

June

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# AMAZING STORIES

HUGO GERNSBACK  
EDITOR



Stories by  
H.G. Wells  
Francis Flagg  
David H. Keller, M.D.

EXPERIMENTER PUBLISHING COMPANY, 23 FIFTH AVENUE NEW YORK

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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 missed 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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# AMAZING STORIES

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## In Our June Issue:

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## Our Cover

this month represents a scene from the story entitled, "The Blue Dimension," by Francis Flagg, in which the young assistant, looking through the newly created spectacles, sees the scientist's head and other body come through the machine, which, by changing the rate of vibration of the body, allows it to manifest itself on another plane. The spectacles, also the scientist's invention, allows the wearer to view this different plane.

## In Our Next Issue:

**VANDALS FROM THE MOON**, by Marius. The steamship imitates the fish in its manner of locomotion, the airplane imitates the bird in its locomotion through the air. But no engineer seems to have ever thought of duplicating the snake motion for propelling heavy bodies. Yet it is perfectly plausible, and the author of this story may prove to be a prophet some day. It is certainly an interesting and original idea and furnishes excellent material in a unique interplanetary tale, this time dealing with the moon people who visit our Planet.

**THE INVISIBLE MAN**, by H. G. Wells. (A Serial in Two Parts) Part II. In the concluding chapters of this story, the harassed and harassing invisible man finally reaches an old scientist friend of his, to whom he relates his experiments, his unexpected success and his subsequent experiences. But you don't need to be a dyed-in-the-wool scientist to become thoroughly absorbed in this detail or in the story of their subsequent experiences. You will enjoy it no matter how much science you know or don't know.

**BARON MUNCHHAUSEN'S SCIENTIFIC ADVENTURES**, by Hugo Gernsback. (The three parts in this issue conclude this series.) What will our descendants do ages from now, when their air supply dwindles down to nothing? According to our very remarkable friend, the Baron, the Martians have already solved this problem by their marvelous invention of air plants, with which they generate their own air. The Baron tells us also, how the Martian canals were built, and, lest we think them always serious and scientific, we are permitted a glimpse into their lighter moments and learn something of the kinds of amusement in which they indulge.

**JUST AROUND THE CORNER**, by Raymond Knight. We offer this interesting playlet, which in a sense is based on science, as a novelty to our readers. It furnishes excellent material for an amateur, inexpensive production.

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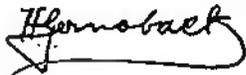
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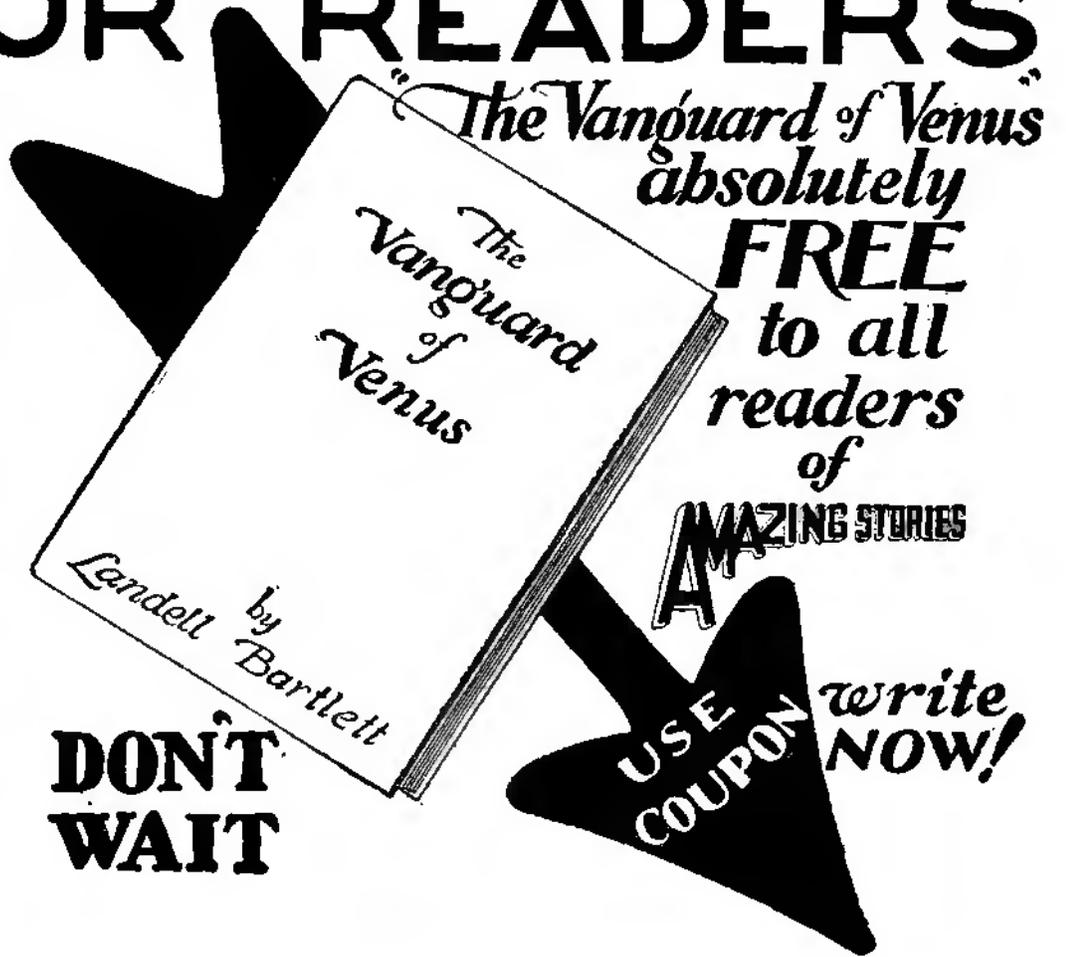
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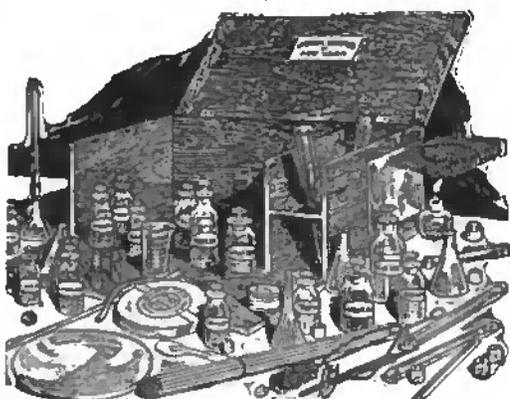


**T. O'CONNOR SLOANE,**  
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*Extravagant Fiction Today - - - - - Cold Fact Tomorrow*

## OUR AMAZING MINDS

By HUGO GERNSBACK



ONE of the curious vagaries of the human mind is that we would much rather believe the things that are not facts than those that are facts and have long been proven to be such. It is the old story of the farmer who, when he first saw a giraffe, exclaimed, "There ain't no such animal."

This illustrates a tendency which holds true throughout our lives and becomes more marked as we grow older. Many instances of such vagaries could be cited.

Thus it will come as a surprise to many intelligent people to hear that a majority of individuals believe that hypnotism is to be classed with witchery and other occult pastimes, such as spiritualism. Thousands of people every year ask the question whether we believe in hypnotism and whether we believe that there is such a thing.

The well-read reader will know that hypnotism is an exact science and that it not only exists, but that it is used daily by a great many doctors. Quite a number of people do not know, however, that animals can be hypnotized as thoroughly as human beings. Thus, a hen may be readily hypnotized by drawing a chalk-line on a table and placing the hen on its back with her head pushed down on the table so that the chalk-line will run between its eyes in such a position that the white line acts as a hypnotic to the hen and she can no longer turn around. This is true hypnotism. A similar experiment can be performed with a rabbit, usually with as much success. Hypnotism is even used to produce artificial sleep in patients during operations. We refer those who might still be skeptical on the subject, to any good book on hypnotism.

The very same people, though, who denounce hypnotism as one of the black arts, glibly go to a Yogi to have their future read and believe implicitly what this faker tells them, or the same innocents will be sold on the idea that astrology is an exact science, just as astronomy is. Yet most educated people know that astrology is a fake, pure and simple, and has only one (?) good feature—it makes money for those who practice it.

SCIENCE AND INVENTION had a standing prize of \$2,000.00, which it promised to pay any astrologist who could predict three future events exactly as to time and place. Although the prize was offered for years, it was never collected.

The list of examples might be extended indefinitely to give instances of this kind.

I am making this point mainly because I constantly hear, from those who are rather vehement in their assertion, that we are always sponsoring the impossible and that we should stick more to facts. Or, if we cannot do that, then we should at least frankly admit that our stories are fiction and let it go at that. But the great trouble is that nowadays, one does not

know what is fiction and what is not. Fiction and fact are so interwoven that it is frequently impossible to separate one from the other; and if you could separate the two, the separation would be meaningless on account of the time element. No sooner would you have separated fact from fiction, than fiction would probably have become fact.

An interesting sidelight on this may be cited in the following: In the year 1911, in my story, Ralph 124C 41+, I featured a purely fictional instrument which I termed "The Hypnobioscope." This instrument was supposed to impart knowledge and education to the sleeping mind. I set forth quite an elaborate theory at that time, as to why it should be simple to educate the sleeping mind. While the mind sleeps, it is not being distracted by outside influences and it would, therefore—I reasoned—be more receptive than at any other time. This was pure fiction and evidently I did not take much stock in it myself, because I never actually tried it. Much to my amazement, however, Chief Radio Man Finney, of the United States Navy, who read the story, tried it in 1922, with the result that today in the Pensacola, Florida, Naval Station, students are taught code while they sleep. You may see the students stretched on benches, with helmets over their heads, sleeping soundly, while an operator is sending them code all night long. The sound is conveyed to them through telephone head receivers inside of the head gear. It is interesting to note that these students found it impossible to learn the telegraphic code during their waking hours—the ONLY way to teach them the code was while they slept. A most amazing fact is that as soon as the operator sends an S.O.S., all the sleepers wake up instantly. The reason, of course, is that the mind itself never sleeps.

That is by no means all. Now comes a statement which sounds like pure fiction. Recently, another investigator in the East began working along the same lines, except that he used a phonograph with a clock attachment. For four or five hours during the night, a phonograph record is made to talk into the ear of the subject, repeating it dozens of times—not education, but suggestion. These suggestions are of a medical nature and work on the subconscious mind. It has thus been possible, in two or three weeks, to cure constipation cases of long standing, simply by mind stimulation—by the suggestions made by the phonograph while the subject slept. Other minor diseases and mental troubles have thus been speedily eliminated.

This again shows the impressive power of the mind over matter, and while the principle is not new—Coué having used it in a different manner—still, it is most interesting because here we have to do with the sleeping unconscious and subconscious mind. There is a possibility that a method of this kind will have a great influence on our future lives, when the new art is better understood.

# The INVISIBLE MAN

By H. G. Wells

Author of: "The War of the Worlds," "The Time Machine," etc.

## CHAPTER I.

### The Strange Man's Arrival



HE stranger came early in February, one wintry day, through a biting wind and a driving snow, the last snowfall of the year, over the down, walking from Bramblehurst Railway Station, and carrying a little black portmanteau in his thickly-gloved hand. He was wrapped up from head to foot, and the brim of his soft felt hat hid every inch of his face save the shiny tip of his nose; the snow had piled itself against his shoulders and chest, and added a white crest to the burden he carried. He staggered into the "Coach and Horses" more dead than alive, and flung his portmanteau down. "A fire," he cried, "in the name of human charity! A room and a fire!" He stamped and shook the snow from off himself in the bar, and followed Mrs. Hall into her guest parlor to strike his bargain. And with that much introduction, that and a couple of sovereigns flung upon the table, he took up his quarters in the inn.

Mrs. Hall lit the fire and left him there while she went to prepare him a meal with her own hands. A guest to stop at Iping in the winter time was an unheard-of piece of luck, let alone a guest who was no "haggler," and she was resolved to show herself worthy of her good fortune.

As soon as the bacon was well-under way, and Millie, her lymphatic aid, had been brisked up a bit by a few deftly chosen expressions of contempt, she carried the cloth, plates, and glasses into the parlor, and began to lay them with the utmost *éclat*. Although the fire was burning up briskly, she was surprised to see that her visitor still wore his hat and coat, and stood with his back to her and staring out of the window at the falling snow in the yard.

His gloved hands were clasped behind him, and he seemed to be lost in thought. She noticed that the melted snow that still sprinkled his shoulders dripped upon her carpet.

"Can I take your hat and coat, sir," she said, "and give them a good dry in the kitchen?"

"No," he said, without turning.

She was not sure she had heard him, and was about to repeat her question.

He turned his head and looked at her over his shoulder. "I prefer to keep them on," he said with emphasis; and she noticed that he wore big blue spectacles with side-lights, and had a bushy side whisker

over his coat collar that completely hid his entire face.

"Very well, sir," she said. *As you like.* In a bit the room will be warmer."

He made no answer, and turned his face away from her again, and Mrs. Hall, feeling that her conversational advances were ill-timed, laid the rest of the table things in a quick staccato manner, and whisked out of the room. When she returned he was still standing there like a man of stone, his back hunched, his collar turned up, his dripping hat-brim turned down, hiding his face and ears completely. She put down the eggs and bacon with considerable emphasis, and called rather than said to him:

"Your lunch is served, sir."

"Thank you," he said at the same time, and did not stir until she was closing the door. Then he swung round and approached the table with a certain eagerness.

As she went behind the bar to the kitchen she heard a sound repeated at regular intervals. Chirk, chirk, chirk, it went, the sound of a spoon being whisked rapidly round a basin. "That girl!" she said. "There! I clean forgot it. It's her being so long!" And while she herself finished mixing the mustard, she gave Millie a few verbal stabs for her excessive slowness. She had cooked the ham and eggs, laid the table, and done everything, while Millie (help, indeed!) had only succeeded in delaying the mustard. And him a new guest, and wanting to stay! Then she filled the mustard-pot, and, putting it with some stateliness upon a gold and black tea-tray, carried it into the parlor.

She rapped and entered promptly. As she did so her

visitor moved quickly, so that she got but a glimpse of a white object disappearing behind the table. It would seem he was picking something from the floor. She rapped down the mustard-pot on the table, and then she noticed the overcoat and hat had been taken off and put over a chair in front of the fire. A pair

of wet boots threatened rust to her steel fender. She went to these things resolutely. "I suppose I may have them to dry now?" she said, in a voice that brooked no denial.

"Leave the hat," said her visitor in a muffled voice, and turning, she saw he had raised his head and was looking at her.

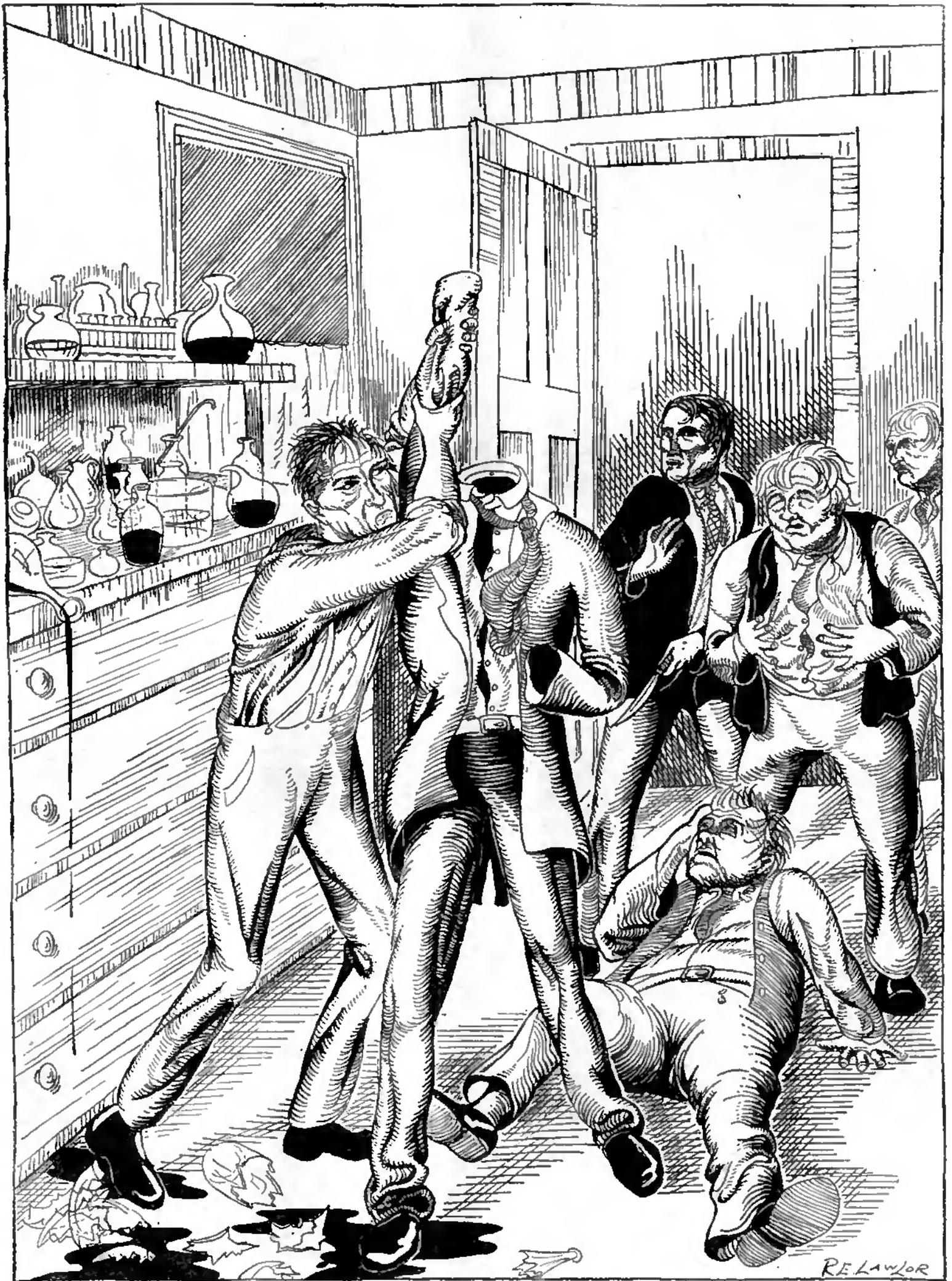
For a moment she stood gazing at him, too surprised to speak.

