind—forgive me—I see now—now I know—I know! Kraussner—can you hear me?—don't die, Kraussner—don't die—we have a message for you—for God's sake, Kraussner, *don't die*—WE HAVE A MESSAGE FOR YOU!—

(But the Assistant is now beyond hearing the Voices and with a final lurch he falls, and in falling, he sweeps the instrument to the floor, where it breaks in many pieces. The pleading voice is suddenly shut off.)

CURTAIN

SUPER-RADIO

By Charles Clankey

(Concluded from page 301)

did not prove to be the case. So a great scientific brain was saved for the United States.

Just before the operation, while Wiessler was sterilizing his instruments, I happened to overhear a conversation between him and the aviator. For once in his life Richard Brown was not smiling. He was intensely in earnest.

"Doctor," he was saying, "I never knew her to display an emotion. I don't believe she ever felt any. Can't you implant in her mind at least a little tendency to be human, some appreciation of beauty, an inclination to smile once in a while? She's always been too damned scientific. Make her something like a human being, Doc, if it's possible."

Dr. Wiessler smiled, but did not say anything. He seldom did. He picked up a tray of instruments, and passed through the door to the next room, where the girl lay under the anesthetic.

THE real end of the adventure occurred three days later. C. Jerry Clankey expressed a desire to speak to the twenty-four-year-old genius who had so

nearly succeeded in changing us both to idiots, in order to find out from her the secret of artificial "ball-lightning." He was fascinated with the possibilities of the invention. After supper I accompanied him to her room. The nurse, whom we met in the hallway, informed us that she was asleep. When we came to her door, it was ajar. Glancing in, we saw Dick Brown at the bedside of the girl he had once loved. Somehow, I realized very clearly that he still did. He bent over her. He would have kissed her if the grey eyes hadn't flickered open just then.

She smiled. "Hello, Dick," she said.

I felt fingers gripping my shoulder. C. Jerry jerked me down the corridor. "Bob," he said, "I'm ashamed of you. It is considered extremely impolite to be listening in while people are renewing old acquaintance. Let us proceed down this hallway, emerge from the door, and—"

"And?" said I softly, with gently rising inflection.

"And gaze intently at the moon," he finished lamely.

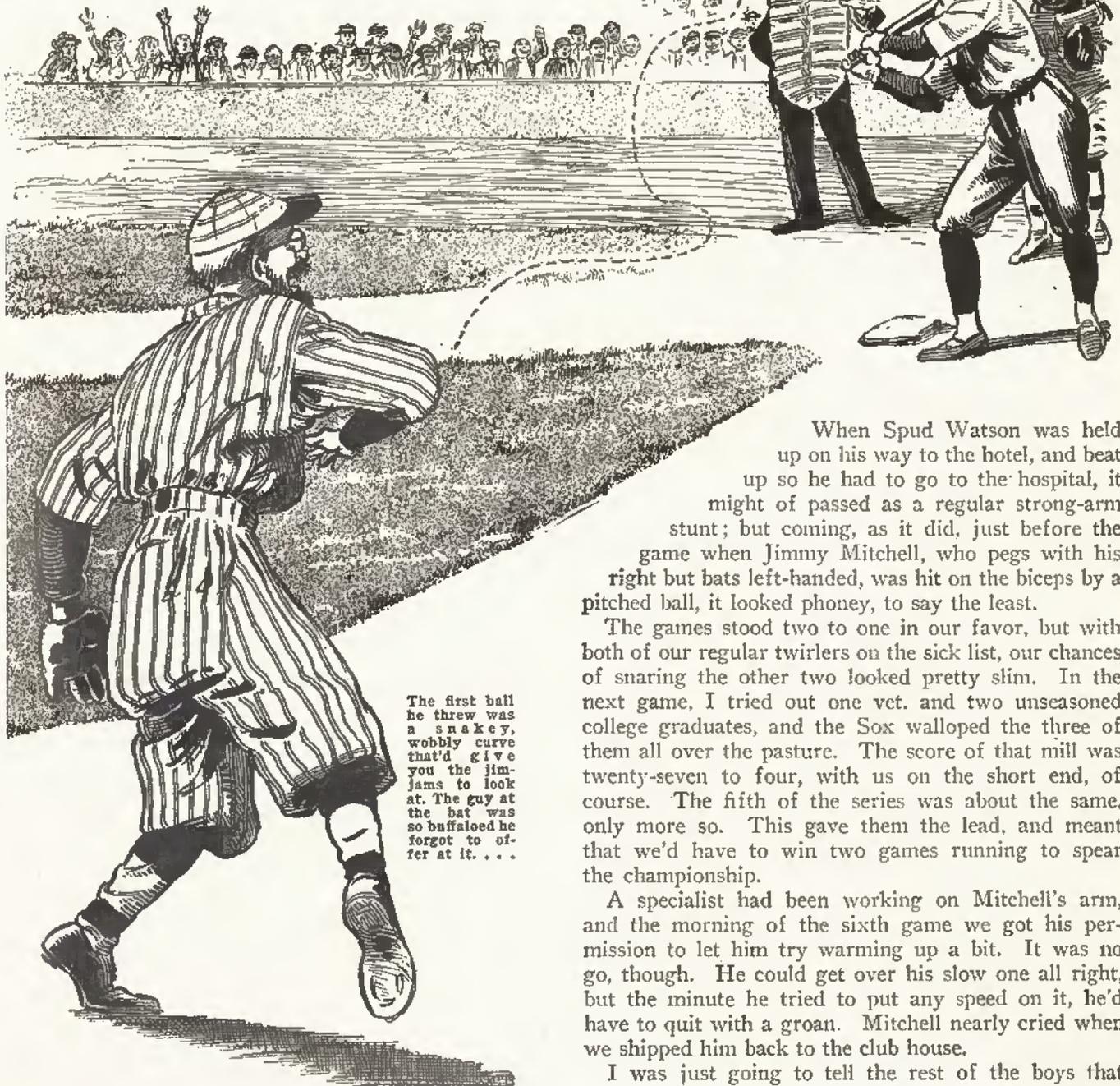
So we proceeded down that hallway, emerged from the door, and gazed intently at the moon.

THE END

THE EDUCATED PILL

By Bob Olsen

THIS here educated pill was invented by a Scotch guy named Gottlieb Schnitzelkuchen. But maybe I ought to tell you how I come to meet him. Remember the year we tied the Silk Sox for the pennant, and had to play an extra post-season series? That was during the palmy days of our famous single stick artists, Gilbert and Sullivan, and we had them skinned forty ways from the deuce. All the dope was in our favor, and we would of rolled them down in one, two, three order, if it hadn't been that they hung the Indian sign on us. It wasn't so much a case of jimx, neither, as a low underhanded stall to lay out our pitchers.



The first ball he threw was a snakey, wobbly curve that'd give you the jim-jams to look at. The guy at the bat was so buffaloed he forgot to offer at it. . . .

When Spud Watson was held up on his way to the hotel, and beat up so he had to go to the hospital, it might of passed as a regular strong-arm stunt; but coming, as it did, just before the game when Jimmy Mitchell, who pegs with his right but bats left-handed, was hit on the biceps by a pitched ball, it looked phoney, to say the least.

The games stood two to one in our favor, but with both of our regular twirlers on the sick list, our chances of snaring the other two looked pretty slim. In the next game, I tried out one vet. and two unseasoned college graduates, and the Sox walloped the three of them all over the pasture. The score of that mill was twenty-seven to four, with us on the short end, of course. The fifth of the series was about the same, only more so. This gave them the lead, and meant that we'd have to win two games running to spear the championship.

A specialist had been working on Mitchell's arm, and the morning of the sixth game we got his permission to let him try warming up a bit. It was no go, though. He could get over his slow one all right, but the minute he tried to put any speed on it, he'd have to quit with a groan. Mitchell nearly cried when we shipped him back to the club house.

I was just going to tell the rest of the boys that

there wasn't no use of practising any more, when a little dried up runt of a guy comes up to me and asks me if I'm the manager.

"I plead guilty," says I.

"My name is Gottlieb Schnitzelkuchen," says he.

"What?"

"I say my name is Schnitzelkuchen."

"Please say that again, and say it slow."

"Schni-tzel-kuchen,—ess-tzay-ha—"

"That's enough. Never mind spelling it. I got you in the first place, but I kind of like to hear you talk. What do you want?"

"I want a job. Would you like to hire a good pitcher?"

"Would I like—say, can the burlesque. Just now, I'm not in the mood for kidding."

"But I tell you I can pitch a ball which nobody can hit."

"You can?" says I, turning so as I can get a better look at him. He was—but I guess I'd better salt down the descriptive stuff until we get him all dolled out in his uniform and ready to make his daybutte—as they say of the society squabs.

Course I thought he was balmy, and I was going to tell the bat boy to direct him to the nearest nut factory, when he yanks a ball out of his pocket and says, "Watch."

Would you believe it? He puts so much stuff on that pill that it went clean around in a circle, like one of those sticks that you've seen the circus guys throw, and come right back into his hands again.

"Make believe that glove is home plate," he says. "Now watch once more." This time he started a slow one. It went straight for the glove until it was two feet from it; then it stopped, and after hanging in the air for a while, backed up. Again he caught it before it touched the ground.

"Now bring out your best batters. I will show you."

And he sure did make us all feel as if we'd just arrived from Saint Louis. He struck out five of our star hitters, not allowing a single hit, or even a pass to first base. Talk about control! I signed him on the spot. After we had both put our John Hancocks on the papers, I asks, "Say, how in Sam Hill do you put so much English on the ball?"