He held a white cloth—it was a serviette he had brought with him—over the lower part of the face, so

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*THERE* have been many stories written dealing with invisibility and invisible people, but "The Invisible Man," by this famous author and father of scientific fiction, is undoubtedly the best and by far the most scientific of them all. While much discussion was created by certain of Mr. Wells' stories which were published in this magazine, the editor predicts that "The Invisible Man" will be proclaimed by all our readers as a scientific story, plus. Start the first instalment with this issue.

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"You're a darned rum customer, mister," said Mr. Jaffers. But 'ed or no 'ed, the warrant says 'body,' and duty's duty—"What the devil's this?" came in a tone of angry expostulation from above the collar of the figure.

that his mouth and jaws were completely hidden, and that was the reason of his muffled voice. But it was not that which startled Mrs. Hall. It was the fact that all the forehead above his blue glasses was covered by a white bandage, and that another covered his ears, leaving not a scrap of his face exposed excepting only his pink, peaked nose. It was bright pink, and shining, just as it had been at first. He wore a dark brown velvet jacket, with a high, black, linen-lined collar turned up about his neck. The thick black hair, escaping as it could below and between the cross bandages, projected in curious tails and horns, giving him the strangest appearance conceivable. This muffled and bandaged head was so unlike what she had anticipated that for a moment she was rigid.

He did not remove the serviette, but remained holding it, as she saw now, with a brown gloved hand, and regarding her with his inscrutable blank glasses. "Leave the hat," he said, speaking indistinctly through the white cloth.

Her nerves began to recover from the shock they had received. She placed the hat on the chair again by the fire. "I didn't know, sir," she began, "that—" And she stopped, embarrassed.

"Thank you," he said dryly, glancing from her to the door, and then at her again.

"I'll have them nicely dried, sir, at once," she said, and carried his clothes out of the room. She glanced at his white-swathed head and blank goggles again as she was going out of the door; but his napkin was still in front of his face. She shivered a little as she closed the door behind her, and her face was eloquent of her surprise and perplexity. "I *never!*" she whispered. "There!" She went quite softly to the kitchen, and was too preoccupied to ask Millie what she was messing about with *now*, when she got there.

**T**HE visitor sat and listened to her retreating feet. He glanced inquiringly at the window before he removed his serviette, and resumed his meal. He took a mouthful, glanced suspiciously at the window, took another mouthful; then rose and, taking the serviette in his hand, walked across the room and pulled the blind down to the top of the white muslin that obscured the lower panes. This plunged the room in twilight. He returned with an easier air to the table and his meal.

"The poor soul's had an accident, or an op'ration or somethin'," said Mrs. Hall. "What a turn them bandages did give me to be sure!"

She put on some more coal, unfolded the clothes-horse, and extended the traveler's coat upon this. "And they goggles! Why, he looked more like a divin' 'elmet than a human man!" She hung his muffler on a corner of the horse. "And holding that handkerchief over his mouth all the time. Talkin' through it! . . . Perhaps his mouth was hurt too—maybe."

She turned round, as one who suddenly remembers. "Bless my soul alive!" she said, going off at a tangent, "ain't you done them taters *yet*, Millie?"

When Mrs. Hall went to clear away the stranger's lunch her idea that his mouth must also have been cut or disfigured in the accident she supposed him to have suffered was confirmed, for he was smoking a pipe,

and all the time that she was in the room he never loosened the silk muffler he had wrapped round the lower part of his face to put the mouthpiece to his lips. Yet it was not forgetfulness, for she saw he glanced at the tobacco as it smoldered out. He sat in the corner with his back to the window-blind, and spoke now, having eaten and drunk and being comfortably warmed through, with less aggressive brevity than before. The reflection of the fire lent a kind of red animation to his big spectacles they had lacked hitherto.

"I have some luggage," he said, "at Bramblehurst Station," and he asked her how he could have it sent. He bowed his bandaged head quite politely in acknowledgment of her explanation. "To-morrow!" he said. "There is no speedier delivery?" and seemed disappointed when she answered "No." "Was she quite sure? No man with a trap who would go over?"

Mrs. Hall, nothing loath, answered his questions, and then developed a conversation. "It's a steep road by the down, sir," she said, in answer to the question about a trap; and then snatching at an opening said, "It was there a carriage was upsettled, a year ago and more. A gentleman killed, besides his coachman. Accidents, sir, happen in a moment, don't they?"

But the visitor was not to be drawn so easily. "They do," he said, through his muffler, eyeing her quietly from behind his impenetrable glasses.

"But they take long enough to get well, sir, don't they? There was my sister's son, Tom, jest cut his arm with a scythe—tumbled on it in the 'ayfield—and bless me! he was three months tied up, sir. You'd hardly believe it. It's regular give me a dread of a scythe, sir."

"I can quite understand that," said the visitor.

"We was afraid, one time, that he'd have to have an op'ration, he was that bad, sir."

The visitor laughed abruptly—a bark of a laugh that he seemed to bite and kill in his mouth. "Was he?" he said.

"He was, sir. And no laughing matter to them as had the doing for him as I had, my sister being took up with her little ones so much. There was bandages to do, sir, and bandages to undo. So that if I may make so bold as to to say it, sir——"

"Will you get me some matches?" said the visitor quite abruptly. "My pipe is out."

Mrs. Hall was pulled up suddenly. It was certainly rude of him after telling him all she had done. She gasped at him for a moment, and remembered the two sovereigns. She went for the matches.

"Thanks," he said concisely, as she put them down, and turned his shoulder upon her and stared out of the window again. Evidently he was sensitive on the topic of operations and bandages. She did not "make so bold as to say," after all. But his snubbing way had irritated her, and Millie had a hot time of it that afternoon.

The visitor remained in the parlor until four o'clock, without giving the ghost of an excuse for an intrusion. For the most part he was quite still during that time: it would seem he sat in the growing darkness, smoking by the firelight—perhaps dozing.

Once or twice a curious listener might have heard

him at the coals, and for the space of five minutes he was audibly pacing the room. He seemed to be talking to himself. Then the armchair creaked as he sat down again.

## CHAPTER II.

### Mr. Teddy Henfrey's First Impressions

**A**T four o'clock, when it was fairly dark, and Mrs. Hall was screwing up her courage to go in and ask her visitor if he would take some tea, Teddy Henfrey, the clock-jobber, came into the bar.

"My sakes, Mrs. Hall," said he, "but this is terrible weather for thin boots!" The snow outside was falling faster.

Mrs. Hall agreed, and then noticed he had his bag with him. "Now you're here, Mr. Teddy," said she, "I'd be glad if you'd give th' old clock in the parlor a bit of a look. 'Tis going, and it strikes well and hearty, but the hour hand won't do nuthin' but point at six."

And leading the way, she went across to the parlor door and rapped and entered.

Her visitor, she saw, as she opened the door, was seated in the arm-chair before the fire, dozing, it would seem, with his bandaged head drooping on one side. The only light in the room was the red glow from the fire. Everything was ruddy, shadowy, and indistinct to her, the more so since she had just been lighting the bar lamp, and her eyes were dazzled. But for a second it seemed to her that the man she looked at had an enormous mouth wide open, a vast and incredible mouth that swallowed the whole of the lower portion of his face. It was the sensation of a moment; the white-bound head, the monstrous goggle eyes, and this huge yawn below it. Then he stirred, started up in his chair, put up his hand. She opened the door wide so that the room was lighter, and she saw him more clearly, with the muffler held to his face, just as she had seen him hold the serviette before. The shadows, she fancied, had tricked her.

"Would you mind, sir, this man a-coming to look at the clock, sir?" she said, recovering from her momentary disorder.

"Look at the clock?" he said, staring round in a drowsy manner, and speaking over his hand; and then, getting more fully awake, "Certainly."

Mrs. Hall went away to get a lamp, and he rose and stretched himself. Then came the light, and Mr. Teddy Henfrey, entering, was confronted by this bandaged person. He was, he says, "taken aback."

"Good afternoon," said the stranger, regarding him—as Mr. Henfrey says, with a vivid sense of the dark spectacles—"like a lobster."

"I hope," said Mr. Henfrey, "that it's no intrusion."

"None whatever," said the stranger. "Though I understand," he said, turning to Mrs. Hall, "that this room is really to be mine for my own private use."

"I thought, sir," said Mrs. Hall, "you'd prefer the clock—"

"Certainly," said the stranger, "certainly; but as a rule I like to be alone and undisturbed."

He turned round with his back to the fireplace, and put his hands behind his back. "And presently," he

said, "when the clock-mending is over, I think I should like to have some tea. But not till the clock-mending is over."

Mrs. Hall was about to leave the room—she made no conversational advances this time, because she did not want to be snubbed in front of Mr. Henfrey—when her visitor asked her if she had made any arrangements about his boxes at Bramblehurst. She told him she had mentioned the matter to the postman, and that the carrier could bring them over on the morrow.

"You are certain that is the earliest?" he said.

She was certain, with a marked coolness.

"I should explain," he added, "what I was really too cold and fatigued to do before, that I am an experimental investigator."

"Indeed, sir," said Mrs. Hall, much impressed.

"And my baggage contains apparatus and appliances."

"Very useful things indeed they are, sir," said Mrs. Hall.

"And I'm naturally anxious to get on with my inquiries."

"Of course, sir."

"My reason for coming to Iping," he proceeded, with a certain deliberation of manner, "was . . . a desire for solitude. I do not wish to be disturbed in my work. In addition to my work, an accident—"

"I thought as much," said Mrs. Hall to herself.

"Necessitates a certain retirement. My eyes are sometimes so weak and painful that I have to shut myself up in the dark for hours together—lock myself up. Sometimes—now and then. Not at present, certainly. At such times the slightest disturbance, the entry of a stranger into the room, is a source of excruciating annoyance to me. . . . It is well these things should be understood."

"Certainly, sir," said Mrs. Hall. "And if I might make so bold as to ask—"

"That, I think, is all," said the stranger, with that quietly irresistible air of finality he could assume at will. Mrs. Hall reserved her question and sympathy for a better occasion.

**A**FTER Mrs. Hall had left the room he remained standing in front of the fire, glaring, so Mr. Henfrey puts it, at the clock-mending. Mr. Henfrey worked with the lamp close to him, and the green shade threw a brilliant light upon his hands and upon the frame and wheels, and left the rest of the room shadowy. When he looked up colored patches swam in his eyes. Being constitutionally of a curious nature, he had removed the works—a quite unnecessary proceeding—with the idea of delaying his departure and perhaps falling into conversation with the stranger. But the stranger stood there, perfectly silent and still. So still—it got on Henfrey's nerves. He felt alone in the room and looked up, and there, gray and dim, was the bandaged head and huge, dark lenses, staring fixedly, with a mist of green spots drifting in front of them. It was so uncanny to Henfrey that for a minute they remained staring blankly at one another. Then Henfrey looked down again. Very uncomfortable position! One would like to say something. Should he remark that

the weather was very cold for this time of the year?

He looked up as if to take aim with that introductory shot. "The weather——" he began.

"Why don't you finish and go?" said the rigid figure, evidently in a state of painfully suppressed rage. "All you've got to do is to fix the hour hand on its—axle. You're simply humbugging."

"Certainly, sir—one minute more. I overlooked. . . ." And Mr. Henfrey finished and went.

But he went off feeling excessively annoyed. "Damn it!" said Mr. Henfrey to himself, trudging down the village through the falling snow, "a man must do a clock at times, sure-ly."

And again, "Can't a man look at you? Ugly!"

And yet again, "Seemingly not. If the police was wanting you, you couldn't be more wrapped and bandaged."

At Gleeson's corner he saw Hall, who had recently married the stranger's hostess at the "Coach and Horses," and who now drove the Iping conveyance, when occasional people required it, to Sidderbridge Junction, coming towards him on his return from that place. Hall had evidently been "stopping a bit" at Sidderbridge, to judge by his driving. "'Ow do, Teddy?" he said, passing.

"You got a rum un up home!" said Teddy.

Hall very sociably pulled up. "What's that?" he asked.

"Rum-looking customer stopping at the 'Coach and Horses,'" said Teddy. "My sakes!"

And he proceeded to give Hall a vivid description of his wife's grotesque guest. "Looks a bit like a disguise, don't it? I'd like to see a man's face if I had him stopping in *my* place," said Henfrey. "But women are that trustful—where strangers are concerned. He's took your rooms, and he ain't even given a name, Hall."

"You don't say so," said Hall, who was a man of sluggish apprehension.

"Yes," said Teddy. "By the week. Whatever he is, you can't get rid of him under the week. And he's got a lot of luggage coming to-morrow, so he says. Let's hope it won't be stones in boxes, Hall."

He told Hall how his aunt at Hastings had been swindled by a stranger with empty portmanteaus. Altogether he left Hall vaguely suspicious. "Get up, old girl," said Hall. "I s'pose I must see 'bout this."

Teddy trudged on his way with his mind considerably relieved.

Instead of "seeing 'bout it," however, Hall, on his return, was severely rated by his wife on the length of time he had spent in Sidderbridge, and his mild inquiries were answered snappishly and in a manner not to the point. But the seed of suspicion Teddy had sown germinated in the mind of Mr. Hall in spite of these discouragements. "You wim' don't know everything," said Mr. Hall, resolved to ascertain more about the personality of his guest at the earliest possible opportunity. And after the stranger had gone to bed, which he did about half-past nine, Mr. Hall went aggressively into the parlor, and looked very hard at his wife's furniture, just to show that the stranger wasn't master there, and scrutinized a little contemptuously a sheet of mathematical computations the stranger

had left. When retiring for the night, he instructed Mrs. Hall to look very closely at the stranger's luggage when it came next day.

"You mind your own business, Hall," said Mrs. Hall, "and I'll mind mine."

She was all the more inclined to snap at Hall because the stranger was undoubtedly an unusually strange sort of stranger, and she was by no means assured about him in her own mind. In the middle of the night she woke up dreaming of huge, white heads like turnips, that came trailing after her, at the end of interminable necks, and with vast black eyes. But being a sensible woman, she subdued her terrors, and turned over and went to sleep again.

### CHAPTER III.

#### The Thousand and One Bottles

SO it was that on the 9th day of February, at the beginning of the thaw, this singular person fell out of infinity into Iping village. Next day his luggage arrived through the slush—and very remarkable luggage it was. There were a couple of trunks, indeed, such as a rational man might have, but in addition there were a box of books—big, fat books, of which some were just in an incomprehensible handwriting—and a dozen or more crates, boxes, and cases, containing objects packed in straw—glass bottles, as it seemed to Hall, tugging with a casual curiosity at the straw. The stranger, muffled in hat, coat, gloves, and wrapper, came out impatiently to meet Fearenside's cart, while Hall was having a word or so of gossip preparatory to helping bring them in. Out he came, not noticing Fearenside's dog, who was sniffing in a *dilettante* spirit at Hall's legs.

"Come along with those boxes," he said. "I've been waiting long enough."

And he came down the steps towards the tail of the wagon, as if to lay hands on the smaller crate.

No sooner had Fearenside's dog caught sight of him, however, than it began to bristle and growl savagely, and when he rushed down the steps it gave an undecided hop, and then sprang straight at his hand. "Whup!" cried Hall, jumping back, for he was no hero with dogs, and Fearenside howled, "Lie down!" and snatched his whip.

They saw the dog's teeth had slipped the hand, heard a kick, saw the dog execute a flanking jump and get home on the stranger's leg, and heard the rip of his trousering. Then the finer end of Fearenside's whip reached his property, and the dog, yelping with dismay, retreated under the wheels of the wagon. It was all the business of a swift half minute. No one spoke, every one shouted. The stranger glanced swiftly at his torn glove and at his leg, made as if he would stoop to the latter, then turned and rushed up the steps into the inn. They heard him go headlong across the passage and up the uncarpeted stairs to his bedroom.

"You brute, you!" said Fearenside, climbing off the wagon with his whip in his hand, while the dog watched him through the wheel.