"I will tell you. It is the ball. I invented it myself. I've been working on it four years. I call it the aeroplane base ball."

As he spoke, he had the ball in his hand, twisting on it until it came apart in two halves. One of the pieces was just a hollow shell of steel with small holes in it; the other part was the funniest looking contraption you ever see in your life. It was built like a dinkey toy aeroplane, with a propellor and dinguses for making it go up and down and to the right or left. The whole rig was so small that it fitted inside a hollow sphere just the size of a league base ball.

He told me it was run by a spring motor, which he

wound up by twisting it just before he delivered the ball. The steering gear and motor were controlled by small buttons, which he pressed through the cover.

"But, say," I protests. "That ain't just square, you know."

"Why not?" he retorts. "There ain't nothing in the rules against it. You're the home team now, and you have to provide the ball. This one comes up to the rules. It is nine and one quarter inches 'round the middle, and weighs just a little over five ounces."

"But it ain't on the level according to the spirit of the game."

"How about Mitchell getting hit on the arm? Did that happen on the level, according to the spirit of the game?"

THIS argument helped to decide me; and then, too, I wanted to win that pennant. On account of the boys, you understand. I still had my doubts, though, and so I asked for another slant at that aeroplane ball. It sure was a dead ringer for a real pill, and the parts fit so close that you'd never notice the crack.

"What are you going to do when we go to bat?" I asked.

"I'll just substitute a regular ball. I used to do sleight-of-hand tricks, you know."

Course the home fans knew we didn't have a ghost of a show; but quite a few of them turned out just to see us get licked, and we had a fair sized crowd. You ought to of heard the howl that went up when the umpire introduced our battery, "Schnitzelkuchen and Bing." No wonder they yelled at what sounded like the head line of a comic supplement.

Snitz sure did look funny, too, in his hand-me-down uniform, which was four sizes too big for him. He was a wiry little cuss, with skinny bow legs like the shanks of a wishbone. His age was forty-six, and he looked it, and then some. Over his long pointed nose was a pair of goggles, which he said he had to

wear or he couldn't see nothing. But the worst of all was his whiskers. We tried to get him to roach them, but it was no go. And, believe me, it was some hedge. Stuck out on all sides like the Katzenjammer's Captain friend, only much longer. Honest, if he'd a worn a stocking cap he'd a been a dead

ringer for one of those goblins you see in the fairy stories.

Course the crowd guyed the life out of him, but their jeers changed to cheers when he commenced to pitch. He sure had that vest-pocket, hide-hound flying machine of his trained. The first ball he threw was a snaky, wobbly curve that'd give you the jimjams to look at. The guy at the bat was so buffaloed he forgot to offer at it, and the ump called a strike. Then Snitz gave him his slow come back. By the time the slugger had swung at it, it was on its way back to its pa. Next he pressed the buttons for full speed on

If you wish to spend a mirthful half hour, don't fail to read this story. And if you are a baseball fan—as very likely you are—this story will not fail to register a decided kick. As a matter of fact, you will find yourself reading this story out loud to your friends for the rest of the summer, unless you are very much mistaken.

On the other hand, a mechanical baseball like the one our author describes, is not at all impossible. As a matter of fact, it shows decided possibilities.

the motor and hard-a-lee on the helm; and hurled a beautiful wide out-shoot. Thinking he was going to get hit, the batter jumped back; but the ball cut a corner off the plate, and sailed around right into the first baseman's mit without being touched by the catcher or anything else.

You'd ought to of heard that crowd yell. They were seeing some real twirling, and, believe me, they knew it. They was so anxious to see him do some more stunts that, after he had fanned three men without having a single ball called on him, they could hardly wait for him to get back into the box again. They even hissed one of our men because he got to first base, and cheered the ones that struck out. Among these, of course was Snitz, who thus added to his popularity.

Encouraged by the crowd, he began to pull off some throws even more sensational than before. One of these was a straight ball that traveled in jerks. First fast, then slow; another would start like a rainbow lob that looked as if it was going ten feet over the catcher's head, but just before it got to the plate it would take a sudden dip, and come across waist high. But the best one of all was the loop-the-loop drop. This left his paw with an underhanded rise, made a complete somersault in the air about halfway home, and finally ended up with a neat little bow over the home plate. The batter just stood and gawked at it.

The innings that they was at bat was all the same story. Three sweating guys would step up to the dish, one after the other, and then retire to the tune of "One! Two! Three strikes, you're out, at the old ball game." Talk about a pitcher's battle! This was a slaughter, a regular one-man massacre.

All we needed to win was one run, and we tried all the tricks we knew to get that run. Course, Snitz was the weak link in our batting order. He couldn't hit a push ball with a Canadian snowshoe; but with Dugan striking out Gilbert and some of our other leading men, that didn't make much difference. At that, Snitz brought in a run.

Funny how that happened. Seeing that Snitz had him beat, Dugan, the Silk Sox flogger, went back to his old tricks of trying to wing our pitcher. But Snitz was wise to him, and instead of trying to hit the ball, he spent all his time dodging. Honest, it was worth the price of admission, just to see him dodge. He'd either jump ten feet from the plate or else flop flat on the ground, and Dugan only succeeded in handing him a complimentary ticket for lower berth number one.

He could run, too. You'd ought to of seen those bull dog legs of his carry him to second when Dobbs knocked a pretty little infield bunt. Right then I put in Sullivan, who I'd saved out as a pinch hitter, and the second ball over sailed over right field fence. These two tallies and one more was all we got, but it won us the game, score three to nothing.

TALK about hero worship! Schnitzelkuchen was the man of the hour. A mob of fans invaded the field after the game and carried him to the club house on their shoulders. That night all the papers issued special baseball extras, as usual, but the front pages

was all full of Schnitzelkuchen. Everything else—politics, murder trials, railroad wrecks, war news was pushed into the society columns.

This of course was some ad for the last game. All the fans that had seen Snitz wanted to come again, and those that missed the other game was just batty to see him perform. People stood in line all night outside the grounds, and at two P.M. there was such a mob outside that we had to close the gates for fear someone would get crushed.

When it comes to an ovation, Napoleon Bonapart never had nothing on Snitz and the cheers he got that afternoon. And, as before, he gave them the goods. He wanted me to take all our men off the field and fight it out alone, with the bat boy to shack the balls behind the plate. I knew he'd get away with it, too, but I wouldn't stand for it. I don't believe in rubbing it in. All the same, I did let on to the boys that if they got lonesome on account of having nothing to do, I wouldn't kick if they amused themselves.

They took the hint all right, and believe me, what with Snitz's freak pitching and the antics of the others, it was some circus. The left fielder started it off by turning a back flip and walking around on his hands. The two other pasture tenders got together in right field and commenced a comedy boxing match. Bedard sat down on first and began to play a solitaire game of numbleypeg, while Chase was on his knees hunting four leaf clovers around third base. Grey and Castle, the other two infielders lived up to their names by going through the latest steps of the black bottom.

All this horse play made a hit with the fans, but the Silk Sox bench looked like a colored funeral combined with a meeting of the I.W.W.

I ought to of explained that we had it framed up so that on the third strike of the last man up, the catcher or the first baseman would toss the ball back to Snitz, so he could change it for the regular ball.

In the third inning, Frenchy Bedard forgot this, and nearly crabbled the act. Snitz didn't wake up until Dugan had the phoney pill in his mit. Then he came running to me with his eyes popping out, and told me what happened.

"If it gets hit it may break the machinery," he stammers.

"That's all right," says I. "I'll just pass the word around for the boys not to offer at it; and let's pray that Dugan don't press any of the buttons." I might of spared my worries about that, though, for of course he didn't know how to wind the thing up. And, would you believe it, Dugan pitched a whole inning with that counterfeit pill, and never got wise!

After the bawling out I give Bedard, I figured he wouldn't be likely to pull off another scissor-bill play like that.

At the end of the sixth, we was two runs to the good, and it looked like easy money for us. But in the last of the seventh, Jones, the Silk Sox shortstop started something by making a lucky hit. Here is how it happened: When he come to the plate, he just stood fanning his bat up and down as fast as he could, and just by luck the third one over hit the willow stick. It sent a nice little rolling grounder straight for Snitz's

feet; but he muffed it, and before the second baseman could get his paws on the ball, Jones was on first.

Our balloon ascension was the next thing on the program, and we sure did go up in the air some. I never could figure out whether the jar of the hit knocked some of the gears loose, or whether Snitz got excited and pressed all the buttons at once; but anyway, he just couldn't make that ball behave after that.

He tried to hold Jones down to first; and the ball he threw started all right, but took a sudden rise and aviated a yard over Bedard's head—finally coming to rest at the foot of the fence in front of the first base bleachers. Of course Jones got to second on that, and a wild pitch advanced him to third. The next ball hit the grandstand netting ten feet to the left of the plate, and Jones came home. Two more men got their bases on balls, and Bing was nearly crazy, running around like a bird dog in his frenzied attempts to get within range of Snitz's wild lobs and curves.

THEN Schnitzelkuchen pulled off his big thriller. It started as a high rise, that looked as if it was going over the grand stand, but it gave a sudden dive and headed back, hitting the umpire an awful crack on the knob, just where it hitches onto his neck. In the excitement, the two men on bases came in. Course I protested, and darned if the other ump didn't call the runs. He even showed me the place in the rule book:

"Rule 54. Sec. 7. If a thrown or pitched ball strike the person or clothing of an umpire, the ball shall be considered in play, and the baserunner, or runners, shall be entitled to all the bases they can make."

When the umpire that got beaned came to, he wanted to know who threw the pop bottle; and when we told him how it happened, we had to hold him to keep him from going out on the field and cleaning up Schnitzelkuchen.

But Snitz was having trouble enough as it was. He'd let another man get to first, and again made a bum attempt to keep him from stealing. This time the ball broke loose as if it was going to show off all its paces at once. It circled and zigzagged around the diamond like a bucking bronco, and then started a skidding, dip-of-death flight for the left field fence. Snitz tore after it, but he might as well of tried to catch a sparrow. When he seen it go out of sight, he climbed right up on the bleachers, trampling on knees and shoulders until he got to the top of the fence, and then he disappeared.

When they picked him up, he could walk all right, but he was as nutty as a hickory tree. He fought to get back on the field and it took four cops to put him into the ambulance and hold him down until they got to the bug hospital.

That was the end of his pitching career. He wound up by making the longest and the wildest throw on record. You remember reading about the big wreck on the C. Q. D. that happened at the time of the World's Series? That was supposed to of been due

to a soused engineer, but I happen to know that Schnitzelkuchen's educated pill caused that accident.

You noticed that the Washington Avenue grounds are right next to the C. Q. D. tracks—in fact the left field fence is the railroad boundary line. Well, just as the aeroplane spheroid went sailing out of the grounds, an express train came by. The engineer and the fireman were rubbering out of the cab window, trying to get a squint at the game as they tore past, and that educated pill took an ornery streak, and just naturally beaned the two of them. The engine run at a sixty-five mile clip with nobody at the throttle for an hour and a half; and then it hit a curve and rolled over into the ditch. The ball had traveled a hundred miles without stopping. Some peg, what I mean.

Maybe you wonder how I come to know all this. I'll put you wise. The day after the wreck, I went down there and give it the once over. I found Schnitzelkuchen's trick ball in a heap of coal next to the junk that'd been the tender.

BUT I suppose you're more interested in hearing how that game come out. Let me see, where was I at? Oh, yes, we was in the field, end of the seventh, nobody out, and our matinee idol on his way to the brain garage.

When the inventor of the aeroplane ball began to aviate, Jimmy Mitchell, who had been sitting on the bench with his arm in a sling, begged me to put him in. At last I told him to get Walker and start war'n'ing up. Talk about guts! That kid went in with his teeth gritted, and pitched the finest four innings of his life. You could hear him groan every time he let go of the ball, but he stuck it out. We held them down to two hits, and gave only one base on balls. They didn't make any runs while he was in the box. We tied the score in the ninth, and Jimmy himself brought in the winning run in the last of the tenth.

I was going to let a substitute bat for him, but he wouldn't stand for it. He was afraid we'd have to play another inning, and if I took him out he wouldn't be able to finish it. He got to first by beating out a pretty bunt along the base line, and was knocked home by Johnson's two-bagger. The lameness in his arm hadn't hurt his sprinting power none.

That night the papers had a new hero, and it was Jimmy Mitchell's mug that graced the front pages of the extras.

After that morning when he tried to practice, Jimmy's arm had got worse, and the doctors warned him that if he pitched with it in that shape he'd never throw another swift ball. But Jimmy fooled them. He started to learn all over, and in two seasons was one of the best southpaws on big time. As Jonah said to the whale, "You can't keep a good man down."

Schnitzelkuchen come out all right, too. He was in a straight-jacket that night when I called on him, and crazy as a woodtick. As soon as he seen me, though, he began to quiet down. "Tell me, did we lose?" he gasps.

"No, we won," and I tells him all about it. And, say, I never realized what a loyal scout he was, until

I seen the way he carried on about us winning the pennant. It wasn't on account of his part in it, neither.

In a month he was all right, and the doctors turned him loose. Of course the management stood for his hospital charges, and we all chipped in and made him up a purse of a thousand.

He said he was going to use this money in perfecting his aeroplane ball, and inventing other baseball junk. He had an idea he could rig up a small wireless station in his left pants pocket, so he could control the pill, and even change the signals after it had left his hand. He said he got this notion from a bird named Ham-

mond that runs a torpedo boat that way. Another of Snitz's inventions is called the electric bat.

Drop around again some time and I'll tell you all about it.

And say, Mr. Magazine Writer, when your story comes out, send me a copy of it, will you? And I forgot to tell you, if you have to mention names, just mix them up, so as not to give anybody a hunch, you understand. Course, most folks have forgotten about it by now, but I wouldn't want to have anyone get wise to the fact that there was anything phoney about the way we won that pennant.

THE END

NOTICE

Our \$300.00 Prize Contest, the results of which were to be announced in this issue, will be published in the August issue.

Due to the fact that a large amount of entries were received, it was impossible to assort them and have the art work done in time.

The Publishers.

What Do You Know?

READERS of AMAZING STORIES have frequently commented upon the fact that there is more actual knowledge to be gained through reading its pages than from many a textbook. Moreover, most of the stories are written in a popular vein, making it possible for any one to grasp important facts.

The questions which we give below are all answered on the pages as listed at the end of the questions. Please see if you can answer the questions without looking for the answer, and see how well you check up on your general knowledge.

1. What is the name of the instrument which tests the truth of a statement by the beating of the pulse of the person speaking? (See page 294.)
2. What are two of the factors which would affect the course followed by directional radio waves? See page 296.)
3. What class of evidence could be given by the sphygmomanometer? (See page 297.)
4. Can you give an example of what ball lightning is said to have done? (See page 299.)
5. What did the earliest Romans do to get wives? (See page 309.)
6. What three actions does a solid exert upon light? (See page 325.)
7. If the refractive index of any substance was reduced to that of air, what would the effect be on its visibility? (See page 325.)
8. Why does powdered glass become almost invisible if it is put into water? (See page 325.)
9. Why does transparent glass become white and opaque if finely powdered? (See page 325.)
10. Can you find an early suggestion of the loud speaker made before any were invented? (See page 346.)
11. Are the courses of the planets, circles or some other curves? (See page 348.)
12. Can you explain the principles of music of colors? (See page 349.)
13. What different kinds of "music" might be developed, not using the sense of hearing? (See page 349.)
14. About how far away is Neptune? (See page 352.)
15. What is the limit of our power of hearing high notes? (See page 355.)
16. Can a sensitized photographic plate see more than we do? (See page 355.)

VANDALS FROM THE MOON

By MARIUS

(Concluded from page ???)

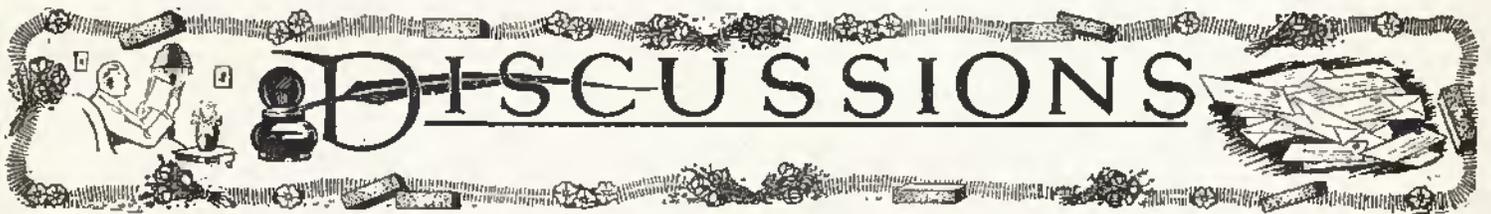
were identical with us, though mentally more advanced, on account of their longer growth and vaster years of experience.

There was nothing esthetic about them. They were scientists to the core—people who had ages ago ceased to quibble over fortunes, lands, rules, and beauty, and had dedicated their all to cold, harsh truths. Yet the powerful mating urge that had sent them to dare unbounded space and hurl themselves earthward from their rocky lunar homes on their ravaging errands out into the cosmos, proved stronger than the lash that

drove them pitilessly on the unquenchable quest for knowledge.

Just one more picture before I close, a pretty one. Little Sierra came into this world only a week ago, a tiny baby girl who weighed seven pounds. Pretty blue eyes just like her mother's, and rosy fingers and rosier toes. At times as I look at her I even feel that I can forgive the people of the moon, for if they spread ruin over many lands and misery over many hearts, at least in one heart they were the unconscious cause of spreading joy.

THE END.



In this department we shall discuss, every month, topics of interest to readers. The editors invite correspondence on all subjects directly or indirectly related to the stories appearing in this magazine. In case a special personal answer is required, a nominal fee of 25c to cover time and postage is required.

A VOICE FROM THE PHILIPPINE ISLANDS

Editor, AMAZING STORIES:

Inasmuch as I am a reader of your great magazine, AMAZING STORIES, I wish to give my comment on the stories that you publish.

I wish to use your "Readers Vote of Preference," but by tearing it off the page it not only mutilates the magazine but the story also. So it would be much better if you print it on the front page to be more conspicuous.

I am a new subscriber to your magazine but even then, I can realize its greatness. The stories are of real science. Your authors are all promising and I hope they would continue to write for your magazine.

I want to enumerate all stories that I want or like to read but it takes much time to list them all. However, to be brief, all stories about space and interplanetary travel, inventions, discoveries, detective stories, and medical stories are my favorite stories. All stories about the fourth dimension are my unfavorable stories.

Some of the stories are so absorbing that it seems as if I am present at the scene. In the story "The Treasures of Tantalus," it was so absorbing that when I reached that part when the cab was pursuing the coupe of Miss Stimson, I broke to a yell as if to stop the cab.