"Come here!" said Fearenside. . . . "You'd better." Hall had stood gaping. "He wuz bit," said Hall.

"I'd better go an' see to en." And he trotted after the stranger. He met Mrs. Hall in the passage. "Carrier's darg," he said, "bit en."

He went straight upstairs, and the stranger's door being ajar, he pushed it open, and was entering without any ceremony, being of a naturally sympathetic turn of mind.

The blind was down and the room dim. He caught a glimpse of a most singular thing, what seemed a handless arm waving towards him, and a face of three huge, indeterminate spots on white, very like the face of a pale pansy. Then he was struck violently in the chest, hurled back, and the door slammed in his face, and locked. It was so rapid that it gave him no time to observe. A waving of indecipherable shapes, a blow and a concussion. There he stood on the dark little landing, wondering what it might be that he had seen.

After a couple of minutes he rejoined the little group that had formed outside the "Coach and Horses." There was Fearenside telling about it all over again for the second time; there was Mrs. Hall saying his dog didn't have no business to bite her guests; there was Huxter, the general dealer from over the road, interrogative; and Sandy Wadgers from the forge, judicial; besides women and children, all of them saying fatuities: "Wouldn't let en bite *me*, I knows"; "Tasn't right *have* such dargs"; "Whad 'e bite 'n for, than?" and so forth.

Mr. Hall, staring at them from the steps and listening, found it incredible that he had seen anything so very remarkable happen upstairs. Besides, his vocabulary was altogether too limited for his impressions.

"He don't want no help, he says," he said in answer to his wife's inquiry. "We'd better be a-takin' of his luggage in."

"He ought to have it cauterized at once," said Mr. Huxter, "especially if it's at all inflamed."

"I'd shoot en, that's what I'd do," said a lady in the group.

Suddenly the dog began growling again.

"Come along," cried an angry voice in the doorway, and there stood the muffled stranger, with his collar turned up and his hat brim bent down. "The sooner you get those things in, the better I'll be pleased." It is stated by an anonymous bystander that his trousers and gloves had been changed.

"Was you hurt, sir?" said Fearenside. "I'm rare sorry the darg——"

"Not a bit," said the stranger. "Never broke the skin. Hurry up with those things."

He then swore to himself, so Mr. Hall asserts.

**D**IRECTLY the first crate was, in accordance with his directions, carried into the parlor, the stranger flung himself upon it with extraordinary eagerness and began to unpack it, scattering the straw with an utter disregard of Mrs. Hall's carpet, and from it he began to produce bottles—little fat bottles containing powders, small and slender bottles containing colored and white fluids, fluted blue bottles labeled *poison*, bottles with round bodies and slender necks, large green glass bottles, large white glass bottles, bottles with glass stoppers and frosted labels, bottles with fine corks, bottles with bungs, bottles with wooden caps, wine bot-

ties, salad-oil bottles—putting them in rows on the chiffonier, on the mantel, on the table under the window, round the floor, on the book-shelf—everywhere. The chemist's shop in Bramblehurst could not boast half so many. Quite a sight it was. Crate after crate yielded bottles, until all six were empty and the table high with straw; the only things that came out of these crates besides the bottles were a number of test tubes and a carefully packed balance.

And directly the crates were unpacked the stranger went to the window and set to work, not troubling in the least about the litter of straw, the fire which had gone out, the box of books outside, nor about the trunks and other luggage that had gone upstairs.

When Mrs. Hall took his dinner in to him, he was already so absorbed in his work, pouring little drops out of the bottles into test tubes, that he did not hear her until she had swept away the bulk of the straw and put the tray on the table, with some little emphasis perhaps, seeing the state that the floor was in. Then he half turned his head, and immediately turned it away again. But she saw he had removed his glasses; they were beside him on the table, and it seemed to her that his eye sockets were extraordinarily hollow. He put on his spectacles again, and then turned and faced her. She was about to complain of the straw on the floor when he anticipated her.

"I wish you wouldn't come in without knocking," he said, in the tone of abnormal exasperation that seemed so characteristic of him.

"I knocked, but seemingly——"

"Perhaps you did. But in my investigations—my really very urgent and necessary investigations—the slightest disturbance, the jar of a door. . . . I must ask you——"

"Certainly, sir. You can turn the lock if you're like that, you know. Any time."

"A very good idea," said the stranger.

"This stror, sir. If I might make so bold as to remark——"

"Don't. If the straw makes trouble, put it down in the bill." And he mumbled at her—words suspiciously like curses.

He was so odd, standing there, so aggressive and explosive, bottle in one hand and test tube in the other, that Mrs. Hall was quite alarmed. But she was a resolute woman. "In which case, I should like to know, sir, what you consider——"

"A shilling—put down a shilling. Surely a shilling's enough?"

"So be it," said Mrs. Hall, taking up the tablecloth and beginning to spread it over the table. "If you're satisfied, of course——"

He turned and sat down with his coat collar towards her.

All the afternoon he worked with the door locked, and, as Mrs. Hall testifies, for the most part in silence. But once there was a concussion and a sound of bottles ringing together, as though the table had been hit, and the smash of glass flung violently down, and then a rapid pacing athwart the room. Fearing something was the matter, she went to the door and listened, not caring to knock.

"I can't go on," he was raving; "I *can't* go on! Three hundred thousand, four hundred thousand! The huge multitude! Cheated! All my life it may take me! . . . Patience! Patience, indeed! . . . Fool! fool!"

There was a noise of hobnails on the bricks in the bar, and Mrs. Hall very reluctantly had to leave the rest of his soliloquy. When she returned the room was silent again, save for the faint crepitation of his chair and the occasional clink of a bottle. It was all over; the stranger had resumed work.

When she took in his tea she saw broken glass in the corner of the room under the concave mirror, and a golden stain that had been carelessly wiped. She called attention to it.

"Put it down in the bill," snapped her visitor. "For God's sake don't worry me! If there's damage done, put it down in the bill," and he went on ticking a list in the exercise-book before him.

"I'll tell you something," said Fearenside mysteriously. It was late in the afternoon, and they were in the little beershop of Iping Hanger.

"Well?" said Teddy Henfrey.

"This chap you're speaking of, what my darg bit. Well—he's black. Leastways his legs are.

"I seed through the tear of his trousers and the tear of his glove. You'd have expected a sort of pinky to show, wouldn't you? Well—there wasn't none. Just blackness. I tell you he's as black as my hat."

"My sakes!" said Henfrey. "It's a rummy case altogether. Why, his nose is as pink as paint!"

"That's true," said Fearenside. "I knows that. And I tell 'ee what I'm thinking. That marn's a piebald, Teddy; black here and white there—in patches. And he's ashamed of it. He's kind of half-breed, and the color's come off patchy instead of mixing. I've heard of such things before. And it's the common way with harses, as any one can see."

#### CHAPTER IV.

#### Mr. Cuss Interviews the Stranger

I HAVE told the circumstances of the stranger's arrival in Iping with a certain fullness of detail, in order that the curious impression he created may be understood by the reader. But excepting two odd incidents, the circumstances of his stay until the extraordinary day of the club festival may be passed over very cursorily. There were a number of skirmishes with Mrs. Hall on matters of domestic discipline, but in every case until late in April, when the first signs of penury began, he overrode her by the easy expedient of an extra payment. Hall did not like him, and whenever he dared, he talked of the advisability of getting rid of him; but he showed his dislike mainly by concealing it ostentatiously, and avoiding his visitor as much as possible. "Wait till the summer," said Mrs. Hall sagely, "when the artisks are beginning to come. Then we'll see. He may be a bit overbearing, but bills settled punctual is bills settled punctual, whatever you likes to say."

The stranger did not go to church, and indeed made

no difference between Sunday and the irreligious days, even in costume. He worked, as Mrs. Hall thought, very fitfully. Some days he would come down early and be continuously busy. On others he would rise late, pace his room, fretting audibly for hours together, smoke, or sleep in the arm-chair by the fire. Communication with the world beyond the village he had none. His temper continued very uncertain; for the most part his manner was that of a man suffering under almost unendurable provocation, and once or twice things were snapped, torn, crushed, or broken in spasmodic gusts of violence. His habit of talking to himself in a low voice grew steadily upon him, but though Mrs. Hall listened conscientiously she could make neither head nor tail of what she heard.

He rarely went abroad by day, but at twilight he would go out muffled up enormously, whether the weather was cold or not, and he chose the loneliest paths and those most overshadowed by trees and banks. His goggling spectacles and ghastly, bandaged face under the penthouse of his hat, came with a disagreeable suddenness out of the darkness upon one or two home-going laborers; and Teddy Henfrey, tumbling out of the "Scarlet Coat" one night at half-past nine, was scared shamefully by the stranger's skull-like head (he was walking hat in hand) lit by the sudden light of the opened inn door. Such children as saw him at nightfall dreamt of bogies, and it seemed doubtful whether he disliked boys more than they disliked him, or the reverse; but there was certainly a vivid enough dislike on either side.

It was inevitable that a person of so remarkable an appearance and bearing should form a frequent topic in such a village as Iping. Opinion was greatly divided about his occupation. Mrs. Hall was sensitive on the point. When questioned, she explained very carefully that he was an "experimental investigator," going gingerly over the syllables as one who dreads pitfalls. When asked what an experimental investigator was, she would say with a touch of superiority that most educated people knew such things as that, and would then explain that he "discovered things." Her visitor had had an accident, she said, which temporarily discolored his face and hands, and being of a sensitive disposition was averse to any public notice of the fact.

Out of her hearing there was a view largely entertained that he was a criminal trying to escape from justice by wrapping himself altogether from the eye of the police. This idea sprang from the brain of Mr. Teddy Henfrey. No crime of any magnitude dating from the middle or end of February was known to have occurred. Elaborated in the imagination of Mr. Gould, the probationary assistant in the National School, this theory took the form that the stranger was an anarchist in disguise, preparing explosives, and he resolved to undertake such detective operations as his time permitted. These consisted for the most part in looking very hard at the stranger whenever they met, or in asking people who had never seen the stranger leading questions about him. But he detected nothing.

Another school of opinion followed Mr. Fearenside, and either accepted the piebald view or some modification of it. As, for instance, Silas Durgan who was

heard to assert that "if he chose to show enself at fairs, he'd make his fortune in no time," and being a bit of a theologian, compared the stranger to the man with the one talent. Yet another view explained the entire matter by regarding the stranger as a harmless lunatic. That had the advantage of accounting for everything straight away. Between these main groups there were waverers and compromisers. Sussex folk have few superstitions, and it was only after the events of early April that the thought of the supernatural was first whispered in the village. Even then it was only credited among the women folk.

But whenever they thought of him, people in Iping on the whole agreed in disliking him. His irritability, though it might have been comprehensible to an urban brain-worker, was an amazing thing to these quiet Sussex villagers. The frantic gesticulations they surprised now and then, the headlong pace after nightfall that swept him upon them round quiet corners, the inhuman bludgeoning of all the tentative advances of curiosity, the taste for twilight that led to the closing of doors, the pulling down of blinds, the extinction of candles and lamps—who could agree with such goings on? They drew aside as he passed down the village, and when he had gone by, young humorists would up with coat collars and down with hat brims, and go pacing nervously after him in imitation of his occult bearing. There was a song popular at that time called "The Bogey Man!" Miss Satchell sang it at the schoolroom concert—in aid of the church lamps—and thereafter, whenever one or two of the villagers were gathered together and the stranger appeared, a bar or so of this tune, more or less sharp or flat, was whistled in the midst of them. Also belated little children would call "Bogey Man!" after him, and make off, tremulously elated.

CUSS, the general practitioner, was devoured by curiosity. The bandages excited his professional interest; the report of the thousand-and-one bottles aroused his jealous regard. All through April and May he coveted an opportunity of talking to the stranger, and at last, towards Whitsuntide, he could stand it no longer, but hit upon the subscription list for a village nurse as an excuse. He was surprised to find that Mr. Hall did not know his guest's name.

"He gave a name," said Mrs. Hall—an assertion which was quite unfounded—"but I didn't rightly hear it." She thought it seemed so silly not to know the man's name.

Cuss rapped at the parlor door and entered. There was a fairly audible imprecation from within.

"Pardon my intrusion," said Cuss, and then the door closed and cut Mrs. Hall off from the rest of the conversation.

She could hear the murmur of voices for the next ten minutes, then a cry of surprise, a stirring of feet, a chair flung aside, a bark of laughter, quick steps to the door, and Cuss appeared, his face white, his eyes staring over his shoulder. He left the door open behind him, and, without looking at her, strode across the hall and went down the steps, and she heard his feet hurrying along the road. He carried his hat in his hand. She stood behind the bar, looking at the open door of the

parlor. Then she heard the stranger laughing quietly, and his footsteps came across the room. She could not see his face where she stood. The parlor door slammed, and the place was silent again.

Cuss went straight up the village to Bunting, the vicar.

"Am I mad?" Cuss began abruptly, as he entered the shabby little study. "Do I look like an insane person?"

"What's happened?" said the vicar, putting the ammonite\* on the loose sheets of his forthcoming sermon.

"That chap at the inn——"

"Well?"

"Give me something to drink," said Cuss, and he sat down.

When his nerves had been steadied by a glass of cheap sherry—the only drink the good vicar had available—he told him of the interview he had just had.

"Went in," he gasped, "and began to demand a subscription for that nurse fund. He'd stuck his hands in his pockets as I came in, and he sat down lumpily in his chair. Sniffed. I told him I'd heard he took an interest in scientific things. He said, 'Yes.' Sniffed again. Kept on sniffing all the time, evidently recently caught an infernal cold. No wonder—wrapped up like that. I developed the nurse idea, and all the while kept my eyes open. Bottles—chemicals—everywhere. Balance, test tubes, in stands, and a smell of—evening primrose. Would he subscribe? Said he'd consider it. Asked him point blank was he researching. Said he was. A long research? Got quite cross, a 'damnable long research,' said he, blowing the cork out, so to speak. 'Oh?' said I. And out came the grievance. The man was just on the boil, and my question boiled him over. He had been given a prescription—most valuable prescription—what for he wouldn't say. Was it medical? 'Damn you! what are you fishing after?' I apologized. Dignified sniff and cough. He resumed. He'd read it. Five ingredients. Put it down; turned his head. Draught of air from window lifted the paper. Swish, rustle. He was working in a room with an open fireplace, he said. Saw a flicker, and there was the prescription burning and lifting chimneyward. Rushed towards it just as it whisked up chimney. So! Just at that point, to illustrate his story, out came his arm."

"Well?"

"No hand. Just an empty sleeve. Lord! I thought, *that's* a deformity! Got a cork arm, I suppose, and has taken it off. Then, I thought, there's something odd in that. What the devil keeps that sleeve up and open if there's nothing in it? There was nothing in it, I tell you. Nothing down it, right down to the joint. I could see right down it to the elbow, and there was a glimmer of light shining through a tear of the cloth. 'Good God!' I said. Then he stopped. Stared at me with those blank, goggled eyes of his, and then at his sleeve."

"Well?"

"That's all. He never said a word, just glared and put his sleeve back in his pocket quickly. 'I was saying,' said he, 'that there was the prescription burning, wasn't I?' Interrogative cough. 'How the devil,' said

\* A fossil shell used as a paperweight.

I, 'can you move an empty sleeve like that?' 'Empty sleeve?' 'Yes,' said I, 'an empty sleeve.'

"It's an empty sleeve, is it? You saw it was an empty sleeve?" He stood up right away. I stood up too. He came towards me in three very slow steps, and stood quite close. Sniffed venomously. I didn't flinch, though I'm hanged if that bandaged knob of his, and those blinkers, aren't enough to unnerve any one, coming quietly up to you.'

"'You said it was an empty sleeve?' he said. 'Certainly,' I said. And staring and saying nothing, a bare-faced man, unspectacled, starts scratch. Then very quietly he pulled his sleeve out of his pocket again, and raised his arm towards me, as though he would show it to me again. He did it very, very slowly. I looked at it. Seemed an age. 'Well?' said I, clearing my throat; 'there's nothing in it.'

"Had to say something. I was beginning to feel frightened. I could see right down it. He extended it straight towards me, slowly, slowly—just like that—until the cuff was six inches from my face. Queer thing to see an empty sleeve come at you like that! And then——"

"Well?"

"Something—exactly like a finger and a thumb it felt—nipped my nose."

Bunting began to laugh.

"There wasn't anything there!" said Cuss—his voice running up into a shriek at the "there." "It's all very well for you to laugh, but I tell you I was so startled, I hit his cuff hard, and turned round and cut out of the room—I left him——"

Cuss stopped. There was no mistaking the sincerity of his panic. He turned round in a helpless way, and took a second glass of the excellent vicar's very inferior sherry. "When I hit his cuff," said Cuss, "I tell you, it felt exactly like hitting an arm."

"And there wasn't an arm! There wasn't the ghost of an arm!"

Mr. Bunting thought it over. He looked suspiciously at Cuss. "It's a most remarkable story," he said. He looked very wise and grave indeed. "It's really," said Mr. Bunting with judicial emphasis, "a most remarkable story."

## CHAPTER V

### The Burglary at the Vicarage

**T**HE facts of the burglary at the Vicarage come to us chiefly through the medium of the vicar and his wife. It occurred in the small hours of Whit Monday, the day devoted in Iping to the Club festivities. Mrs. Bunting, it seems, woke up suddenly in the stillness that comes before the dawn, with a strong impression that the door of their bedroom had opened and closed. She did not arouse her husband at first, but sat up in bed listening. She then distinctly heard the pad, pad, pad of bare feet coming out of the adjoining dressing-room and walking along the passage towards the staircase. So soon as she felt assured of this she aroused the Rev. Mr. Bunting as quietly as possible. He did not strike a light, but putting on his spectacles, his dressing gown, and his bath slippers, went out on

the landing to listen. He heard quite distinctly a fumbling going on at his study desk downstairs, and then a violent sneeze.

At that he returned to his bedroom, armed himself with the most obvious weapon, the poker, and descended the staircase as noiselessly as possible. Mrs. Bunting came out on the landing.

The hour was about four, and the ultimate darkness of the night was passed. There was a faint shimmer of light in the hall, but the study doorway yawned impenetrably black. Everything was still, except the faint creaking of the stairs under Mr. Bunting's tread, and the slight movements in the study. Then something snapped, the drawer was opened, and there was a rustle of papers. Then came an imprecation, and a match was struck, and the study was flooded with yellow light. Mr. Bunting was now in the hall, and through the crack of the door he could see the desk and the open drawer, and a candle burning on the desk. But the robber he could not see. He stood there in the hall undecided what to do, and Mrs. Bunting, her face white and intent, crept slowly downstairs after him. One thing kept up Mr. Bunting's courage. The persuasion that this burglar was a resident in the village.

They heard the chink of money, and realized that the robber had found the housekeeping reserve of gold—two pounds ten in half sovereigns altogether. At that sound Mr. Bunting was nerved to abrupt action. Gripping the poker firmly, he rushed into the room, closely followed by Mrs. Bunting.

"Surrender!" cried Mr. Bunting fiercely, and then stopped, amazed. Apparently the room was perfectly empty.

Yet their conviction that they had that very moment heard somebody moving in the room had amounted to a certainty. For half a minute perhaps they stood gasping, then Mrs. Bunting went across the room and looked behind the screen, while Mr. Bunting, by a kindred impulse, peered under the desk. Then Mrs. Bunting turned back the window curtains and Mr. Bunting looked up the chimney, and probed it with the poker. Then Mrs. Bunting scrutinized the waste-paper basket, and Mr. Bunting opened the coal-scuttle. Then they came to a stop, and stood with eyes interrogating one another.

"I could have sworn——" said Mr. Bunting.

"The candle!" said Mr. Bunting. "Who lit the candle?"

"The drawer!" said Mrs. Bunting. "And the money's gone!"

She went hastily to the doorway.

"Of all the extraordinary occurrences——"

There was a violent sneeze in the passage. They rushed out, and as they did so the kitchen door slammed. "Bring the candle!" said Mr. Bunting, and led the way. They both heard the sound of bolts being hastily shot back.

As he opened the kitchen door he saw through the scullery that the back door was just opening, and the faint light of early dawn displayed the dark masses of the garden beyond. He was certain that nothing went out of the door. It opened, stood open for a moment, and then closed with a slam. As it did so, the candle

Mrs. Bunting was bringing from the study flickered and flared. . . . It was a minute or more before they entered the kitchen.

The place was empty. They refastened the back door, examined the kitchen, pantry, and scullery thoroughly, and at last went down into the cellar. There was not a soul to be found in the house, search as they would.

Daylight found the vicar and his wife, a quaintly costumed little couple, still marveling about on their own ground floor by the unnecessary light of a guttering candle.

"Of all the extraordinary affairs," began the vicar for the twentieth time.

"My dear," said Mrs. Bunting, "there's Susie coming down. Just wait here until she has gone into the kitchen, and then slip upstairs."

## CHAPTER VI

### The Furniture That Went Mad

**N**OW it happened that in the early hours of Whit Monday, before Millie was hunted out for the day, Mr. Hall and Mrs. Hall both rose and went noiselessly down into the cellar. Their business there was of a private nature, and had something to do with the specific gravity of their beer.

They had hardly entered the cellar when Mrs. Hall found she had forgotten to bring down a bottle of sarsaparilla from their joint room. As she was the expert and principal operator in this affair, Hall very properly went upstairs for it.

On the landing he was surprised to see that the stranger's door was ajar. He went on into his own room and found the bottle as he had been directed.

But as he came downstairs, he noticed that the bolts on the front door had been shot back—that the door was, in fact, simply on the latch. And, with a flash of inspiration, he connected this with the stranger's room upstairs and the suggestions of Mr. Teddy Henfrey. He distinctly remembered holding the candle while Mrs. Hall shot these bolts overnight. At the sight he stopped, gaping; then, with the bottle still in his hands, went upstairs again. He rapped at the stranger's door. There was no answer. He rapped again; then pushed the door wide open and entered.

It was as he expected. The bed, the room also, was empty. And what was queerer, even to his heavy intelligence, on the bedroom chair and along the rail of the bed were scattered the garments, the only garments so far as he knew, and the bandages of their guest. His big slouch hat even was cocked jauntily over the bedpost.

As Hall stood there he heard his wife's voice coming out of the depth of the cellar, and with that rapid telescoping of the syllables and interrogative cocking up of the final words to a high note, by which the West Sussex villager is wont to indicate a brisk impatience, "Gearge! You gart whad a wand?"

At that he turned and hurried down to her.

"Janny," he said over the rail of the cellar steps, "'tas the truth what Henfrey sez. 'E's not in uz room, 'e en't. And the front door's onbolted."

At first Mrs. Hall did not understand, and so soon

as she did she resolved to see the empty room for herself. Hall, still holding the bottle, went first. "If 'e en't there," he said, "'is close' are. And what's 'e doin' 'ithout 'is close, than? 'Tas a most curius basness."

As they came up the cellar steps they both, it was afterwards ascertained, fancied they heard the front door open and shut, but, seeing it closed and nothing there, neither said a word to the other about it at the time. Mrs. Hall passed her husband in the passage, and ran on first upstairs. Some one sneezed on the staircase. Hall, following six steps behind, thought that he heard her sneeze; she, going on first, was under the impression that Hall was sneezing. She flung open the door and stood regarding the room. "Of all the curious!" she said.

She heard a sniff close behind her head, as it seemed, and, turning, was surprised to see Hall a dozen feet off on the topmost stair. But in another moment he was beside her. She bent forward and put her hand on the pillow and then under the clothes.

"Cold," she said. "He's been up this hour or more."

As she did so a most extraordinary thing happened. The bedclothes gathered themselves together, leapt up suddenly into a sort of peak, and then jumped headlong over the bottom rail. It was exactly as if a hand had clutched them in the centre and flung them aside. Immediately after, the stranger's hat hopped off the bedpost, described a whirling flight in the air through the better part of a circle, and then dashed straight at Mrs. Hall's face. Then as swiftly came the sponge from the washstand, and then the chair, flinging the stranger's coat and trousers carelessly aside, and laughing dryly in a voice singularly like the stranger's, turned itself up with its four legs at Mrs. Hall, seemed to take aim at her for a moment, and charged at her. She screamed and turned, and then the chair legs came gently but firmly against her back and impelled her and Hall out of the room. The door slammed violently, and was locked. The chair and bed seemed to be executing a dance of triumph for a moment, and then abruptly everything was still.

Mrs. Hall was left almost in a fainting condition in Mr. Hall's arms on the landing. It was with the greatest difficulty that Mr. Hall and Millie, who had been roused by her scream of alarm, succeeded in getting her downstairs, and applying the restoratives customary in such cases.

"'Tas sperits," said Mrs. Hall. "I know 'tas sperits. I've read the papers of en. Tables and chairs leaping and dancing . . ."

"Take a drop more, Janny," said Hall. "'Twill steady ye."

"Lock him out," said Mrs. Hall. "Don't let him come in again. I half guessed . . . I might ha' known. With them goggling eyes and bandaged head, and never going to church of a Sunday. And all they bottles—more'n it's right for any one to have. He's put the sperits into the furniture. . . . My good old furniture! 'Twas in the very chair my poor dear mother used to sit when I was a little girl. To think it should rise up against me now . . ."

"Just a drop more, Janny," said Hall. "Your nerves is all upset."

They sent Millie across the street through the golden five o'clock sunshine to rouse up Mr. Sandy Wadgers, the blacksmith.

Mr. Hall's compliments, and the furniture upstairs was behaving most extraordinary. Would Mr. Wadgers come round?

He was a knowing man, was Mr. Wadgers, and very resourceful. He took quite a grave view of the case. "Arm darmed if thet ent witchcraft," was the view of Mr. Sandy Wadgers. "You warnt horseshoes for such gentry as he."

He came round greatly concerned. They wanted him to lead the way upstairs to the room; but he didn't seem to be in any hurry. He preferred to talk in the passage. Over the way Huxter's apprentice came out, and began taking down the shutters of the tobacco window. He was called over to join the discussion. Mr. Huxter naturally followed in the course of a few minutes. The Anglo-Saxon genius for parliamentary government asserted itself: there was a great deal of talk and no decisive action.

"Let's have the facts first," insisted Mr. Sandy Wadgers. "Let's be sure we'd be acting perfectly right in bustin' that there door open. A door onbust is always open to bustin', but ye can't onbust a bust door once you've busted en."

And suddenly and most wonderfully, the door of the room upstairs opened of its own accord, and as they looked up in amazement, they saw descending the stairs the muffled figure of the stranger, staring more blackly and blankly than ever with those unreasonably large glass eyes of his. He came down stiffly and slowly, staring all the time; he walked across the passage, staring, then stopped.

"Look there!" he said, and their eyes followed the direction of his gloved finger, and saw a bottle of sarsaparilla hard by the cellar door. Then he entered the parlor, and suddenly, swiftly, viciously, slammed the door in their faces.

Not a word was spoken until the last echoes of the slam had died away. They stared at one another.

"Well, if that don't lick everything!" said Mr. Wadgers, and left the alternative unsaid.

"I'd go in and ask'n 'bout it," said Wadgers to Mr. Hall. "I'd d'mand an explanation."

It took some time to bring the landlady's husband up to that pitch. At last he rapped, opened the door, and got as far as:

"Excuse me——"

"Go to the devil!" said the stranger in a tremendous voice, and, "Shut that door after you."

So this brief interview terminated.

## CHAPTER VII

### The Unveiling of the Stranger

**T**HE stranger went into the little parlor of the "Coach and Horses" about half-past five in the morning, and there he remained until near mid-day, the blinds down, the door shut, and none, after Hall's repulse, venturing near him.

All that time he must have fasted. Thrice he rang

his bell, the third time furiously and continuously, but no one answered him. "Him and his 'Go to the devil,' indeed!" said Mrs. Hall. Presently came an imperfect rumour of the burglary at the Vicarage, and two and two were put together. Hall, assisted by Wadgers, went off to find Mr. Shuckleforth, the magistrate, and take his advice. No one ventured upstairs. How the stranger occupied himself is unknown. Now and then he would stride violently up and down, and twice came an outburst of curses, a tearing of paper, and a violent smashing of bottles.

The little group of scared but curious people increased. Mrs. Huxter came over; some gay young fellows resplendent in black, ready-made jackets and *pique* paper ties—for it was Whit Monday—joined the group with confused and confusing interrogations. Young Archie Harker distinguished himself by going up the yard and trying to peep under the drawn blinds. He could see nothing, but gave reason for supposing that he did, and others of the Iping youth presently joined him.

It was the finest of all possible Whit Mondays, and down the village street stood a row of nearly a dozen booths, a shooting-gallery, and on the grass by the forge were three yellow and chocolate wagons, and some picturesque strangers of both sexes putting up a coconut shy. The gentlemen wore blue jerseys, the ladies white aprons and quite fashionable hats with heavy plumes. Woodyer, of the "Purple Fawn," and Mr. Jagers, the cobbler, who also sold second-hand ordinary bicycles, were stretching a string of union jacks and royal ensigns, which had originally celebrated the first Victorian Jubilee, across the road.

And inside in the artificial darkness of the parlour, into which only one thin jet of sunlight penetrated, the stranger, hungry we must suppose, and fearful, hidden in his uncomfortable hot wrappings, pored through his dark glasses upon his paper, or chinked his dirty little bottles, and occasionally swore savagely at the boys, audible, if invisible, outside the windows. In the corner by the fireplace lay the fragments of half a dozen smashed bottles, and a pungent twang of chlorine tainted the air. So much we know from what was heard at the time, and from what was subsequently seen in the room.

About noon he suddenly opened his parlour door and stood glancing fixedly at the three or four people in the bar. "Mrs. Hall," he said. Somebody went sheepishly and called for Mrs. Hall.

Mrs. Hall appeared after an interval, a little short of breath, but all the fiercer for that. Hall was still out. She had deliberated over this scene, and she came holding a little tray with an unsettled bill upon it. "Is it your bill you're wanting, sir?" she said.

"Why wasn't my breakfast laid? Why haven't you prepared my meals and answered my bell? Do you think I live without eating?"

"Why isn't my bill paid?" said Mrs. Hall. "That's what I want to know."

"I told you three days ago I was awaiting a remittance——"

"I told you three days ago I wasn't going to await no remittances. You can't grumble if your breakfast

waits a bit, if my bill's been waiting these five days, can you?"

The stranger swore briefly but vividly.

"Nar, nar!" from the bar.

"And I'd thank you kindly, sir, if you'd keep your swearing to yourself, sir," said Mrs. Hall.

The stranger stood looking more like an angry diving helmet than ever. It was universally felt in the bar that Mrs. Hall had the better of him. His next words showed as much.

"Look here, my good woman——" he began.

"Don't 'good woman' *me*," said Mrs. Hall.

"I've told you my remittance hasn't come."

"Remittance, indeed!" said Mrs. Hall.

"Still, I dare say in my pocket——"

"You told me three days ago that you hadn't anything but a sovereign's worth of silver upon you."

"Well, I've found some more."

"'Ul-lo!" from the bar.

"I wonder where you found it?" said Mrs. Hall.

That seemed to annoy the stranger, very much. He stamped his foot. "What do you mean?" he said.

"That I wonder where you found it," said Mrs. Hall. "And before I take any bills, or get any breakfasts, or do any such things whatsoever, you got to tell me one or two things I don't understand, and what nobody don't understand, and what everybody is very anxious to understand. I want know what you been doing t'my chair upstairs, and I want know how 'tis your room was empty and how you got in again? Them as stops in this house comes in by doors—that's the rule of this house, and that you *didn't* do, and what I want know is how you *did* come. And I want know——"

**S**UDDENLY the stranger raised his gloved hands clenched, stamped his foot, and said, "Stop!" with such extraordinary violence that he silenced her instantly.

"You don't understand," he said, "who I am or what I am. I'll show you. By heaven! I'll show you." Then he put his open palm over his face and withdrew it. The centre of his face became a black cavity. "Here," he said. He stepped forward and handed Mrs. Hall something which she, staring at his metamorphosed face, accepted automatically. Then, when she saw what it was, she screamed loudly, dropped it, and staggered back. The nose—it was the stranger's nose! pink and shining—rolled on the floor with a sound of hollow cardboard.

Then he removed his spectacles, and every one in the bar gasped. He took off his hat, and with a violent gesture tore at his whiskers and bandages. For a moment they resisted him. A flash of horrible anticipation passed through the bar. "Oh, my Gard!" said some one. Then off they came.

It was worse than anything. Mrs. Hall, standing open-mouthed and horror-struck, shrieked at what she saw, and made for the door of the house. Every one began to move. They were prepared for scars, disfigurement, tangible horrors—but *nothing!* The bandages and false hair flew across the passage into the bar, making a hobbledehoy jump to avoid them. Every one tumbled on every one else down the steps. For the

man who stood there shouting some incoherent explanation was a solid, gesticulating figure up to the coat-collar of him, and then—nothingness, no visible thing at all!

People down the village heard shouts and shrieks, and looking up the street saw the "Coach and Horses" violently firing out its humanity. They saw Mrs. Hall fall down, and Mr. Teddy Henfrey jump to avoid tumbling over her, and then they heard the frightful screams of Millie, who, emerging suddenly from the kitchen at the noise of the tumult, had come upon the headless stranger from behind. These ceased suddenly.

Forthwith every one all the way down the street—the sweetstuff-seller, cocoanut-shy proprietor and his assistant, the swing man, little boys and girls, rustic dandies, smart wenches, smocked elders, and aproned gypsies—began running towards the inn, and in a miraculously short space of time a crowd of perhaps forty people, and rapidly increasing, swayed, and hooted, and inquired, and exclaimed, and suggested in front of Mrs. Hall's establishment. Everybody seemed eager to talk at once, and the result was Babel. A small group supported Mrs. Hall, who was picked up in a state of collapse. There was a confusion, and the incredible evidence of a vociferous eye-witness. "O Bogie." "What's he been doin', then?" "Ain't hurt the girl, 'as 'e?" "Run at en with a knife, I believe." "No 'ed, I tell ye. I don't mean no manner of speaking, I mean Marn 'ithout a 'Ed!" "Narnsense! 'tis some conjuring trick." "Fetched off 's wrappings, 'e did——"

In its struggles to see in through the open door the crowd formed itself into a struggling wedge, with the more adventurous apex nearest the inn. "He stood for a moment, I heerd the gal scream, and he turned. I saw her skirts whisk, and he went after her. Didn't take ten seconds. Back he comes with a knife in his hand and a loaf, stood just as if he was staring. Not a moment ago. Went in that there door. I tell 'e, 'e ain't gart no 'ed 'tall. You just missed en——"

There was a disturbance behind, and the speaker stopped to step aside for a little procession that was marching very resolutely towards the house; first Mr. Hall, very red and determined, then Mr. Bobby Jaffers, the village constable, and then the wary Mr. Wadgers. They had come now armed with a warrant.