Well, I wish I possessed the literary style in order to have expressed my opinions better, but I hope I have conveyed my idea to you well. Hoping your magazine will continue its policy and wishing it all success,

Celestino P. Delgado,

Burgos, Ilocos Norte, Philippine Islands.

[We sometimes feel that stories of interplanetary travel are perhaps too imaginative, but you are not the only one who writes and tells us that they are greatly enjoyed. You like the detective stories, we observe and many of our readers dislike these. You do not like four-dimensional stories. If you follow our Discussions Column, you will see that these interest many people. The author of The Treasures of Tantalus, should be greatly delighted to hear of the excitement his narrative instilled in you.

We are certainly glad that our efforts are appreciated on the other side of the world.—EDITOR.]

THE COLOUR OUT OF SPACE, A BOYHOOD REMINISCENCE IMPOSSIBILITIES (?) IN STORIES

Editor, AMAZING STORIES:

I find your magazine the most interesting of all those I read, as it takes up subjects not covered by others.

In regard to my first choice in the September issue, "The Colour Out of Space," I did not see the colour, but there is a spot somewhere in New England like that described as the blasted heath, for I saw such a place when I was a boy about ten years old, when traveling with my parents. I do not remember just what state we were in or what town we stopped at, but I was in the habit of straying off in the woods every place we went, and I remember coming to a place such as that which is described in the story. At the time the stone walls and chimney of the house and wall of barn and well were standing,

but no woodwork was to be seen. I could not get to the house or barn, because I was afraid of the gray dust, at the time I thought it was quicksand, as I could not reach anything solid when I poked into it with a branch of a tree.

The space covered as near as I can guess was about 3 or 4 acres.

I do not remember if we were in Connecticut or Massachusetts at the time, nor can I remember the town. All that I know is that the place was about 5 miles from a little town with high hills to the north of it. I took a road leading west.

What the cause or why people would not go near the place, I don't know, and being only a boy, I soon forgot it when we left for new scenes and places. The story recalled the scene vividly to my mind again.

As to my second choice, *The Stone Cat*, I have seen petrified trees, small animals and once a human being, the young wife of a doctor in Philadelphia, about 35 years ago.

All these cases were affected by water. The petrified trees are in Fairmount Park. The small animals I saw in Texas, where there is a small stream known to the Indians (by the way I am part Injun myself) that petrifies anything put into it, but not instantly as in the story. It takes some months or more, according to the size of the subject put in.

I have seen many strange things in my travels that those who have not seen them would not believe.

The story of the man-eating flower also is not new nor impossible. In Africa there is a plant that lives on small animals it catches with its tendrils. I do not know the name of it. And in Lancaster County here on the Ephrata hills, in Pennsylvania, is a plant or flower that I have seen trap bees, flies and other insects, and when it opens afterward nothing is left of them.

I am not interested in radio, but I can well believe the *Radio Ghost Story*.

As to the story, *A Link of the Past*, that is also an old story in a new dress I have heard more than once of a tribe of white Indians in Northern Canada, but this is the first story I have read that connects them with the lost Norwegians, and I must say it is the most likely of any, as the Eskimo is of Asiatic origin, at least all I have met seem to be so.

Wishing you long life and success.

D. E. C. Chester,

Lancaster, Pa.

[Our correspondent's review of the "Colour out of Space" is rather remarkable, and it again goes to prove that even the wildest flights of imagination, in which some of our authors indulge, usually have some counterpart of reality, somewhere, or some time. Truth, as a rule, is much stranger than fiction, and we may say, very much more amazing.

Our correspondent's remarks as to petrification are most interesting. Petrification of objects by water of springs charged with calcium bicarbonate is a very old story and is a very interesting phenomenon, showing the production, in a sense, of present day fossils.

Much has been published about the discovery of white Eskimos, but they have been attributed to Scandinavian origin.—EDITOR.]

THE EVERYDAY READER AND SCIENCE IN STORIES

Editor, AMAZING STORIES:

I note your various remarks in AMAZING STORIES, expressing the hope that the advertising in your pages will increase sufficiently to put the magazine on its feet financially. And, knowing that the amount of advertising depends directly on the extent of circulation, I am offering the following suggestion.

Your various letters of criticism from readers, both *pro* and *contra*, are nevertheless from readers who are interested. Even to criticize a story unfavorably, a man must have displayed sufficient interest to read it through. You hear from readers of a scientific cast of mind; I have heard from members of "hoi polloi," the vast masses who like a good story, but are not particularly scientific.

Are you curious as to what they think of AMAZING STORIES?

After all, their money is good to you, and you can have it if you please them.

Their opinion, often crudely and inarticulately expressed, coincides with mine.

"Too dry," "too much mathematics," "too much stuff that doesn't mean anything," "too much theory," and so on, all mean that the stories have a tendency to lack a modern literary quality.

I don't care how much science you put in, if the stories conform to modern literary standards, the above criticisms will not occur. Let your stories have plot and unity of impression, and the general reader will like them, in spite of the science. He will buy your magazine by the million.

I have tried to send you examples; yet I am not any literary star. "The Stone Cat," "The Riot at Sanderac," "A Little Here Below" and "The Puzzle Duel" are primarily literary; yet they contain all the science that a reader can take at one dose.

Which is the better purpose for your magazine: to provide light entertainment for the scientific people; or to carry the message of science to the vast masses who prefer to read fiction?

If I ever make any large success as a writer, it will be to reflect the interaction of modern science and human nature—but that can't be done by handing out large, suffocating doses of science.

Miles J. Brouer, M. D.,
Lincoln, Neb.

[A writer, such as Charles Lamb or Nathaniel Hawthorne, could describe the most ordinary scene and make it literature. But neither could have dipped into science for their subjects, because it would be unfamiliar ground for them. Our stories, on the other hand, are written to popularize science. Our efforts have led to the publication and production of a quantity of good literature, seasoned with science—perhaps too far-fetched in the latter aspect. This last is a dangerous assertion, however, for no one knows how far science will develop in the future. The last sixty years have seen the world revolutionized by the developments of science. The younger readers, we believe, will live through another generation of almost miracles, and they seem especially to enjoy these stories. We are, of course, always on the look-out for "literary scientific fiction."—EDITOR.]

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.....Like a razor also, the pendulum was massy and heavy, it was appended to a weighty rod of brass, and the whole hissed as it swung through the air. I saw that the crescent was designed to cross the region of the heart. Down—steadily down it crept. The rats were wild, bold, ravenous, their red eyes glaring upon me. And then.....

From "The Pit and the Pendulum."

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You know the hideous tale—little Marion Parker kidnapped, foully murdered, her torn, mutilated body stuffed in a suitcase—delivered to her grief-stricken father for ransom—and the fiend drives off into the night—lost, unnamed, unknown—safe but for FINGER PRINTS! Yes, these telltale marks *cleared the mystery* surrounding this crime of unprecedented brutality and absolutely identified William Edward Hickman as the fiendish murderer. Fame and rewards go to the Finger Print Expert in this case. Fame and rewards await you, too, if you learn Finger Printing!



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Gentlemen: Please rush me by return mail Sergeant Barlow's own story of the Hickman case and tell me how I may learn the science of Finger Printing! No obligation on my part.

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ABOUT STORIES AND AUTHORS

Editor, AMAZING STORIES:

Since the introduction of your magazine to the public I have read it with much pleasure. And with much interest have I perused the comments of other readers, some of whom, I believe, do not think before they write to you.

I have no intention of discussing the merits of the numerous stories that have appeared, all of which had some points of interest or scientific value, but I would like to suggest to those, who hastily condemn certain writers and commend others, that they spend at least an hour carefully reviewing each story in their minds, placing themselves in the location, environment, and particularly the period of the author, before they place one word upon paper. That is, actually THINK. As Gernsbach truthfully states in his latest editorial, most persons seldom think.

When the first of Verne's stories came out, I began to read it seriously in a magazine, and following that one I devoured all that came after. Not only did I read them once, but, as in the case of *The Mysterious Island*, I read them over whenever they were republished. Now I have the pleasure of going over some of them in the light of modern times, which casts added radiance upon the work of one, who, I believe, was not only a thinker, but a prophet.

At the time Verne wrote his stories, these youthful critics were not born, hence they have no knowledge of the times and conditions that existed then and to some extent controlled his writings. Almost every one of the machines and methods he wrote of were the creatures of his brain, and had no counterpart in the world at that period. Therefore, if he made a few predictions that have not been fulfilled, he is not to be condemned, in view of the fact that at least ninety per cent of them have been realized within the few years since his death. Not one of these ignorant critics could at the present time write even one story, presenting some radical idea or invention, that would in future be duplicated in fact. I am sure that the editor of this magazine would gladly pay them for such stories if they would write them.

Now, regarding H. G. Wells. He has to invent every new machine which he describes; every creature he brings to us from some other world is a child of his brain alone. Naturally he makes what may be called by non-thinkers foolish statements or blunders. Let one of these critics be given the task of constructing such a simple thing as a lead pencil, without being supplied with a single bit of material or a formula from which to work. Could he design a cylinder of soft wood, with a core composed of a mixture of clay and graphite, which would inscribe writing upon a surface? No; he would probably spend a lifetime experimenting, without once arriving at the desired end.

All of these stories are of some interest and value to the reader, if he will seek for them. Schools are founded for instructing the ignorant, but many are they who pass through them without being enlightened to a great extent. It is not the fault of the schools. Nor is it proper for the heedless scholar to condemn them. And more ridiculous is it for unthinking critics to condemn writers and their stories because they have not found them instructive. Perhaps they are not capable of receiving or assimilating the instruction.

I do not feel that I am competent to adversely criticize any of the writers mentioned, or even some of the new ones, for, if I were, I would also be competent to write similar stories, with necessary improvements. But I will at all times defend these writers from unjust condemnation. It is true that Verne is verbose. So was Cooper, Dickens, Swift, Shakespeare. All of them followed the customary method of writing of their times. Most readers then were uninformed, there were few encyclopedias and books of reference, and not a tenth of the numerous periodicals of the present age. Hence they filled their stories with details and dates to assist the readers in visualizing the characters, the plots and the environments.

It was very probable, in the absence of the knowledge of the present age, the use of the airplane, the automobile, the telephone, the radio and other common appliances of our time, that these old writers made mistakes. It was natural. Many of the things then believed have since been proved fallacious. But it is childish to condemn the older writers for not inventing all the wonders of our days. Why not condemn Hiero, Archimedes, Leonardo da Vinci or any other oldtime genius for not inventing the wonders we now use and enjoy? Let these critics read the histories of the three ancients beforementioned and profit thereby.

Personally, I find much entertainment in all the stories, even when they strain the imagination to the breaking point, and at the age of sixty I am still anxious to acquire information or find a different viewpoint from which to study a theory or proposition.

GEORGE PARKE,
Covington, La.

[True literature is almost inevitably verbose, and those whom you speak of as having that quality are recognized master writers. If the stories in this magazine were written with a view toward saving space and merely to itemize supposed events, they would be very dry.

In his own time, Jules Verne could stand reading and rereading. The writer himself did this many years ago, and the stories which we have published are so replete with incident and good humor, which seems to be natural with the distinguished pioneer in this field of writing, that we are sure that many of our readers enjoy their second or third perusal in our columns.—EDITOR.]

READERS' VOTE OF PREFERENCE

Stories I Like:

- (1).....
- (2).....
- (3).....

Stories I Do Not Like:

- (2).....
- (1).....

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Do you like the illustrations as we have them now?.....

Do you favor more illustrations than we have now?.....

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A SUGGESTION TO AUTHORS TO INTRODUCE THE LOVE STORY ELEMENT IN WHAT THEY WRITE

Editor, AMAZING STORIES:

I am a young college student and have been reading AMAZING STORIES almost from the first. It is truly a wonderful magazine. It has set me to thinking along entirely new lines, and I can truthfully say that I have learned more general science, especially Astronomy and Physics, than I have in my school work.

I heard of AMAZING STORIES through a friend who loaned me a magazine, and I have often wondered why you do not do more advertising. I know that there are hundreds of people who would buy every issue if they only knew what the book contains. This brings up the question so much discussed about the flashy covers. The pictures on the covers portray the stories they represent very well, but don't you think that they are too flashy? To the non-reader it certainly creates the idea of "cheap fiction." I heartily agree with Glenn D. Rabuck that the covers should be made more conservative.

I have often wondered why you do not devote a section of the magazine to some great, outstanding problem that now confronts the world. Of course this would be some scientific problem, dealing with things that, if solved, would have an important bearing on everyone. You do this to some extent in your editorials, which, by the way, are to me the most interesting thing of the whole book, but I think it would be an advance if you would follow some great scientific problem in its development, decline, or accomplishment. I think it would bring "our magazine" nearer to the readers.

There is one little point I have always wondered about, and, although I know you have nothing to do about it, it interests me nevertheless. Why do authors not make a love plot more evident and important? It seems that such a plot could very easily be woven into nearly all the stories, and, instead of distracting the reader from the real plot, it would only heighten his interest and make him feel the stories were more true to life. True, many stories have love plots, but they seem so lifeless, and all have such an abrupt ending that it takes away all romance from the story. It seems that the American Public must have romance in its stories, so why do not the authors give it to them?

So far all has been criticism for the magazine. I do not want you to think that I dislike the stories or the magazine, because I think it is the best story magazine on the market, barring none. Keep up the good work and the Discussion Department.

Yours for a less flashy cover

Leonard Coffin,
132 S. Friends Ave.,
Whittier, Cal.

[This is another nice letter from one of our younger readers. The covers, which you are inclined to complain of, if you will study them out, you will find are quite wonderful conceptions. The mechanical features of machines are illustrated in them as depicted in the narration.

Writing stories based on science does seem to have the tendency to cause the authors to put aside the love feature as an element therein. We presume that if our stories are to be scientific, this love element will be missing in most of them. The scientific features to a certain extent operate to exclude every day romance.—EDITOR.]

WANTS MORE STORIES

Editor, AMAZING STORIES:

Yesterday, feeling blue and nervous, I got out of my shanty and walked aimlessly, for a while, along 18th Avenue. At a certain point I stopped, turned around, and found myself standing dumbbell-like near a news-stand. My eyes focussed upon a magazine whose cover and respective title arouse my curiosity.

"Here is," I said to myself, "something which should drive away the melancholy that grieves me." So, I bought your AMAZING STORIES ANNUAL, which has kept me busy all this Sunday.

I have found in it lots of scientific "bunk," but I have jiked it. I have felt as if I was the protagonist of each story, and have enjoyed them very, very much. My nerves have settled down; my melancholy has left me, making place for a great desire for more stories to read, consequently I've bought also the November issue of your splendid magazine.

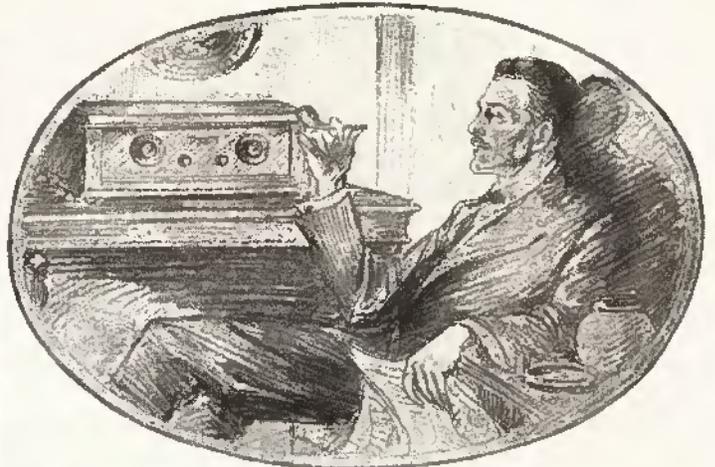
Moreover, I would like to have more stories. Thus, I pray you to be so kind as to publish in one of AMAZING STORIES' next issues the complete list of the stories already published. Doing this you will oblige me much.

Charles Herb,
Brooklyn, N. Y.

[AMAZING STORIES certainly contains what you term scientific bunk, but along with it is also a quantity of good, natural science. Our stories seem to have operated as a sedative, and have put you in a position to say with Milton, "Hence loathed melancholy." As your walk on 18th Avenue led you to AMAZING STORIES, we can only be very glad that the perusal of our magazine had the effect you describe upon you. Our space is too limited to publish the list of our stories. And you have not sent us your full address.—EDITOR.]



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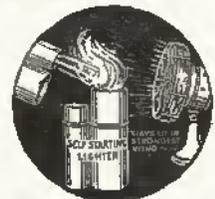
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SLANG AND BAD ENGLISH IN STORIES

Editor, AMAZING STORIES:

I just bought your October number and started to read Cummings' "Around the Universe." Was rather disappointed. It is more or less a story for children and taking other tales into consideration I am wondering whether you intend turning your magazine into a second "St. Nicholas Magazine"?

"Around the Universe" disappointed me because of its frightful slang. I think we are nowadays abusing the king's English to such a degree that even newspapers and theatres are making grammatical mistakes without knowing it. Words like "gotten" or "holer" that are absolutely non-existent in the English language are introduced, until our language has become a sorry mixture spoken by a people of mixed nationalities.

What seems to me sadly lacking in stories (and life) of today is: Dignity. Every wise-crack has become a wit and I suppose the author of the story "Around the Universe" thinks the awful slang used "extremely cute"!

I personally think that a time has approached when magazine editors should call a halt to stories written in bad English, as our present day English is bad enough and reading "slangy stuff" won't mend it.

I am strong for your stories by H. G. Wells or Jules Verne. They are or were writers who could write interesting yarns without the jazzy levity of our times which usually expresses itself in poor grammar and bad manners!

Harold S. Farnese,
Los Angeles, Cal.

[We are afraid that our correspondent did not get the right slant on the story "Around the Universe." In the first place, this was purposely written in a lighter vein, and in many places the author actually was, in a sort of mild way, spoofing the reader. If the story had been written in a serious vein, most of the delightful parts of it could not have been worked in. It is, by the way, the only Cummings story written in this vein, with some slang, and it seems to be the opinion of the majority of our readers, and we have hundreds of letters on file testifying as much that they have enjoyed "Around the Universe" hugely. Nevertheless the correspondent's criticism is highly welcome. —EDITOR.]

TRAVELERS INTO PAST AND FUTURE TIME

Editor, AMAZING STORIES:

In your last publication I notice that a discussion has arisen as to whether a traveler in time could or could not be seen by those he was observing. I would like to express my opinion on the subject.

Now, in my mind, one of two things is absolutely clear, either man will never be able to travel backwards through time or he will be invisible to those he is observing.

Let us suppose the age of the invention of the time machine at some distant date in the future. Now the men of that day having the ability would certainly travel back through time to view this our present day, and time machines and travelers should be quite a common sight. However, to my knowledge not a single time traveler or machine has been seen which leads us to the conclusion that either man will never invent such a machine or, in traveling back through time, will be invisible to those whom he observes.