People shouted conflicting information of the recent circumstances. "Ed or no 'ed," said Jaffers: "I got to 'rest en, 'rest en I *will*."

Mr. Hall marched up the steps, marched straight to the door of the parlour and found it open. "Constable," he said, "do your duty."

Jaffers marched in, Hall next, Wadgers last. They saw in the dim light the headless figure facing them, with a gnawed crust of bread in one gloved hand and a chunk of cheese in the other.

"That's him," said Hall.

"What the devil's this?" came in a tone of angry expostulation from above the collar of the figure.

"You're a darned rum customer, mister," said Mr. Jaffers. "But 'ed or no 'ed the warrant says 'body,' and duty's duty——"

"Keep off!" said the figure, starting back.

Abruptly he whipped down the bread and cheese,

and Mr. Hall just grasped the knife on the table in time to save it. Off came the stranger's left glove, and was slapped in Jaffer's face. In another moment Jaffers, cutting short some statement concerning a warrant, had gripped him by the handleless wrist, and caught his invisible throat. He got a sounding kick on the shin that made him shout, but he kept his grip. Hall sent the knife sliding along the table to Wadgers, who acted as goal-keeper for the offensive, so to speak, and then stepped forward as Jaffers and the stranger swayed and staggered towards him, clutching and hitting in. A chair stood in the way, and went aside with a crash as they came down together.

"Get the feet," said Jaffers between his teeth.

Mr. Hall, endeavouring to act on instructions, received a sounding kick in the ribs that disposed of him for a moment; and Mr. Wadgers, seeing the decapitated stranger had rolled over and got the upper side of Jaffers, retreated towards the door, knife in hand, and so collided with Mr. Huxter and the Sidderbridge carter coming to the rescue of law and order. At the same moment down came three or four bottles from the chiffonier and shot a web of pungency into the air of the room.

"I'll surrender," cried the stranger, though he had Jaffers down, and in another moment he stood up panting, a strange figure, headless and handleless—for he had pulled off his right glove now as well as his left. "It's no good," he said, as if sobbing for breath.

IT was the strangest thing in the world to hear that voice coming as if out of empty space, but the Sussex peasants are perhaps the most matter-of-fact people under the sun. Jaffers got up also, and produced a pair of handcuffs. Then he stared.

"I say!" said Jaffers, brought up short by a dim realisation of the incongruity of the whole business. "Darn it! Can't use 'em as I can see."

The stranger ran his arm down his waistcoat, and, as if by a miracle, the buttons to which his empty sleeve pointed became undone. Then he said something about his shin, and stooped down. He seemed to be fumbling with his shoes and socks.

"Why!" said Huxter suddenly, "that's not a man at all. It's just empty clothes. Look! You can see down his collar and the linings of his clothes. I could put my arm——"

He extended his hand; it seemed to meet something in mid-air, and he drew it back with a sharp exclamation. "I wish you'd keep your fingers out of my eye," said the aerial voice in a tone of savage expostulation. "The fact is, I'm all here—head, hands, legs, and all the rest of it, but it happens I'm invisible. It's a confounded nuisance, but I am. That's no reason why I should be poked to pieces by every stupid bumpkin in Iping, is it?"

The suit of clothes, now all unbuttoned and hanging loosely upon its unseen supports, stood up, arms akimbo.

Several other of the men folk had now entered the room, so that it was closely crowded. "Invisible, eh?" said Huxter, ignoring the stranger's abuse. "Who ever heard the likes of that?"

"It's strange, perhaps, but it's not a crime. Why

am I assaulted by a policeman in this fashion——?"

"Ah! that's a different matter," said Jaffers. "No doubt you are a bit difficult to see in this light, but I got a warrant and it's all correct. What I'm after ain't no invisibility, it's burglary. There's a house been broke into, and money took."

"Well?"

"And circumstances certainly point——"

"Stuff and nonsense!" said the Invisible Man.

"I hope so, sir. But I've got my instructions——"

"Well," said the stranger, "I'll come. I'll *come*. But no handcuffs."

"It's the regular thing," said Jaffers.

"No handcuffs," stipulated the stranger.

"Pardon me," said Jaffers.

Abruptly the figure sat down, and before any one could realize what was being done, the slippers, socks, and trousers had been kicked off under the table. Then he sprang up again and flung off his coat.

"Here, stop that," said Jaffers, suddenly realizing what was happening. He gripped the waistcoat, it struggled, and the shirt slipped out of it and left it limp and empty in his hand. "Hold him!" said Jaffers loudly. "Once he gets the things off——"

"Hold him!" cried every one, and there was a rush at the fluttering white shirt, which was now all that was visible of the stranger.

The shirt sleeve planted a shrewd blow in Hall's face that stopped his open-armed advance and sent him backward into old Toothsome, the sexton, and in another moment the garment was lifted up, and became convulsed and vacantly flapping about the arms, even as a shirt that is being thrust off over a man's head. Jaffers clutched at it, and only helped to pull it off. He was struck in the mouth out of the air, and incontinently drew his truncheon and smote Teddy Henfrey savagely upon the crown of his head.

"Look out!" said everybody, fencing at random and hitting at nothing. "Hold him! Shut the door! Don't let him loose. I got something! Here he is!" A perfect Babel of noises they made. Everybody, it seemed, was being hit all at once, and Sandy Wadgers, knowing as ever, and his wits sharpened by a frightful blow on the nose, reopened the door and led the rout. The others, following incontinently, were jammed for a moment in the corner by the doorway. The hitting continued. Phipps, the Unitarian, had a front tooth broken, and Henfrey was injured in the cartilage of his ear. Jaffers was struck under the jaw, and, turning, caught at something that intervened between him and Huxter in the *mêlée*, and prevented their coming together. He felt a muscular chest, and in another moment the whole mass of struggling, excited men shot out into the crowded hall.

"I got him!" shouted Jaffers, choking and reeling through them all, and wrestling with purple face and swelling veins against his unseen enemy.

Men staggered right and left as the extraordinary conflict swayed swiftly towards the house door and went spinning down the half dozen steps of the inn. Jaffers cried in a strangled voice, holding tight nevertheless, and making play with his knee, spun round and

fell heavily undermost with his head on the gravel. Only then did his fingers relax.

There were excited cries of "Hold him!" "Invisible!" and so forth, and a young fellow, a stranger in the place whose name did not come to light, rushed in at once, caught something, missed his hold, and fell over the constable's prostrate body. Half-way across the road a woman screamed as something pushed by her, a dog, kicked apparently, yelped and ran howling into Huxter's yard, and with that the transit of the Invisible Man was accomplished. For a space people stood amazed and gesticulating, and then came panic, and scattered them abroad through the village as a gust scatters dead leaves. But Jaffers lay quite still, face and knees upward bent, at the foot of the steps of the inn.

## CHAPTER VIII

### In Transit

THE eighth chapter is exceedingly brief, and relates that Gibbins, the amateur naturalist of the district, while lying out on the spacious open downs without a soul within a couple of miles of him as he thought, and almost dozing, heard close to him the sound of a man coughing, sneezing, and then swearing savagely to himself, and looking beheld nothing. Yet the voice was indisputable. It continued to swear with that breadth and variety that distinguishes the swearing of a cultivated man. It grew to a climax, diminished again and died away in the distance, going, as it seemed to him, in the direction of Adderdean. It lifted to a spasmodic sneeze, and ended. Gibbins had heard nothing of the morning's occurrences, but the phenomenon was so striking and disturbing, that his philosophical tranquillity vanished; he got up hastily and hurried down the steepness of the hill towards the village, as fast as he could go.

## CHAPTER IX

### Mr. Thomas Marvel

YOU must picture Mr. Thomas Marvel as a person of copious, flexible visage, a nose of cylindrical protusion, a liquorish, ample, fluctuating mouth, and a beard of bristling eccentricity. His figure inclined to *embonpoint*, his short limbs accentuated this inclination. He wore a furry silk hat, and the frequent substitution of twine and shoe-laces for buttons, apparent at critical points of his costume, marked a man essentially bachelor.

Mr. Thomas Marvel was sitting with his feet in a ditch by the roadside over the down towards Adderdean, about a mile and a half out of Iping. His feet, save for socks of irregular open-work, were bare, his big toes were broad, and pricked like the ears of a watchful dog. In a leisurely manner—he did everything in a leisurely manner—he was contemplating a pair of lace-up boots. They were the soundest boots he had come across for a long time, but too large for him, whereas those he had had were, in dry weather, a very comfortable fit, but too thin soled for damp. Mr. Thomas Marvel hated roomy boots, but then he hated

damp. He had never properly thought out which he hated most, and it was a pleasant day, and there was nothing better to do. So he put the four boots in a graceful group on the turf, and looked at them. And seeing them there among the grass and springing agrimony, it suddenly occurred to him that both pairs were exceedingly ugly to see. He was not at all startled by a voice behind him.

"They're boots, anyhow," said the Voice.

"They are—Charity Boots," said Mr. Thomas Marvel, with his head on one side regarding them distastefully; "and which is the ugliest pair in the whole blessed universe, I'm darned if I know!"

"H'm," said the Voice.

"I've worn worse—in fact, I've worn none. But none so owdacious ugly—if you'll allow the expression. I've been cadging boots—in particular—for days, because I was sick of *them*. They're sound enough, of course. But a gentleman on tramp sees such a thundering lot of his boots. And if you'll believe me, I've raised nothing in the whole blessed county, try as I would, but *them*. Look at 'em! And a good county for boots, too, in a general way. But it's just my promiscuous luck. I've got my boots in this county ten years or more. And then they treat you like this."

"It's a beast of a county," said the Voice, "and pigs for people."

"Ain't it?" said Mr. Thomas Marvel. "Lord! But them boots! It beats it."

He turned his head over his shoulder to the right, to look at the boots of his interlocutor, with a view to comparisons, and lo! where the boots of his interlocutor should have been were neither legs nor boots. He turned his head over his shoulder to the left, and there also were neither legs nor boots. He was irradiated by the dawn of a great amazement. "Where *are* yer?" said Mr. Thomas Marvel over his shoulder, and coming on all fours. He saw a stretch of empty down, with the wind swaying the remote green-pointed furze bushes.

"Am I drunk?" said Mr. Marvel. "Have I had visions? Was I talking to myself? What the——"

"Don't be alarmed," said a Voice.

"None of your ventriloquising *me*," said Mr. Thomas Marvel, rising sharply to his feet. "Where *are* yer? Alarmed, indeed!"

"Don't be alarmed," repeated the Voice.

"*You'll* be alarmed in a minute, you silly fool," said Mr. Thomas Marvel. "Where *are* yer? Lemme get my mark on yer . . ."

"*Are* yer *buried*?" said Mr. Thomas Marvel after an interval.

There was no answer. Mr. Thomas Marvel stood bootless and amazed, his jacket nearly thrown off.

"Peewit," said a peewit very remote.

"Peewit, indeed!" said Mr. Thomas Marvel. "This ain't no time for foolery." The down was desolate east and west, north and south; the road, with its shallow ditches and white bordering stakes, ran smooth and empty north and south, and, save for that peewit, the blue sky was empty too. "So help me," said Mr. Thomas Marvel, shuffling his coat on to his shoulders again. "It's the drink. I might ha' known."

"It's not the drink," said the Voice. "You keep your nerves steady."

"Ow!" said Mr. Marvel, and his face grew white amidst its patches. "It's the drink," his lips repeated noiselessly. He remained staring about him, rotating slowly backwards. "I could have *swore* I heard a voice," he whispered.

"Of course you did."

"It's there again," said Mr. Marvel, closing his eyes and clapping his hand on his brow with a tragic gesture. He was suddenly taken by the collar and shaken violently, and left more dazed than ever. "Don't be a fool!" said the Voice.

"I'm—off—my—blooming—chump!" said Mr. Marvel. "It's no good. It's fretting about them blarsted boots. I'm off my blessed, blooming chump. Or it's spirits!"

"Neither one thing nor the other," said the Voice. "Listen!"

"Chump!" said Mr. Marvel.

"One minute," said the Voice penetratingly, tremulous with self-control.

"Well?" said Mr. Thomas Marvel, with a strange feeling of having been dug in the chest by a finger.

"You think I'm just imagination—just imagination?"

"What else *can* you be?" said Mr. Thomas Marvel, rubbing the back of his neck.

"Very well," said the Voice in a tone of relief. "Then I'm going to throw flints at you till you think differently."

"But where *are* yer?"

THE Voice made no answer. Whizz came a flint, apparently out of the air, and missed Mr. Marvel's shoulder by a hair's breadth. Mr. Marvel, turning, saw a flint jerk up into the air, trace a complicated path, hang for a moment, and then fall at his feet with almost invisible rapidity. He was too amazed to dodge. Whizz it came, and ricocheted from a bare toe into the ditch. Mr. Thomas Marvel jumped a foot and howled aloud. Then he started to run, tripped over an unseen obstacle, and came head over heels into a sitting position.

"*Now*," said the Voice, as a third stone curved upward and hung in the air above the tramp, "am I imagination?"

Mr. Marvel, by way of reply, struggled to his feet, and was immediately rolled over again. He lay quiet for a moment.

"If you struggle any more," said the Voice, "I shall throw the flint at your head."

"It's a fair do," said Mr. Thomas Marvel, sitting up, taking his wounded toe in hand, and fixing his eye on the third missile. "I don't understand it. Stones flinging themselves. Stones talking. Put yourself down. Rot away. I'm done."

The third flint fell.

"It's very simple," said the Voice. "I'm an invisible man."

"Tell us something I don't know," said Mr. Marvel, gasping with pain. "Where you've hid—how you do it—I *don't* know. I'm beat."

"That's all," said the Voice. I'm invisible. That's what I want you to understand."

"Any one could see that. There is no need for you to be so confounded impatient, mister. *Now*, then. Give us a notion. How are you hid?"

"I'm invisible. That's the great point. And what I want you to understand is this—"

"But whereabouts?" interrupted Mr. Marvel.

"Here—six yards in front of you."

"Oh, *come!* I ain't blind. You'll be telling me next you're just thin air. I'm not one of your ignorant tramps—"

"Yes. I am—thin air. You're looking through me."

"What! Ain't there any stuff to you? *Vox et*—what is it?—jabber. Is it that?"

"I am just a human being—solid, needing food and drink, needing covering, too. . . . But I'm invisible. You see? Invisible. Simple idea. Invisible."

"What, real like?"

"Yes, real."

"Let's have a hand of you," said Marvel, "if you *are* real. It won't be so darn out-of-the-way like then—"

"*Lord!*" he said, "how you made me jump!—gripping me like that!"

He felt the hand that had closed round his wrist with his disengaged fingers, and his touch went timorously up the arm, patted a muscular chest, and explored a bearded face. Marvel's face was astonishment.

"I'm dashed!" he said. "If this don't beat cock-fighting! Most remarkable!—And there I can see a rabbit clean through you arf a mile away! Not a bit of you visible—except—"

He scrutinised the apparently empty space keenly. "You 'aven't been eatin' bread and cheese?" he asked, holding the invisible arm.

"You are quite right. It's not assimilated into the system."

"Ah!" said Mr. Marvel. "Sort of ghostly, though."

"Of course, all this isn't half so wonderful as you think."

"It's quite wonderful enough for *my* modest wants," said Mr. Thomas Marvel. "Howjer manage it? How the dooce is it done?"

"It's too long a story. And besides—"

"I tell you, the whole business fair beats me," said Mr. Marvel.

"What I want to say at present is this: I need help. I have come to that. I came upon you suddenly. I was wandering, mad with rage, naked, impotent. I could have murdered. . . . And I saw you—"

"*Lord!*" said Mr. Marvel.

"I came up behind you—hesitated—went on."

Mr. Marvel's expression was eloquent.

"Then stopped. 'Here,' I said, 'is an outcast like myself. This is the man for me.' So I turned back and came to you. You. And—"

"*Lord!*" said Mr. Marvel. "But I'm all in a dizzy. May I ask: How is it?—and what you may be requiring in the way of help? Invisible!"

"I want you to help me get clothes and shelter, and then with other things. I've left them long enough. If you won't—well! . . . But you *will*—*must*."

"Look here," said Mr. Marvel. "I'm too flabbergasted. Don't knock me about any more. And leave me go. I must get steady a bit. And you've pretty near broken my toe. It's all so unreasonable. Empty downs, empty sky. Nothing visible for miles except the bosom of Nature. And then comes a voice. A voice out of heaven! And stones. And a fist. Lord!"

"Pull yourself together," said the Voice, "for you have to do the job I've chosen for you."