It may interest you to know that, although I am not a subscriber, I have a copy of every issue of AMAZING STORIES that ever has been printed. Needless to say, I think it is a splendid publication and I, too, would like to see it made semi-monthly.

J. Richard Haynes,
Lexington, Ky.

[While we have our own ideas about traveling into time, either past or future, we ourselves would never like to make the statement that much that seems "absolutely impossible" in connection with time travel may not be so a hundred or a thousand years hence.

Of course, to us at the present time, it would seem that if we travel into the past, the human beings or civilization that we are likely to encounter could not possibly be aware of the time traveler. Logic would seem to dictate thus. It is also problematical as to what, if anything, the traveler in time, going backward, would be able to see. All these things, however, lie in the future and until some one actually has tried it, not much can be known.—EDITOR.]

PASSING AROUND THE EDGE OF ITS SHELL INTO THE INTERIOR OF SPACE

Editor, AMAZING STORIES:

Referring to Vol. 2, No. 7 of October, 1927; Ray Cummings' story "Around the Universe."

Mr. Cummings puts forth an atomic theory that at least is interesting. All the way through the story he has brought to view the fact that the planets that are of a substance permitting them to be habitable are populated on the outer surfaces only; yet when he arrived at his edge of space, the INSIDE of the substance that forms the outer shell of our own governing atom he found it to be populated. How come?

B. A. Haley,
Pasadena, Cal.

[All we can say about Mr. Cummings' theory is that it is not a bit more contradictory on its face, than is much of the Einstein theory such as the Lorenz-Fitzgerald contraction.—EDITOR.]



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ON THE POSSIBILITY OF THE STORIES
BY OUR AUTHORS

Editor, AMAZING STORIES:

Just a word to let you know how much we appreciate AMAZING STORIES. We have been subscribers since the magazine was first brought to our notice, over a year ago, and have never missed a word since. We can truthfully say that AMAZING STORIES is the only magazine out of the hundreds that are published in which one can lose oneself and then return to normality only when he is through reading the story.

Regarding the neat piece of logic of Mr. C. G. Portsmouth, which was published and argued about by the editor in the September issue, I should like to advance an opinion. Using the same logic as Mr. Portsmouth did, Mr. Wells' famous story, "The Time Machine," would not be possible, as the inventor would have lived his life, died and been laid to rest thousands of years before the events of the story. Providing the inventor's body had been embalmed and so preserved, while the events of the story took place, the inventor of the time machine would have two bodies, one living and one dead, which, to our minds, is inconceivable. Again, in the story, "The Lost Continent," it might have been that A, whom Mr. Portsmouth assumes as the leader of the inhabitants of the "lost continent," did see this ship while he lived, thousands of years ago. This fact can neither be proved nor disproved.

We should like to see AMAZING STORIES as a bi-monthly, if possible. The pictures, in quantity and quality seem to us just right and we would prefer more reading material than pictures.

We read and enjoy every kind of story that is published and congratulate the editor on his choices. "The Colour Out of Space" was especially good.

Wishing for a bigger and better AMAZING STORIES, we remain,

Harold and Irwin Olcovich,
Denver, Colo.

[Many have wished to see the magazine appear twice each month, but as we have stated over and over again, AMAZING STORIES is the property of its readers; its future lies in their hands. As long as it is published, we will try to keep the stories first class. You congratulate us on our choice of "The Colour Out of Space" and consider it an especially good story. Yet others have written us condemning it in the most wholesale manner. Stick to AMAZING STORIES. Realize that we are delighted to receive such letters as the above. We are doing everything in our power to improve it, and we believe that the future issues will please you more and more.—EDITOR.]

LIGHT FROM DISTANT STARS—WEIGHT OF THE FISH IN A BUCKET OF WATER

Editor, AMAZING STORIES:

I have a few questions of scientific interest, which, I thought, you might possibly answer for me.

The first question pertains to the relativity between time and space. For instance: the speed of light is estimated to be 186,000 miles per second. Then take the nearest fixed star, which is Alpha Centauri. This is approximately twenty-six trillion miles from the earth. Thus: It would take four years and 146 days for the light of this star to reach us here on the earth.

Now does not this prove that when we look at Alpha Centauri we behold a light that is over four years old. That is the natural assumption, but, to all practical minds, it seems impossible and ridiculous. There is perhaps some fallacy in our method of calculation. But, that is what I wish you to answer for me, if possible.

There is another question I would like you to answer, pertaining to the laws of gravitation. If a five-pound fish were placed alive and swimming in a tank of water, weighing, tank and water inclusive, fifty pounds, so as not to touch the sides or bottom of the tank, and then the whole placed on a scale, what would be the weight?

It will be noticed how the atmospheric pressure is neutralized on, for instance, the hand. The weight of atmospheric pressure on the hand is about three hundred pounds. But this is neutralized by an equal pressure on the sides and bottom of the hand. Does not this apply to the fish in the tank of water. The fish taking the place of the hand, and the water taking the place of the atmosphere. Thus making the total fifty instead of the naturally supposed fifty-five pounds?

A few words in closing as to the instructive and reading quality points of your magazine, which in my experience with books, scientific and otherwise, has never been excelled, and which, I believe, never will be.

A. A. Speakman,
2236 Frankford Ave.,
Philadelphia, Pa.

[Why it should seem impossible and ridiculous to a practical mind that the light of Alpha Centauri which now reaches us is over four years old is not easy to answer, but the fact remains, that the light is four years old.

If you see the steam cloud from the whistle of a steamship or locomotive three miles away, you see the steam escaping from the whistle almost instantaneously, but you do not hear the whistle for about fifteen seconds. In other words, by the time the sound arrives at your ear, it is fifteen seconds old.

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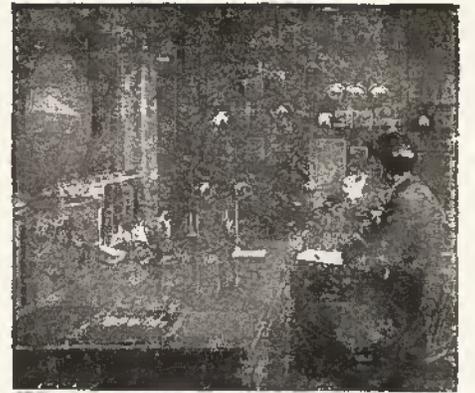
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NOTES ON SOME OF OUR STORIES

Editor, AMAZING STORIES:

I am writing this letter partly in praise and partly in criticism. The first copy of your book that I read was the ANNUAL which a friend gave to me. Since then I have looked forward each month for the book.

"The Master Mind of Mars" by Edgar Rice Burroughs is one of the best stories I have ever read. I have absolutely nothing against it.

"The Malignant Flower" by Anthos is a story I do not like and am glad to see that no more like it have appeared to date.

I might say that I like stories of inter-planetary travel, new inventions and of light rays.

"The Radio Ghost" by Otis Kline was a very good story and I hope you print more like it.

"The Colour Out of Space" by Lovecraft is a very poor story and made a bad showing in AMAZING STORIES.

"The Treasures of Tantalus" is a great story. Keeps one guessing all the time.

I have read the story "Around the Universe" in SCIENCE AND INVENTION and was glad to see it in print again. In this story I noticed that the professor said to Tubby that his projectile to the moon had only circled around it and had returned to earth. Is this reference in any way connected with Jules Verne's Book, "Around the Moon?"

AMAZING STORIES has taught me more about science than I ever thought I would know, as I did not pay any attention to it in the past.

Well I must close, wishing A. S. the best of luck.

I have just finished reading Treasures of Tantalus. It is great. I hope you will publish more like it.

When is "The Hydraulic Bank Protector" to be printed?

Jack Reid,
Cavalry Barracks,
St. Johns, Can.

[You will find in our correspondence columns of the preceding issue, a very flattering appreciation of the Lovecraft story, "The Colour Out of Space." The dreary atmosphere which the author imparted to it, and carried so successfully from beginning to end, in a sort of crescendo movement, to us at least, was very impressive.

The "Hydraulic Bank Protector" appeared in the December issue.—EDITOR.]

A GOOD REASON FOR CONTINUING AMAZING STORIES AS A MONTHLY

Editor, AMAZING STORIES:

The enclosed clipping from a recent issue of the Chicago Daily Tribune might be of interest to you, or it might prove "food for thought" for some of our favorites.

Also, I have some back numbers of AMAZING STORIES, as follows: December, '26; Jan., '27; Feb., '27; March, '27; July, '27; Nov., '27; Dec., '27, and probably a few others; although these are almost continually out on loan. "What of it?"

Finally, re most questions in your discussion column: While I enjoy your magazine very much, I rather agree with Mr. Rabuck, in that a semi-monthly would be approaching saturation point. It is quite probable that many of us would pass up occasional issues and thus lose continuity and some interest. Size of type would be a negligible factor, in my opinion, and could be smaller without sacrifice of prestige.

I have been a reader of your publications along these lines for over fifteen years, beginning with Mr. Fosdick, etc., in Modern Electrics, and wish AMAZING STORIES all success.

H. F. English,
331 N. Central Ave., Chicago, Ill.

Thank you for the statement of the back numbers of AMAZING STORIES which you have, and the implied compliment in the statement that they are continually out on a loan. You express your sentiment rather well when you say that a semi-monthly would approach a saturation point. Even a child may eat too much candy, and therefore cease to want it. We hope, of course, that our readers shall miss no number, that there shall be steady customers, as it were, to get the benefit of continuity. That explains the new Amazing Stories Quarterly.

The cutting which relates to recent investigations in atoms, we do not publish for lack of space, but it has been given wide circulation in daily papers.