Mr. Marvel blew out his cheeks, and his eyes were round.

"I've chosen you," said the Voice. "You are the only man, except some of those fools down there, who knows there is such a thing as an Invisible Man. You have to be my helper. Help me—and I will do great things for you. An Invisible Man is a man of power." He stopped for a moment to sneeze violently.

"But if you betray me," he said, "if you fail to do as I direct you——"

He paused and tapped Mr. Marvel's shoulder smartly. Mr. Marvel gave a yelp of terror at the touch. "I don't want to betray you," said Mr. Marvel, edging away from the direction of the fingers. "Don't you go a-thinking that, whatever you do. All I want to do is to help you—just tell me what I got to do. (Lord!) Whatever you want done, that I'm most willing to do."

## CHAPTER X

### Mr. Marvel's Visit to Iping

**A**FTER the first gusty panic had spent itself, Iping became argumentative. Scepticism suddenly reared its head—rather nervous scepticism, not at all assured of its back, but scepticism nevertheless. It is so much easier not to believe in an Invisible Man, and those who had actually seen him dissolve into air or felt the strength of his arm could be counted on the fingers of two hands. And of these witnesses, Mr. Wadgers was presently missing, having retired impregnably behind the bolts and bars of his own house, and Jaffers was lying stunned in the parlor of the "Coach and Horses." Great and strange ideas transcending experience often have less effect upon men and women than smaller, more tangible considerations. Iping was gay with bunting, and everybody was in gala dress. Whit Monday had been looked forward to for a month or more. By the afternoon even those who believed in the Unseen were beginning to resume their little amusements in a tentative fashion, on the supposition that he had quite gone away, and with the sceptics he was already a jest. But people—sceptics and believers alike—were remarkably sociable all that day.

Haysman's meadow was gay with a tent, in which Mrs. Bunting and other ladies were preparing tea, while without, the Sunday school children ran races and played games under the noisy guidance of the curate and the Misses Cuss and Sackbut. No doubt there was a slight uneasiness in the air, but people for the most part had the sense to conceal whatever imaginative qualms they experienced. On the village green an inclined string, down which, clinging the while to a pulley-swung handle, one could be hurled violently

against a sack at the other end, came in for considerable favor among the adolescent, as also did the swings and the cocoanut-shies. There was also promenading, and the steam organ attached to a small roundabout filled the air with a pungent flavor of oil and with equally pungent music. Members of the club, who had attended church in the morning, were splendid in badges of pink and green, and some of the gayer minded had also adorned their bowler hats with brilliant colored favors of ribbon. Old Fletcher, whose conceptions of holiday-making were severe, was visible through the jasmine about his window or through the open door (whichever way you chose to look) poised delicately on a plank supported on two chairs, and whitewashing the ceiling of his front room.

About four o'clock a stranger entered the village from the direction of the downs. He was a short, stout person in an extraordinarily shabby top hat, and he appeared to be very much out of breath. His cheeks were alternately limp and tightly puffed. His mottled face was apprehensive, and he moved with a sort of reluctant alacrity. He turned the corner by the church and directed his way to the "Coach and Horses." Among others, old Fletcher remembers seeing him, and indeed the old gentleman was so struck by his peculiar agitation that he inadvertently allowed a quantity of whitewash to run down the brush into the sleeve of his coat while regarding him.

This stranger, to the perceptions of the proprietor of the cocoanut-shy, appeared to be talking to himself, and Mr. Huxter remarked the same thing. He stopped at the foot of the "Coach and Horses" steps, and, according to Mr. Huxter, appeared to undergo a severe internal struggle before he could induce himself to enter the house. Finally he marched up the steps, and was seen by Mr. Huxter to turn to the left and open the door of the parlor. Mr. Huxter heard voices from within the room and from the bar apprising the man of his error.

"That room's private!" said Hall, and the stranger shut the door clumsily and went into the bar.

In the course of a few minutes he reappeared, wiping his lips with the back of his hand, with an air of quiet satisfaction that somehow impressed Mr. Huxter as assumed. He stood looking about him for some moments, and then Mr. Huxter saw him walk in an oddly furtive manner towards the gates of the yard, upon which the parlor window opened. The stranger, after some hesitation, leant against one of the gate-posts, produced a short clay pipe, and prepared to fill it. His fingers trembled while doing so. He lit it clumsily, and, folding his arms, began to smoke in a languid attitude, an attitude which his occasional quick glances up the yard altogether belied.

All this Mr. Huxter saw over the canisters of the tobacco window, and the singularity of the man's behavior prompted him to maintain his observation.

Presently the stranger stood up abruptly and put his pipe in his pocket. Then he vanished into the yard. Forthwith Mr. Huxter, conceiving he was witness of some petty larceny, leapt round his counter and ran out into the road to intercept the thief. As he did so, Mr. Marvel reappeared, his hat askew, a big bundle

in a blue tablecloth in one hand, and three books tied together—as it proved afterwards with the vicar's braces—in the other. Directly he saw Huxter he gave a sort of gasp, and turning sharply to the left began to run. "Stop thief!" cried Huxter, and set off after him.

Mr. Huxter's sensations were vivid but brief. He saw the man just before him, and sprinting briskly for the church corner and the down road. He saw the village flags and festivities beyond, and only a face or two turned toward him. He bawled, "Stop thief" again, and set off gallantly. He had hardly gone ten strides before his shin was caught in some mysterious fashion, and he was no longer running but flying with incredible velocity through the air. He saw the ground suddenly close to his head. The world seemed to splash into a million whirling specks of light, and "subsequent proceedings interested him no more."

## CHAPTER XI

### In the "Coach and Horses"

**N**OW, in order to understand clearly what had happened in the inn, it is necessary to go back to the moment when Mr. Marvel first came into view of Mr. Huxter's window.

At that precise moment Mr. Cuss and Mr. Bunting were in the parlor. They were seriously investigating the strange occurrences of the morning, and were, with Mr. Hall's permission, making a thorough examination of the Invisible Man's belongings. Jaffers had partially recovered from his fall and had gone home in the charge of his sympathetic friends. The stranger's scattered garments had been removed by Mrs. Hall, and the room tidied up. And on the table under the window, where the stranger had been wont to work, Cuss had hit almost at once on three big books in manuscript labeled "Diary."

"Diary!" said Cuss, putting the three books on the table. "Now, at any rate, we shall learn something." The vicar stood with his hands on the table.

"Diary," repeated Cuss, sitting down, putting two volumes to support the third, and opening it. "H'm—no name on the fly leaf. Bother! . . . Cipher. And figures."

The vicar came around to look over his shoulder.

Cuss turned the pages over with a face suddenly disappointed. "I'm—dear me! It's all cipher, Bunting."

"There are no diagrams?" asked Mr. Bunting. "No illustrations throwing light—"

"See for yourself," said Mr. Cuss. "Some of it's mathematical, and some of it's Russian or some such language (to judge by the letters), and some of it's Greek. Now the Greek I thought *you*—"

"Of course," said Mr. Bunting, taking out and wiping his spectacles, and feeling suddenly very uncomfortable—for he had no Greek left in his mind worth talking about. "Yes—the Greek, of course, may furnish a clue."

"I'll find you a place."

"I'd rather glance through the volumes first," said Mr. Bunting, still wiping. "A general impression first, Cuss, and *then*, you know, we can go looking for clues."

He coughed, put on his glasses, arranged them fas-

tidiously, coughed again, and wished something would happen to avert the seemingly inevitable exposure. Then he took the volume Cuss handed him in a leisurely manner. And then something did happen.

The door opened suddenly.

Both men started violently, looked round, and were relieved to see a sporadically rosy face beneath a furry silk hat. "Tap?" asked the face, and stood staring.

"No," said both gentlemen at once.

"Over the other side, my man," said Mr. Bunting. "And please shut that door," said Mr. Cuss irritably.

"All right," said the intruder, as it seemed in a low voice, curiously different from the huskiness of its first inquiry. "Right you are," said the intruder in the former voice. "Stand clear," and he vanished and closed the door.

"A sailor, I should judge," said Mr. Bunting. "Amusing fellows they are. Stand clear, indeed. A nautical term, referring to his getting back out of the room, I suppose."

"I dare say so," said Cuss. "My nerves are all loose to-day. It quite made me jump—the door opening like that."

Mr. Bunting smiled as if he had not jumped. "And now," he said with a sigh, "these books."

"One minute," said Cuss, and went and locked the door. "Now I think we are safe from interruption."

Some one sniffed as he did so.

"One thing is indisputable," said Bunting, drawing up a chair next to that of Cuss. "There certainly have been very strange things happen in Iping during the last few days—very strange. I cannot, of course, believe in this absurd invisibility story—"

"It's incredible," said Cuss, "incredible. But the fact remains that I saw—I certainly saw right down his sleeve—"

"But did you—are you sure . . . Suppose a mirror for instance. . . . Hallucinations are so easily produced. I don't know if you have ever seen a really good conjurer—"

"I won't argue again," said Cuss. "We've thrashed that out, Bunting. And just now there's these books . . . Ah! here's some of what I take to be Greek! Greek letters certainly."

He pointed to the middle of the page. Mr. Bunting flushed slightly, and brought his face nearer, apparently finding some difficulty with his glasses. The little man's Greek was of the flimsiest, and he firmly believed that every one outside the Church credited him with a knowledge of Greek and Hebrew originals. And now—Should he confess? Should he vamp? Suddenly he became aware of a strange feeling at the nape of his neck. He tried to move his head, and encountered an immovable resistance.

The feeling was a curious pressure—the grip of a heavy, firm hand, and it bore his chin irresistibly to the table. "Don't move, little men," whispered a voice, "or I'll brain you both!"

He looked into the face of Cuss, close to his own, and saw a horrified reflection of his own sickly astonishment.

"I'm sorry to handle you roughly," said the Voice, "but it's unavoidable."

"Since when did you learn to pry into an investigator's private memoranda?" continued the Voice; two chairs struck the table simultaneously, and two sets of teeth rattled.

"Since when did you learn to invade the private rooms of a man in misfortune?" and the concussion was repeated.

"Where have they put my clothes?"

"Listen," said the Voice. "The windows are fastened, and I've taken the key out of the door. I am a fairly strong man, and I have the poker handy—besides being invisible. There's not the slightest doubt that I could kill you both and get away quite easily if I wanted to—do you understand? Very well. If I let you go, will you promise not to try any nonsense, and do what I tell you?"

The vicar and the doctor looked at one another, and the doctor pulled a face. "Yes," said Mr. Bunting, and the doctor repeated it. Then the pressure on the necks relaxed, and the doctor and vicar sat up, both very red in the face, and wriggling their heads.

"Please keep sitting where you are," said the Invisible Man. "Here's the poker, you see."

"When I came into this room," continued the Invisible Man, after presenting the poker to the tip of the nose of each of his visitors, "I did not expect to find it occupied; and I expected to find, in addition to my books of memoranda, an outfit of clothing. Where is it? No—don't rise. I can see it's gone. Now just at present, though the days are quite warm enough for an invisible man to run about stark—the evenings are chilly. I want clothing—and other accomodation. And I must also have those three books."

## CHAPTER XII

### The Invisible Man Loses His Temper

IT is unavoidable that at this point the narrative should break off again, for a certain very painful reason that will presently be apparent. And while these things were going on in the parlor, and while Mr. Huxter was watching Mr. Marvel smoking his pipe against the gate, not a dozen yards away were Mr. Hall and Teddy Henfrey discussing in a state of cloudy puzzlement the one Iping topic.

Suddenly there came a violent thud against the door of the parlor, a sharp cry, and then—silence.

"Hul-lo!" said Teddy Henfrey.

"Hul-lo!" from the tap.

Mr. Hall took things in slowly but surely. "That's ain't right," he said, and came round from behind the bar towards the parlor door.

He and Teddy approached the door together, with intent faces. Their eyes considered. "Summat wrong," said Hall, and Henfrey nodded agreement. Whiffs of an unpleasant chemical odor met them, and there was a muffled sound of conversation, very rapid and subdued.

"You all raight thur?" asked Hall, rapping.

The muttered conversation ceased abruptly, for a moment silence, then the conversation was resumed in hissing whispers, then a sharp cry of "No! no you don't!" There came a sudden struggle. Silence again.

"What the dooce!" exclaimed Henfrey *sotto voce*.

"You—all—raight—thur?" asked Mr. Hall sharply again.

The vicar's voice answered with a curious jerking intonation. "Quite ri-ight. Please don't—interrupt."

"Odd!" said Mr. Henfrey.

"Odd!" said Mr. Hall.

"Says, 'Don't interrupt,'" said Henfrey.

"I heerd'n," said Hall.

"And a sniff," said Henfrey.

They remained listening. The conversation was rapid and subdued. "I can't," said Mr. Bunting, his voice rising; "I tell you, sir, I *will* not."

"What was that?" asked Henfrey.

"Says he w's nart," said Hall. "Warn't speakin' to us, wuz he?"

"Disgraceful!" said Mr. Bunting within.

"Disgraceful," said Mr. Henfrey. "I heard it—*distinct*."

"Who's that speaking now?" asked Henfrey.

"Mr. Cuss, I s'pose," said Hall. "Can you hear—anything?"

Silence. The sounds within indistinct and perplexing.

"Sounds like throwing the tablecloth about," said Hall.

Mrs. Hall appeared behind the bar. Hall made gestures of silence and invitation. This roused Mrs. Hall's wifely opposition.

"What yer listenin' there for, Hall?" she asked. "Ain't you nothin' better to do—busy day like this?"

Hall tried to convey everything by grimaces and dumb show, but Mrs. Hall was obdurate. She raised her voice. So Hall and Henfrey, rather crestfallen, tiptoed back to the bar gesticulating, to explain to her.

At first she refused to see anything in what they had heard at all. Then she insisted on Hall keeping silence, while Henfrey told her his story. She was inclined to think the whole business nonsense—perhaps they were just moving the furniture about.

"I heerd'n say 'disgraceful'; *that* I did," said Hall.

"I heard that, Mis' Hall," said Henfrey.

"Like as not," began Mrs. Hall.

"Hsh!" said Mr. Teddy Henfrey. "Didn't I hear the window?"

"What window?" asked Mrs. Hall.

"Parlor window," said Henfrey.

Every one stood listening intently. Mrs. Hall's eyes, directed straight before her, saw, without seeing, the brilliant oblong of the inn door, the road, white and vivid, and Huxter's door opened, and Huxter appeared, eyes staring with excitement, arms gesticulating.

"Yap!" cried Huxter. "Stop thief!" and he ran obliquely across the oblong towards the yard gates and vanished.

Simultaneously came a tumult from the parlor, and a sound of windows being closed.

Hall, Henfrey, and the human contents of the tap rushed out at once pell-mell into the street. They saw some one whisk round the corner towards the down road, and Mr. Huxter executing a complicated leap in the air that ended on his face and shoulder. Down the

street people were standing astonished or running towards them.

Mr. Huxter was stunned. Henfrey stopped to discover this, but Hall and the two laborers from the tap rushed at once to the corner, shouting incoherent things, and saw Mr. Marvel vanishing by the corner of the church wall. They appear to have jumped to the impossible conclusion that this was the Invisible Man suddenly become visible, and set off at once along the lane of pursuit. But Hall had hardly run a dozen yards before he gave a loud shout of astonishment and went flying headlong sideways, clutching one of the laborers and bringing him to the ground. He had been charged just as one charges a man at football. The second laborer came round in a circle, stared, and conceiving that Hall had tumbled over of his own accord, turned to resume the pursuit, only to be tripped by the ankle just as Huxter had been. Then as the first laborer struggled to his feet he was knocked sideways by a blow that might have felled an ox.

As he went down, the rush from the direction of the village green came round the corner. The first to appear was the proprietor of the cocoanut-shy, a burly man in a blue jersey. He was astonished to see the lane empty save for three men sprawling absurdly on the ground. And then something happened to his rear-most foot, and he went headlong and rolled sideways just in time to snare the feet of his brother and partner, following headlong. The two were then kicked, knelt on, fallen over, and cursed by quite a number of over-hasty people.

**N**OW, when Hall and Henfrey and the laborers ran out of the house, Mrs. Hall, who had been disciplined by years of experience, remained in the bar next the till. And suddenly the parlor door was opened, and Mr. Cuss appeared, and, without glancing at her, rushed at once down the steps towards the corner. "Hold him!" he cried, "don't let him drop that parcel! You can see him so long as he holds the parcel."

He knew nothing of the existence of Marvel; for the Invisible Man had handed over the books and bundle in the yard. The face of Mr. Cuss was angry and resolute, but his costume was defective—a sort of limp, white kilt that could only have passed muster in Greece. "Hold him!" he bawled. "He's got my trousers!—and every stitch of the vicar's clothes!"

"Tend to him in a minute!" he cried to Henfrey as he passed the prostrate Huxter, and coming round the corner to join the tumult was promptly knocked off his feet into an indecorous sprawl. Somebody in full flight trod heavily on his finger. He yelled, struggled to regain his feet, was knocked against and thrown on all fours again, and became aware that he was involved not in a capture but in a rout. Every one was running back to the village. He rose again, and was hit severely behind the ear. He staggered, and set off back to the "Coach and Horses" forthwith, leaping over the deserted Huxter, who was now sitting up, on his way.