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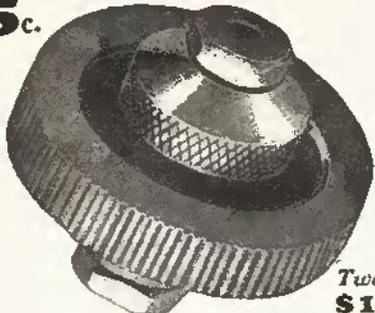
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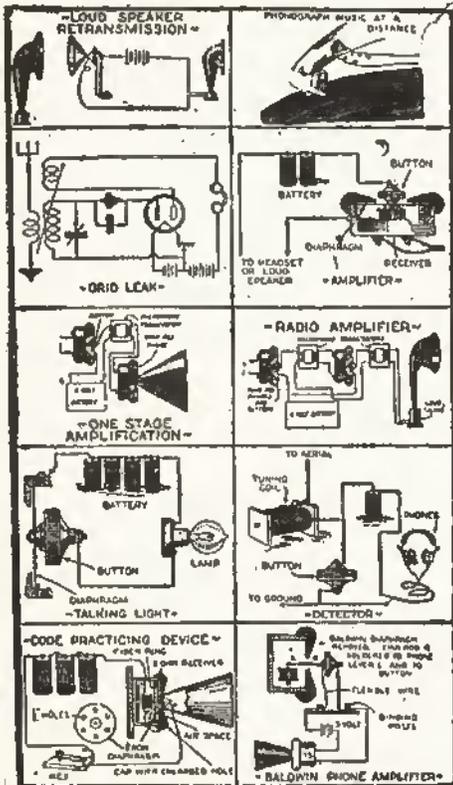
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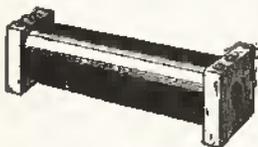
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HOW TASTES DIFFER

Editor, AMAZING STORIES:

Your magazine first came to my attention in 1927, and since then I have been buying it now and then at the newsstand. I find it most interesting as a whole, but I should like to analyze the April, 1928 issue as a good example of all the others.

H. G. Wells' novel is exceedingly good. I have always been an admirer of Wells, but of late you have been printing stories of his that are rather poor. I refer to *The Stolen Body* and *The Country of the Blind*. This story, however, makes up for all former errors, as it deals very logically with future life in the great cities.

Speaking of Wells, I noticed a letter, from an English correspondent, I believe, expressing the wish to have printed in AMAZING STORIES Mr. Wells' book *Men Like Gods*. This is the finest piece of fiction by that author I have ever read, but somehow I don't think it should be classed with the other stories you publish. It is too fine to run in any magazine.

The Yeast Men is very droll scientific; that is all I can say for it.

The Way of a Dinosaur is inexcusable, as is its near relative, *The Ancient Horror*. They are not scientific; neither is scientific, both are dry, and I may even venture to say that the former is not even fiction, but a daily event in the life of a prehistoric monster. At any rate, it is not well handled.

I was vastly entertained by your Baron Münchhausen's *Scientific Adventures*. I have read some of the original Münchhausen, and your style corresponds just enough to make it amusing, while using a better quality and quantity of scientific principles than in any of the other stories. I was especially amused by the account of the Baron's trip through the crater of a volcano.

I want to compliment you on your theory of the general appearance of Martians. There is just one particular in which I don't agree with you, and that is with regard to the enormous lungs. There is no reason why the circulating system, and not the lungs, should not be adapted to the thinner atmosphere, and certainly the over-large chest would make the man a bit top-heavy.

The Miracle of the Lily is good, as it brings out a perfectly logical scientific theory—that other orders may have gained the ascendancy in the process of evolution.

The Master Key was simple and good, but with remarkably poor judgment, your artist, Paul, spoiled the whole thing at the outset by drawing a picture of the solution to appear at the beginning of the story. This, however, was not entirely Paul's fault, for I suppose he has nothing to say concerning the position of his illustrations.

The Return of the Martians was good, but rather grotesque.

A word in criticism of Mr. De Britts' complaint concerning the cover. I have seen people walk into a store and purchase such magazines as *Popular Science* and *Popular Mechanics* sporting covers just as lurid as yours, without so much as one nervous glance around them to see if the coast is clear. Why? Because of the better quality of the paper, and because they are scientific magazines. I note with pleasure that better paper is on the way and that you intend to print conspicuously on the cover the word "Scientification." This should raise AMAZING STORIES to a level with other scientific magazines, and should put a stop to Mr. De Britts' timidity.

JOHN W. PRITCHARD,
10210 Second Blvd., Detroit, Mich.

(All we can say about your "brickbats" is that the stories you dislike, any number of our correspondents have admired. We only wish, from the business standpoint, that we could please everybody.)

We have a word to say about the spelling of the word "Münchhausen." In the original fiction, which was written many decades ago, the word was spelled incorrectly. Mr. I. M. Alier has corrected this. Your comments on Mr. De Britts are quite humorous. Your criticism on the *Way of a Dinosaur* we should interpret as very favorable, although you do not intend it to be such.—Editor.)

A COLLEGE MAN'S POINT OF VIEW—

Editor, AMAZING STORIES:

I've been following your AMAZING STORIES for the last two years and I think it is one of the best out for two reasons. First: It gives a person very good lessons in science in an easy, readable, and interesting style; and secondly, it is a very good guide from the viewpoint of psychology in broadening one's thinking capacity and getting one's viewpoint away from this provincial, narrow-minded reasoning on scientific matters. Although there are many far fetched highly improbable stories in it, I think the latter point more than compensates for it.

To get down to the facts, I wish to write a few words about the "Science Club." In this there is an unlimited field, and an important one. Incidentally I am a junior in college and my major is physics—hence the interest.

Science is the profession of the future; by starting a club of this sort, one is investing for the future. There are many thousands of young men who, unlike myself, have not the privilege of higher education to continue their study of science. Also there are the boys and girls in high school who because of their relatively small scientific

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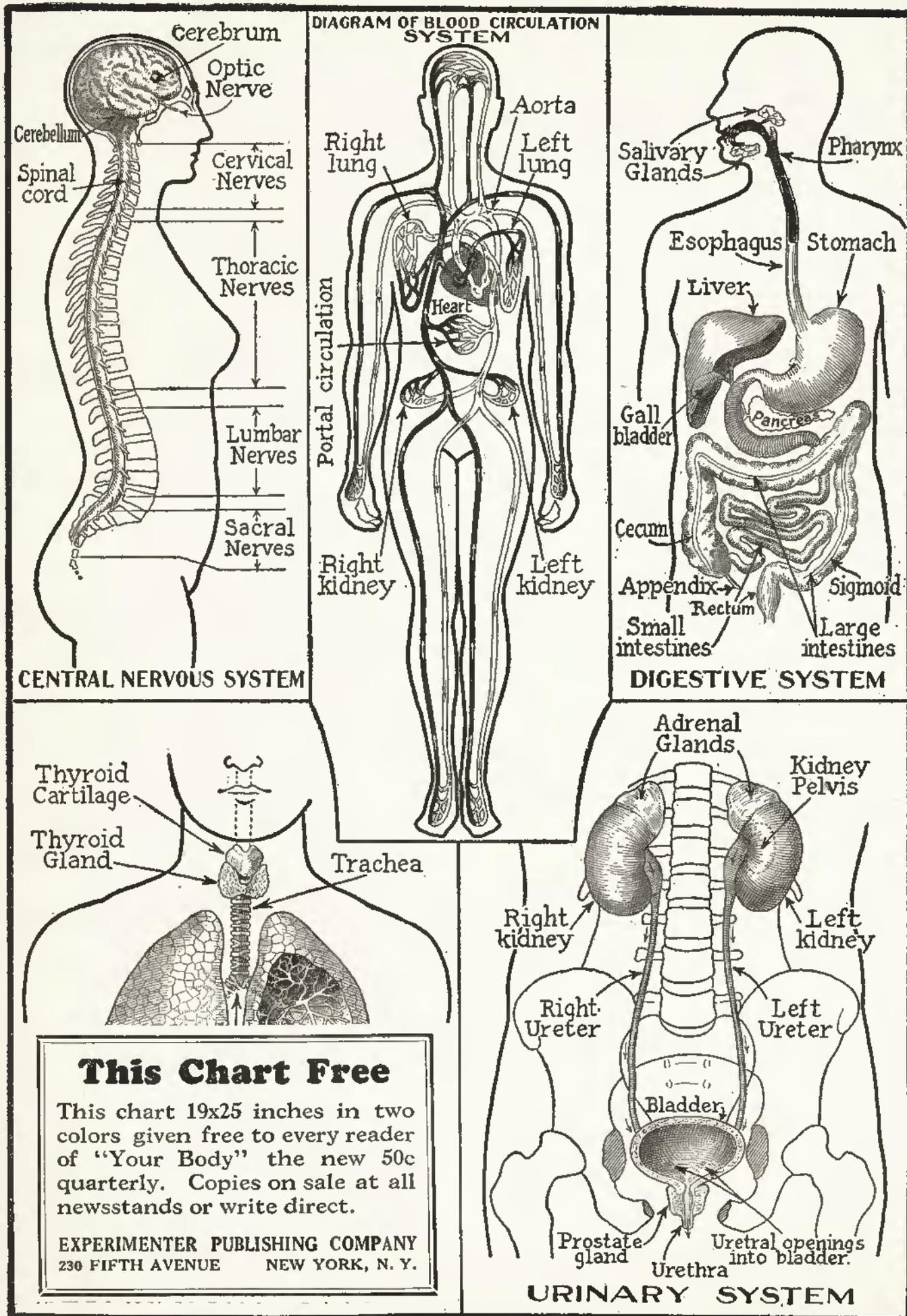
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knowledge, and the fact and rule teaching (necessary
of course) in high school science, wish to go ahead
in it and find it hard.