Behind him, as he was half-way up the inn steps, he heard a sudden yell of rage, rising sharply out of the confusion of cries, and a sounding smack in some one's face. He recognized the voice as that of the Invisible

Man, and the note was that of a man suddenly infuriated by a painful blow.

In another moment Mr. Cuss was back in the parlor.

"He's coming back, Bunting!" he said, rushing in. "Save yourself!"

Mr. Bunting was standing in the window, engaged in an attempt to clothe himself in the hearthrug and a *West Survey Gazette*.

"Who's coming?" he said, so startled that his costume narrowly escaped disintegration.

"Invisible Man!" said Cuss, and rushed to the window. "We'd better clear out from here. He's fighting mad! Mad!"

In another moment he was out in the yard.

"Good heavens!" said Mr. Bunting, hesitating between two horrible alternatives. He heard a frightful struggle in the passage of the inn, and his decision was made. He clambered out of the window, adjusted his costume hastily, and fled up the village as fast as his fat little legs would carry him.

From the moment when the Invisible Man screamed with rage and Mr. Bunting made his memorable flight up the village, it became impossible to give a consecutive account of affairs in Iping. Possibly the Invisible Man's original intention was simply to cover Marvel's retreat with the clothes and books. But his temper, at no time very good, seems to have gone completely at some chance blow, and forthwith he set to smiting and overthrowing for the mere satisfaction of hurting.

You must figure the street full of running figures, of doors slamming, and fights for hiding-places. You must figure the tumult suddenly striking on the unstable equilibrium of old Fletcher's plank and two chairs—with cataclysmal results. You must figure an appalled couple caught dismally in a swing. And then the whole tumultuous rush has passed, and the Iping street, with its gauds and flags, is deserted, save for the still raging unseen, and littered with cocoa-nuts, overthrown canvas screens, and the scattered stock-in-trade of a sweetstuff stall. Everywhere there is a sound of closing shutters and shooting bolts, and the only visible humanity is an occasional fitting eye under a raised eyebrow in the corner of a window-pane.

The Invisible Man amused himself for a little while by breaking all the windows in the "Coach and Horses," and then he thrust a street lamp through the parlor window of Mrs. Grogam. He it must have been who cut the telegraph wire to Adderdean just beyond Higgins's cottage on the Adderdean Road. And after that, as his peculiar qualities allowed, he passed out of human perceptions altogether, and he was neither heard, seen, nor felt in Iping any more. He vanished absolutely.

But it was the best part of two hours before any human being ventured out again into the desolation of Iping Street.

## CHAPTER XIII

### Mr. Marvel Discusses His Resignation

**W**HEN the dusk was gathering, and Iping was just beginning to peep timorously forth again upon the shattered wreckage of its Bank Holiday, a short, thickset man in a shabby silk hat was

marching painfully through the twilight behind the beechwoods on the road to Bramblehurst. He carried three books, bound together by some sort of ornamental elastic ligature, and a bundle wrapped in a blue tablecloth. His rubicund face expressed consternation and fatigue, he appeared to be in a spasmodic sort of hurry. He was accompanied by a Voice other than his own, and ever and again he winced under the touch of unseen hands.

"If you give me the slip again," said the Voice; "if you attempt to give me the slip again——"

"Lord!" said Mr. Marvel. "That shoulder's a mass of bruises as it is."

"On my honor," said the Voice, "I will kill you."

"I didn't try to give you the slip," said Marvel, in a voice that was not far remote from tears. "I swear I didn't. I didn't know the blessed turning, that was all! How the devil was I to know the blessed turning? As is it, I've been knocked about——"

"You'll get knocked about a great deal more if you don't mind," said the Voice, and Mr. Marvel abruptly became silent. He blew out his cheeks, and his eyes were eloquent of despair.

"It's bad enough to let these floundering yokels explode my little secret, without *your* cutting off with my books. It's lucky for some of them they cut and ran when they did! Here am I . . . No one knew I was invisible! And now what am I to do?"

"What am I to do?" asked Marvel, *sotto voce*.

"It's all about. It will be in the papers! Everybody will be looking for me. Every one on their guard——"

The Voice broke off into vivid curses and ceased. The despair of Mr. Marvel's face deepened, and his pace slackened.

"Go on," said the Voice.

Mr. Marvel's face assumed a grayish tint between the ruddier patches.

"Don't drop those books, stupid!" said the Voice sharply.

"The fact is," said the Voice, "I shall have to make use of you. . . . You're a poor tool, but I must."

"I'm a *miserable* tool," said Marvel.

"You are," said the Voice.

"I'm the worst possible tool you could have," said Marvel.

"I'm not strong," he said, after a discouraging silence.

"I'm not over strong," he repeated.

"No?"

"And my heart's weak. That little business—I pulled it through, of course. But, bless you! I could have dropped."

"Well?"

"I haven't the nerve and strength for the sort of thing you want——"

"I'll stimulate you."

"I wish you wouldn't. I wouldn't like to mess up your plans, you know. But I might. Out of sheer funk and misery——"

"You'd better not," said the Voice, with quiet emphasis.

"I wish I was dead," said Marvel.

"It ain't justice," he said. "You must admit . . . It seems to me I've a perfect right——"

"Get on," said the Voice.

Mr. Marvel mended his pace, and for a time they went in silence again.

"It's devilish hard," said Mr. Marvel.

This was quite ineffectual. He tried another tack.

"What do I make by it?" he began, again in a tone of unendurable wrong.

"Oh! *shut up!*" said the Voice, with sudden amazing vigor. "I'll see to you all right. You do what you're told. You'll do it all right. You're a fool and all that, but you'll do——"

"I tell you, sir, I'm not the man for it. Respectfully—but it *is* so——"

"If you don't shut up I shall twist your wrist again," said the Invisible Man. "I want to think."

Presently two oblongs of yellow light appeared through the trees, and the square tower of a church loomed through the gloaming. "I shall keep my hand on your shoulder," said the Voice, "all through this village. Go straight through and try no foolery. It will be the worse for you if you do."

"I know that," sighed Mr. Marvel, "I know all that."

The unhappy-looking figure in the obsolete silk hat passed up the street of the little village with his burdens, and vanished into the gathering darkness beyond the lights of the windows.

## CHAPTER XIV

### At Port Stowe

TEN o'clock the next morning found Mr. Marvel, unshaven, dirty, and travel-stained, sitting with his hands deep in his pockets, looking very weary, nervous, and uncomfortable, and inflating his cheeks at frequent intervals, on the bench outside a little inn on the outskirts of Port Stowe. Beside him were the books, but now they were tied with string. The bundle had been abandoned in the pinewoods beyond Bramblehurst, in accordance with a change in the plans of the Invisible Man. Mr. Marvel sat on the bench, and although no one took the slightest notice of him, his agitation remained at fever heat. His hands would go ever and again to his various pockets with a curious nervous fumbling.

When he had been sitting for the best part of an hour, however, an elderly mariner, carrying a newspaper, came out of the inn and sat down beside him.

"Pleasant day," said the mariner.

Mr. Marvel glanced about him with something very like terror. "Very," he said.

"Just seasonable weather for the time of year," said the mariner, taking no denial.

"Quite," said Mr. Marvel.

The mariner produced a toothpick, and (saving his regard) was engrossed thereby for some minutes. His eyes meanwhile were at liberty to examine Mr. Marvel's dusty figure and the books beside him. As he had approached Mr. Marvel he had heard a sound like the dropping of coins into a pocket. He was struck by the contrast of Mr. Marvel's appearance with this suggestion of opulence. Thence his mind wandered back again to a topic that had taken a curiously firm hold of his imagination.

"Books?" he said suddenly, noisily finishing with the toothpick.

Mr. Marvel started and looked at them. "Oh, yes," he said. "Yes, they're books."

"There's some ex-traordinary things in books," said the mariner.

"I believe you," said Mr. Marvel.

"And some extra-ordinary things out of 'em," said the mariner.

"True, likewise," said Mr. Marvel. He eyed his interlocutor, and then glanced about him.

"There's some extra-ordinary things in newspapers, for example," said the mariner.

"There are."

"In *this* newspaper," said the mariner.

"Ah!" said Mr. Marvel.

"There's a story," said the mariner, fixing Mr. Marvel with an eye that was firm and deliberate; "there's a story about an Invisible Man, for instance."

Mr. Marvel pulled his mouth askew and scratched his cheek and felt his ears glowing. "What will they be writing next?" he asked faintly. "Ostria or America?"

"Neither," said the mariner. "*Here.*"

"Lord!" said Mr. Marvel, staring.

"When I say *here*," said the mariner to Mr. Marvel's intense relief, "I don't, of course, mean here in this place, I mean hereabouts."

"An Invisible Man!" said Mr. Marvel. "And what's *he* been up to?"

"Everything," said the mariner, controlling Marvel with his eye, and then amplifying, "every—blessed—thing."

"I ain't seen a paper these four days," said Marvel.

"Iping's the place he started at," said the mariner.

"In-*deed!*" said Mr. Marvel.

"He started there. And where he came from nobody don't seem to know. Here it is: 'Pe-culiar Story from Iping.' And it says in this paper that the evidence is extraordinary strong, extraordinary."

"Lord!" said Mr. Marvel.

"But then it's a extra-ordinary story. There is a clergyman and a medical gent witnesses—saw 'im all right and proper—or leastways, didn't see him. He was staying, it says, at the 'Coach an' Horses,' and no one don't seem to have been aware of his misfortune, it says, aware of his misfortune, until in an Altercation in the inn, it says, his bandages on his head was torn off. It was then ob-served that his head was invisible. Attempts were At Once made to secure him, but, casting off his garments, it says, he succeeded in escaping, but not until after a desperate struggle, in which he had inflicted serious injuries, it says, on our worthy and able constable, Mr. J. A. Jaffers. Pretty straight story, eh? Names and everything."

"Lord!" said Mr. Marvel, looking nervously about him, trying to count the money in his pockets by his unaided sense of touch, and full of a strange and novel idea. "It sounds most astonishing."

"Don't it? Extra-ordinary, *I* call it. Never heard tell of Invisible Men before, I haven't, but nowadays one hears such a lot of extra-ordinary things—that it's—"

"That all he did?" asked Marvel, trying to seem at his ease.

"It's enough, ain't it?" said the mariner.

"Didn't go back by any chance?" asked Marvel. "Just escaped, and that's all, eh?"

"All!" said the mariner. "Why!—ain't it enough?"

"Quite enough," said Marvel.

"I should think it was enough," said the mariner. "I should think it was enough."

"He didn't have any pals—it don't say he had any pals, does it?" asked Mr. Marvel, anxious.

"Ain't one of a sort enough for you?" asked the mariner. "No, thank heaven, as one might say, he didn't."

HE nodded his head slowly. "It makes me regular uncomfortable, the bare thought of that chap running about the country!— He is at present at large, and from certain evidence, it is supposed that he has—taken—*took*, I suppose they mean—the road to Port Stowe. You see we're right *in* it! None of your American wonders this time. And just think of the things he might do! Where'd you be if he took a drop over and above, and had a fancy to go for you? Suppose he wants to rob—who can prevent him? He can trespass, he can burgle, he can walk through a cordon of policemen as easy as me or you could give the slip to a blind man! Easier! For these here blind chaps hear uncommon sharp, I'm told. And wherever there was liquor he fancied—"

"He's got a tremenjous advantage, certainly," said Mr. Marvel. "And—well . . ."

"You're right," said the mariner; "he *has*."

All this time Mr. Marvel had been glancing about him intently, listening for faint footfalls, trying to detect imperceptible movements. He seemed on the point of some great resolution; he coughed behind his hand.

He looked about him again—listened—bent towards the mariner, and lowered his voice.

"The fact of it is, I happen—to know just a thing or two about this Invisible Man. From private sources."

"Oh!" said the mariner. "*You?*"

"Yes," said Mr. Marvel—"me."

"Indeed!" said the mariner. "And may I ask—?"

"You'll be astonished," said Mr. Marvel, behind his hand. "It's tremenjous."

"Indeed!" said the mariner.

"The fact is," began Mr. Marvel eagerly, in a confidential undertone. Suddenly his expression changed marvelously. "Ow!" he said. He rose stiffly in his seat; his face was eloquent of physical suffering. "Wow!" he said.

"What's up?" said the mariner, concerned.

"Toothache," said Mr. Marvel, and put his hand to his ear. He caught hold of his books. "I must be getting on, I think," he said. He edged in a curious way along the seat away from his interlocutor.

"But you was just a-going to tell me about this here Invisible Man," protested the mariner.

Mr. Marvel seemed to consult with himself.

"Hoax," said a Voice.

"It's a hoax," said Mr. Marvel.

"But it's in the paper," said the mariner.

"Hoax all the same," said Marvel. "I know the chap that started the lie. There ain't no Invisible Man whatsoever. . . . Blimey."

"But how 'bout this paper? D'you mean to say——?"

"Not a word of it," said Mr. Marvel stoutly.

The mariner stared, paper in hand. Mr. Marvel jerkily faced about. "Wait a bit," said the mariner, rising and speaking slowly. "D'you mean to say——?"

"I do," said Mr. Marvel.

"Then why did you let me go on and tell you all this blarsted stuff, then? What d'yer mean by letting a man make a fool of himself like that for, eh?"

Mr. Marvel blew out his cheeks. The mariner was suddenly very red indeed, he clenched his hands. "I been talking here this ten minutes," he said; "and you, you little pot-bellied, leathery-faced son of an old boot, couldn't have the elementary manners——"

"Don't you come bandying words with *me*," said Mr. Marvel.

"Bandyng words! I've a jolly good mind——"

"Come up," said a Voice, and Mr. Marvel was suddenly whirled about and started marching off in a curious, spasmodic manner. "You'd better move on," said the mariner. "*Who's moving on?*" said Mr. Marvel. He was receding obliquely with a curious, hurrying gait, with occasional violent jerks forward. Some way along the road he began a muttered monologue, protests and recriminations.

"Silly devil," said the mariner, legs wide apart, arms akimbo, watching the receding figure. "I'll show you, you silly fool, hoaxing *me*! It's here in the paper!"

Mr. Marvel retorted incoherently, and receding was hidden by a bend in the road; but the mariner still stood magnificent in the midst of the way, until the approach of a butcher's cart dislodged him. Then he turned himself towards Port Stowe. "Full of extra-ordinary fools," he said softly to himself. "Just to take me down a bit—that was his silly game. . . . It's on the paper!"

And there was another extraordinary thing he was presently to hear that had happened quite close to him. And that was a vision of a "fist full of money" (no less) traveling without visible agency, along by the wall at the corner of St. Michael's Lane. A brother mariner had seen this wonderful sight that very morning. He had snatched the money forthwith, and had been knocked headlong, and when he had got to his feet the butterfly money had vanished. Our mariner was in the mood to believe anything, he declared, but that was a bit *too* stiff. Afterwards, however, he began to think things over.

The story of the flying money was true. And all about that neighborhood, even from the august London and County Banking Company, from the tills of shops and inns—doors standing that sunny weather entirely open—money had been quietly and dexterously making off that day in handfuls and rouleaux, floating quietly along by walls and shady places, dodging quickly from the approaching eyes of men. And it had, though no man had traced it, invariably ended its mysterious flight in the pocket of that agitated gentleman in the

obsolete silk hat, sitting outside the little inn on the outskirts of Port Stowe.

It was ten days after—and indeed only when the Burdock story was already old—that the mariner collated these facts and began to understand how near he had been to the wonderful Invisible Man.

## CHAPTER XV

### The Man Who Was Running

**I**N the early evening time Dr. Kemp was sitting in his study in the belvedere on the hill overlooking Burdock. It was a pleasant little room, with three windows—north, west, and south—and bookshelves crowded with books and scientific publications, and a broad writing-table, and, under the north window, a microscope, glass slips, minute instruments, some cultures, and scattered bottles of reagents. Dr. Kemp's solar lamp was lit, albeit the sky was still bright with the sunset light, and his blinds were up because there was no offense of peering outsiders to require them pulled down. Dr. Kemp was a tall and slender young man, with flaxen hair and a mustache almost white, and the work he was upon would earn him, he hoped, the fellowship of the Royal Society, so highly did he think of it.

And his eye, presently wandering from his work, caught the sunset blazing at the back of the hill that is over against his own. For a minute, perhaps, he sat, pen in mouth, admiring the rich golden color above the crest, and then his attention was attracted by the little figure of a man, inky black, running over the hill towards him. He was a shortish little fellow, and he wore a high hat, and he was running so fast that his legs verily twinkled.

"Another of those asses," said Dr. Kemp. "Like that ass who ran into me this morning round a corner, with his '*Visible Man a-coming, sir!*' I can't imagine what possesses people. One might think we were in the thirteenth century."

He got up, went to the window, and stared at the dusky hillside and the dark little figure tearing down it. "He seems in a confounded hurry," said Dr. Kemp, "but he doesn't seem to be getting on. If his pockets were full of lead, he couldn't run heavier."

"Spurtd, sir!" said Dr. Kemp.

In another moment the higher of the villas that had clambered up the hill from Burdock had occulted the running figure. He was visible again for a moment, and again and then again, three times between the three detached houses that came next, and then the terrace hid him.