Here are a few hints that in my estimation are
good. (I hope they are in yours.) The Science
Club should be organized and run under separate
cover from AMAZING STORIES although you might
say, under its protecting wings. It should have its
separate publication (sent to members) which I
have a few ideas for. It should, foremost of all,
have a "Forum" in which its members would
bring up subjects, discuss them, and tell of re-
search work they have done and what they have
observed and found. It would have a, what you
might say, text book page or department in which
scientific knowledge would be brought forth in
simple, direct, readable lessons. There could be
discussions of up-to-date scientific subjects by lead-
ing scientists and college professors. There would
be experiments to do, laboratory helps and hints
and so on "ad infinitum." There could also be if
possible prizes for articles sent in by members;
say monthly prizes and a yearly prize based on
knowledge of the subjects in hand, on the method
of bringing it out, and so on.

These are, of course, only ideas of mine which
I hope may incubate and hatch forth into paying
chickens. Naturally, it could not be put on this
basis at first, because a fair amount of capital
would be needed. But, I think this or a similar
end would be worth working for.

This science club idea is an idea worth fostering
and if at any time there is anything I can do, I
will be willing to do it and praise be to Allah for
the chance to do anything within my power.
Here's a toast (water) to the future of our
miniature Smithsonian Institution.

Douglass L. Benson,
209 North Linden St.,
Northfield, Minnesota.

[Undoubtedly there are many far fetched, highly
improbable stories in our magazine. If you realize
how many of our readers have expressed their
liking for stories of interplanetary travel, you
would see that it would not do for us to reject
the improbable, even if it is not certain if it will
ever come about. There is one thing we wish to
state here with regard to science. The word
science means knowledge and is derived from the
Latin verb—"to know"; so you see that things
which are remote from natural science such as
history, language and the like, come under science
just as truly as electricity or chemistry do. It also
has always seemed to us that one of the great
functions is to teach people in early youth how to
apply themselves to the acquirement of knowledge;
to discipline them and cause them to develop as
far as possible, the studious habit. Strictly speak-
ing, no one can teach you anything. When the
teacher must take a part in the work of instruc-
tion, you must be your own teacher and all the
school can do is to lead your footsteps; they can-
not provide them for you. The Science Club would
carry out what we have said above for its mem-
bers in their work and reading; the members would
at once be their own teachers and your ideas about
it are excellent.—EDITOR.]

MORE FAVORABLE CRITICISM OF AU- THORS AND REPROOF FOR UN- FAVORABLE CRITICS

Editor, AMAZING STORIES:

When you receive this letter and are kind enough
to read it you can convince yourself that I am in
earnest. I have been reading AMAZING STORIES
from the very first copy. Up until this time I have
read your Discussion column with mingled emo-
tions of joy, anger, and disgust, the joy at the
fair and square ratings of some letter-writers in
regard to the authors and stories, the anger at
the narrow-minded judgment of some, and the dis-
gust at the opinions of some readers, of the very
best of stories. Understand me rightly, everyone
for their own opinion, but, I say, use our heads
and let's not be narrow-minded.

The magazine itself is a "wow," the stories in
some cases have flaws, but let some of the sup-
posedly "Wise Guy Critics," realize that we are
all humans and liable to err.

This is my first letter to your department so
you can realize that I am very much satisfied with
AMAZING STORIES. The thing that made me write
was the revulsion of my sense of fair-mindedness at
some of the "bum decisions" of "critics."

All the authors are good ones. My favorite is
"Burroughs." I've read all of his stories and
they are stories. I challenge any one to disprove
my statement that Burroughs is not a good writer
if not the best of scientific authors. This, be-
cause I've noticed that quite a few writers have
criticized him. "Give credit where credit is due."

I like "Futuristic" stories, stories that have
conversation and a good plot with not much de-
scription, at least not enough to tire one.

I've read a story, Ralph 124C41+, written by
the editor of this magazine, Hugo Gernsback. It
was a marvellous story. My point is this, why
not some more stories from Mr. Gernsback. He
knows his "scientific."

Yours for fair-minded Discussions,
Herbert J. Williams,
Forty-Fort, Pa.

[Our correspondent expresses the view of most
of our readers when it comes to futuristic stories.
This seems to be the favorite. Mr. Gernsback is
now publishing in AMAZING STORIES, "Baron Mün-
chhausen's Scientific Adventures."—EDITOR.]

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H. G. WELLS' VIEW OF POPULAR INTELLIGENCE—TIME TRAVELERS—AN ADMIRER OF BARON MUENCHHAUSEN

Editor, AMAZING STORIES:
You have said that the fame of the *War of Worlds* rests on the originality of Mr. Wells' theme. Now if the editor will look through his files of scientification, he will find that the plot of Mr. Wells' story is anything but original. Such descriptions as the exodus from London and the panic in the nearby villages are what make this book so famous, not Wells' ideas; also his analysis of the character of the people and their actions under such circumstances.

Mr. Volkman says that Wells exaggerates the stupidity and the incredulity of the populace; now nothing could be further from the truth. Think how the public accepts new theories and discoveries, the theory of evolution, for instance. The majority of the people think Darwin was crazy. If you try to explain some new and seemingly impossible scientific theory to the average person, he is so incredulous and hard-headed that he will not even listen. If anything, Wells exaggerates the credulity of the people and the speed in which measures were taken to resist the invasion.

In reality, I doubt that the people of London would have believed there was such a thing as a Martian until they had seen one, and then someone would have said it was a hoax. One just doesn't realize how foolish, how futile the actions of a mob are. Wells shows this again in *The Food of the Gods*; he even gives you a clearer picture of our petty, foolish ways than he did in *The War of Worlds*.

If some of the would-be critics would read Mark Twain's *Mysterious Stranger* and Ray Cummings' *Explorers into Infinity*, they would not be so rash in their statements concerning traveling into time. These critics seem to think it would be out of the general order of things for a man to travel into time. But why could not He have planned that man would eventually be able to travel in time? If this were the case, and a man did travel back into the past, of course the people of the past would be able to see him. When God planned their lives, could he not also have planned that perhaps some "time traveler" should come and visit them?

Now I am not a believer in predestination. I do not think that our lives follow a fixed and definite path; I believe that our lives are what we make them. If people were destined to lead a fixed life, some of them sure did get a rotten deal!

I just gave the preceding theory, because I believe it will give some of the would-be critics a somewhat different view on time traveling.

By the way, I think that Copeland expresses many of Wells' ideas very clearly in his poems. He shows how selfish, how insignificant our actions really are, and how little they matter in the scheme of life. But of all of his poems, I believe that "Alone" contains the best thought.

Although *The Moon Maid* is the best book Burroughs has written, I am very glad you published *The Land That Time Forgot*, because it will bring the theory of evolution closer to the eyes of the readers. Burroughs doesn't give exactly the right view of the theory, but still he does more good than harm.

Also, I would like to say that the Baron Münchhausen stories have all your other humorous stories beaten a long way. I hope the series will last for many more months.

B. K. GOREE, JR.,
1416 South Adams St., Fort Worth, Texas.

(We consider that Mr. Wells is original in his way of telling his stories. It's not easy at the present day to find an absolutely original plot for any story, so many have been written. Without thinking that Darwin was crazy, we must recognize the fact that he made some pretty bad mistakes and that his theory has been greatly modified and that basically, it is supposed to be some 2,000 years old; perhaps more.—EDITOR.)

H. G. WELLS APPRECIATED; HUMOROUS STORIES WELCOMED

Editor, AMAZING STORIES:
Although I haven't missed a copy or a single story in your magazine since its birth, I have so far refrained from writing much as I have been tempted to do so. I just want to make a few remarks concerning the magazine and your policy in general.

It seems to me that those who roast H. G. Wells take a superficial view of his work. To my mind he is another Conan Doyle, when it comes to putting atmosphere into his stories. I have never been to England, but I can sense the very spirit of the place from reading Doyle, Wells and others. Far from being "dragging" and slow, *The War of the Worlds* was, to me, a work of rare merit. The descriptions of the panic-stricken populace fleeing from the terror of the Martian monsters were almost perfect. They reminded me of nothing so much as a movie I once saw showing refugees from a French town fleeing before the Germans, with a background of fire and smoke from the burning buildings. I have yet to read a dull story by Mr. Wells, although not all of them are so good as *The War of the Worlds*.

My favorite theme is interplanetary travel. I am one of those who believe that this miracle will be accomplished and that some of us will live

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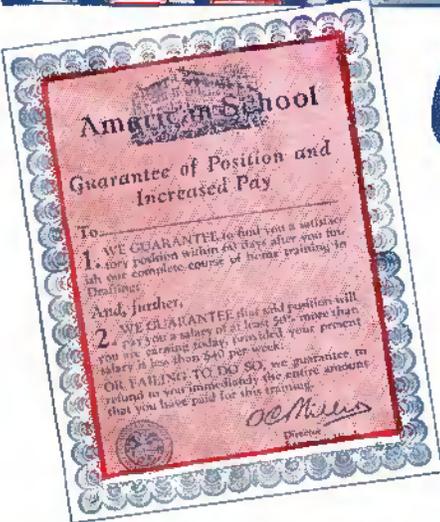
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