"Asses!" said Dr. Kemp, swinging round on his heel and walking back to his writing-table.

But those who saw the fugitive nearer, and perceived the abject terror on his perspiring face, being themselves in the open roadway, did not share in the doctor's contempt. By the man pounded, and as he ran he chinked like a well-filled purse that is tossed to and fro. He looked neither to the right nor left, but his dilated eyes stared straight down hill to where the lamps were being lit and the people were crowded in the street. And his ill-shaped mouth fell apart, and a glairy

foam lay on his lips, and his breath came hoarse and noisy. All he passed stopped and began staring up the road and down, and interrogating one another with an inkling of discomfort for the reason of his haste.

And then presently, far up the hill, a dog playing in the road yelped and ran under a gate, and as they still wondered, something—a wind—a pad, pad, pad, a sound like a panting breathing, rushed by.

People screamed. People sprang off the pavement. It passed in shouts, it passed by instinct down the hill. They were shouting in the street before Marvel was half-way there. They were bolting into houses and slamming the doors behind them, with the news. He heard it, and made one last desperate spurt. Fear came striding by, rushed ahead of him, and in a moment had seized the town.

"The Invisible Man is coming! *The Invisible Man!*"

## CHAPTER XVI

### In the "Jolly Cricketers"

**T**HE "Jolly Cricketers" is just at the bottom of the hill, where the tram-lines begin. The barman leant his fat red arms on the counter and talked of horses with an anæmic cabman, while a black-bearded man in gray snapped up biscuit and cheese, drank Burton, and conversed in American with a policeman off duty.

"What's the shouting about?" said the anæmic cabman, going off at a tangent, trying to see up the hill over the dirty yellow blind in the low window of the inn. Somebody ran by outside.

"Fire, perhaps," said the barman.

Footsteps approached, running heavily, the door was pushed open violently, and Marvel, weeping and disheveled, his hat gone, the neck of his coat torn open, rushed in, made a convulsive turn, and attempted to shut the door. It was held half open by a strap.

"Coming!" he bawled, his voice shrieking with terror. "He's coming. The 'Nvisible Man! After me. For Gawd's sake. 'Elp! 'Elp! 'Elp!"

"Shut the doors," said the policeman. "Who's coming? What's the row?" He went to the door, released the strap, and it slammed. The American closed the other door.

"Lemme go inside," said Marvel, staggering and weeping, but still clutching the books. "Lemme go inside. Lock me in—somewhere. I tell you he's after me. I give him the slip. He said he'd kill me, and he will."

"You're safe," said the man with the black beard. "The door's shut. What's it all about?"

"Lemme go inside," said Marvel, and shrieked aloud as a blow suddenly made the fastened door shiver, and was followed by a hurried rapping and a shouting outside.

"Hullo," cried the policeman, "who's there?"

Mr. Marvel began to make frantic dives at panels that looked like doors. "He'll kill me—he's got a knife or something. For Gawd's sake——!"

"Here you are," said the barman. "Come in here." And he held up the flap of the bar.

Mr. Marvel rushed behind the bar as the summons

outside was repeated. "Don't open the door," he screamed. "Please don't open the door. *Where* shall I hide?"

"This, this Invisible Man, then?" asked the man with the black beard with one hand behind him. "I guess it's about time we saw him."

The window of the inn was suddenly smashed in, and there was a screaming and running to and fro in the street. The policeman had been standing on the settee staring out, craning to see who was at the door. He got down with raised eyebrows. "It's that," he said. The barman stood in front of the bar-parlor door, which was now locked on Mr. Marvel, stared at the smashed window, and came round to the two other men.

Everything was suddenly quiet. "I wish I had my truncheon," said the policeman, going irresolutely to the door. "Once we open, in he comes. There's no stopping him."

"Don't you be in too much hurry about that door," said the anæmic cabman anxiously.

"Draw the bolts," said the man with the black beard, "and if he comes . . ." He showed a revolver in his hand.

"That won't do," said the policeman, "that's murder."

"I know what country I'm in," said the man with the beard. "I'm going to let off at his legs. Draw the bolts."

"Not with that thing going off behind me," said the barman, craning over the blind.

"Very well," said the man with the black beard, and stooping down, revolver ready, drew them himself. Barman, cabman, and policeman faced about.

"Come in," said the bearded man in an undertone, standing back and facing the unbolted doors with his pistol behind him. No one came in, the door remained closed. Five minutes afterwards, when a second cabman pushed his head in cautiously, they were still waiting, and an anxious face peered out of the bar-parlor and supplied information.

"Are all the doors of the house shut?" asked Marvel. "He's going round—prowling round. He's as artful as the devil."

"Good Lord!" said the burly barman. "There's the back! Just watch them doors! I say——!" He looked about him helplessly. The bar-parlor door slammed and they heard the key turn. "There's the yard door and the private door. The yard door——"

He rushed out of the bar.

In a minute he reappeared with a carving knife in his hand. "The yard door was open," he said, and his fat underlip dropped.

"He may be in the house now," said the first cabman.

"He's not in the kitchen," said the barman. "There's two women there, and I've stabbed every inch of it with this little beef slicer. And they don't think he's come in. They have noticed——"

"Have you fastened it?" asked the first cabman.

"I'm out o' frocks," said the barman.

The man with the beard replaced his revolver. And even as he did so the flap of the bar was shut down and the bolt clicked, and then with a tremendous thud

the catch of the door snapped and the bar-parlor door burst open. They heard Marvel squeal like a caught levert, and forthwith they were clambering over the bar to his rescue. The bearded man's revolver cracked, and the looking-glass at the back of the parlor starred and came smashing and tinkling down.

As the barman entered the room, he saw Marvel curiously crumpled up and struggling against the door that led to the yard and kitchen. The door flew open while the barman hesitated, and Marvel was lugged into the kitchen. There was a scream and a clatter of pans. Marvel, head down, and lugging back obstinately, was forced to the kitchen door, and the bolts were drawn.

The policeman, who had been trying to pass the barman, rushed in, followed by one of the cabmen, gripped the wrist of the invisible hand that collared Marvel, was hit in the face and went reeling back. The door opened, and Marvel made a frantic effort to obtain a lodgment behind it. Then the cabman clutched something.

"I got him," said the cabman.

The barman's red hands came clawing at the unseen.

"Here he is!" said the barman.

Mr. Marvel, released, suddenly dropped to the ground, and made an attempt to crawl behind the legs of the fighting men. The struggle blundered round the edge of the door. The voice of the Invisible Man was heard for the first time, yelling out sharply as the policeman trod on his foot. Then he cried out passionately, and his fists flew round like flails. The cabman suddenly whooped and doubled up, kicked under the diaphragm. The doors into the bar-parlor from the kitchen slammed and covered Mr. Marvel's retreat. The men in the kitchen found themselves clutching at and struggling with empty air.

"Where's he gone?" cried the man with the beard. "Out?"

"This way," said the policeman, stepping into the yard and stopping.

A piece of tile whizzed by his head, and smashed among the crockery on the kitchen table.

"I'll show him," shouted the man with the black beard, and suddenly a steel barrel shone over the policeman's shoulder, and five bullets had followed one another into the twilight whence the missile had come. As he fired, the man with the beard moved his hand in a horizontal curve, so that his shots radiated out into the narrow yard like spokes from a wheel.

A silence followed. "Five cartridges," said the man with the black beard. "That's best of all. Four aces and the joker. Get a lantern, some one, and come and feel about for his body."

## CHAPTER XVII

### Dr. Kemp's Visitor

**D**R. KEMP had continued writing in his study until the shots aroused him. Crack, crack, crack, they came one after the other.

"Hullo!" said Dr. Kemp, putting his pen into his mouth again and listening. "Who's letting off revolvers in Burdock? What are the asses at now?"

He went to the south window, threw it up, and lean-

ing out stared down on the network of windows, beaded gas-lamps and shops with black interstices of roof and yard that made up the town at night. "Looks like a crowd down the hill," he said, "by 'The Cricketers,'" and remained watching. Thence his eyes wandered over the town to far away, where the ships' lights shone and the pier glowed—a little illuminated, faceted pavilion like a gem of yellow light. The moon in its first quarter hung over the westward hill, and the stars were clear and almost tropically bright.

After five minutes, during which his mind had traveled into a remote speculation of social conditions of the future, and lost itself at last over the time dimension, Dr. Kemp roused himself with a sigh, pulled down the window again, and returned to his writing-desk.

It must have been about an hour after this that the front door-bell rang. He had been writing slackly, and with intervals of abstraction, since the shots. He sat listening. He heard the servant answer the door, and waited for her feet on the staircase, but she did not come. "Wonder what that was?" said Dr. Kemp.

He tried to resume his work, failed, got up, went downstairs from his study to the landing, rang, and called over the balustrade to the housemaid, as she appeared in the hall below. "Was that a letter?" he asked.

"Only a runaway ring, sir," she answered.

"I'm restless to-night," he said to himself. He went back to his study, and this time attacked his work resolutely.

In a little while he was hard at work again, and the only sounds in the room were the ticking of the clock and the subdued shrillness of his quill, hurrying in the very center of the circle of light his lampshade threw on his table.

It was two o'clock before Dr. Kemp had finished his work for the night. He rose, yawned, and went upstairs to bed. He had already removed his coat and vest, when he noticed that he was thirsty. He took a candle and went down to the dining-room in search of a siphon and whisky.

Dr. Kemp's scientific pursuits had made him a very observant man, and as he recrossed the hall he noticed a dark spot on the linoleum near the mat at the foot of the stairs. He went on upstairs, and then it suddenly occurred to him to ask himself what the spot on the linoleum might be. Apparently some sub-conscious element was at work. At any rate, he turned with his burden, went back to the hall, put down the siphon and whisky, and, bending down, touched the spot. Without any great surprise, he found it had the stickiness and color of drying blood.

He took up his burden again, and returned upstairs looking about him and trying to account for the blood spot. On the landing he saw something, and stopped astonished. The door-handle of his room was blood-stained.

He looked at his own hand. It was quite clean, and then he remembered that the door of his room had been open when he came down from his study, and that consequently he had not touched the handle at all. He went straight into his own room, his face quite calm—

perhaps a trifle more resolute than usual. His glance, wandering inquisitively, fell on the bed. On the counterpane was a mess of blood, and the sheet had been torn. He had not noticed this when he had entered the room before, because then he had walked straight to the dressing-table. On the farther side the bed-clothes were depressed as if some one had recently been sitting there.

Then he had an odd impression that he had heard a low voice say, "Good heavens!—Kemp!" But Dr. Kemp was no believer in voices.

He stood staring at the tumbled sheets. Was that really a voice? He looked about again, but noticed nothing further than the disordered and blood-stained bed. Then he distinctly heard a movement across the room, near the washhand-stand. All men, however highly educated, retain some superstitious inklings. The feeling, that is called "eerie," came upon him. He closed the door of the room, came forward to the dressing-table, and put down his burden. Suddenly, with a start, he perceived a coiled and blood-stained bandage of linen rag hanging in mid-air, between him and the washhand-stand.

He stared at this in amazement. It was an empty bandage—a bandage properly tied, but quite empty. He would have advanced to grasp it, but a touch arrested him and a voice speaking quite close to him,

"Kemp!" said the Voice.

"Eh?" said Kemp, with his mouth open.

"Keep your nerve," said the Voice. "I'm an Invisible Man."

Kemp made no answer for a space, simply stared at the bandage. "Invisible Man?" he said.

"I am an Invisible Man," repeated the Voice.

The story he had been active to ridicule only that morning rushed through Kemp's brain. He does not appear to have been either very much frightened or very greatly surprised at the moment. Realization came later.

"I thought it was all a lie," he said. The thought uppermost in his mind was the reiterated arguments of the morning. "Have you a bandage on?" he asked.

"Yes," said the Invisible Man.

"Oh!" said Kemp, and then roused himself. "I say!" he said. "But this is nonsense. It's some trick." He stepped forward suddenly and his hand extended towards the bandage met invisible fingers.

HE recoiled at the touch, and his color changed.

"Keep steady, Kemp, for God's sake! I want help badly. Stop!"

The hand gripped his arm. He struck at it. "Kemp!" cried the Voice. "Kemp, keep steady!" and the grip tightened.

A frantic desire to free himself took possession of Kemp. The hand of the bandaged arm gripped his shoulder, and he was suddenly tripped and flung backwards upon the bed. He opened his mouth to shout, and the corner of the sheet was thrust between his teeth. The Invisible Man had him down grimly, but his arms were free, and he struck and tried to kick savagely.

"Listen to reason, will you?" said the Invisible Man,

sticking to him in spite of a pounding in the ribs. "By heaven, you'll madden me in a minute!"

"Lie still, you fool!" bawled the Invisible Man in Kemp's ear.

Kemp struggled for another moment, and then lay still.

"If you shout, I'll smash your face," said the Invisible Man, relieving his mouth. "I'm an Invisible Man. It is no foolishness and no magic. I am really an Invisible Man. And I want your help. I don't want to hurt you, but if you behave like a frantic rustic I must. Don't you remember me, Kemp? Griffin, of University College."

"Let me get up," said Kemp. "I'll stop where I am. And let me sit quiet for a minute."

He sat up and felt his neck.

"I am Griffin, of University College, and I have made myself invisible. I am just an ordinary man—a man you have known—made invisible."

"Griffin?" said Kemp.

"Griffin," answered the Voice. "A younger student than you were, almost an albino, six feet high, and broad—with a pink and white face and red eyes, who won the medal for chemistry."

"I'm confused," said Kemp. "My brain is rioting. What has this to do with Griffin?"

"I am Griffin."

Kemp thought. "It's horrible," he said. "But what devilry must happen to make a man invisible?"

"It's no devilry. It's a process, sane and intelligible enough——"

"It's horrible!" said Kemp. "How on earth——?"

"It's horrible enough. But I'm wounded and in pain, and tired . . . Great God! Kemp, you are a man. Take it steady. Give me some food and drink, and let me sit down here."

Kemp stared at the bandage as it moved across the room, then saw a basket chair dragged along the floor and come to rest near the bed. It creaked, and the seat was depressed a quarter of an inch or so. He rubbed his eyes and felt his neck again. "This beats ghosts," he said, and laughed stupidly.

"That's better. Thank heaven, you're getting sensible!"

"Or silly," said Kemp, and knuckled his eyes.

"Give me some whisky. I'm near dead."

"I didn't feel so. Where are you? If I get up shall I run into you? *There!* All right. Whisky. . . . Here. Where shall I give it you?"

The chair creaked, and Kemp felt the glass drawn away from him. He let it go by an effort; his instinct was all against it. It came to rest poised twenty inches above the front edge of the chair. He stared at it in infinite perplexity.

"This is—this must be—hypnotism. You must have suggested you are invisible."

"Nonsense!" said the Voice.

"It's frantic!"

"Listen to me."

"I demonstrated conclusively this morning," began Kemp, "that invisibility——"

"Never mind what you've demonstrated! I'm starv-

ing," said the Voice, "and the night is chilly to a man without clothes."

"Food?" said Kemp.

The tumbler of whiskey tilted itself. "Yes," said the Invisible Man, rapping it down. "Have you got a dressing-gown?"

Kemp made some exclamation in an undertone. He walked to a wardrobe, and produced a robe of dingy scarlet. "This do?" he asked. It was taken from him. It hung limp for a moment in mid-air, fluttered weirdly, stood full and decorous buttoning itself, and sat down in his chair.

"Drawers, socks, slippers would be a comfort," said the Unseen curtly. "And food."

"Anything. But this is the insanest thing I was ever in, in my life!"

He turned out his drawers for the articles, and then went downstairs to ransack his larder. He came back with some cold cutlets and bread, pulled up a light table, and placed them before his guest.

"Never mind knives," said his visitor, and a cutlet hung in mid-air with a sound of gnawing.

"I always like to get something about me before I eat," said the Invisible Man, with a full mouth, eating greedily. "Queer fancy."

"I suppose that wrist is all right?" said Kemp.

"Trust me," said the Invisible Man.

"Of all the strange and wonderful——"

"Exactly. But it's odd I should blunder into *your* house to get my bandaging. My first stroke of luck! Anyhow, I meant to sleep in this house to-night. You must stand that! It's a filthy nuisance, my blood showing, isn't it? Quite a clot over there. Gets visible as it coagulates, I see. It's only the living tissue I've changed, and only for as long as I'm alive. . . . I've been in the house three hours."

"But how's it done?" began Kemp, in a tone of exasperation. "Confound it! The whole business—it's unreasonable from beginning to end."

"Quite reasonable," said the Invisible Man; "*perfectly reasonable.*"

He reached over and secured the whisky bottle. Kemp stared at the devouring dressing-gown. A ray of candle-light penetrating a torn patch in the right shoulder made a triangle of light under the left ribs.

"What were the shots?" he asked. "How did the shooting begin?"

"There was a fool of a man—a sort of confederate of mine, curse him!—who tried to steal my money. Has done so."

"Is he invisible, too?"

"No."

"Well?"

"Can't I have some more to eat before I tell all that? I'm hungry—in pain. And you want me to tell stories!"

Kemp got up. "*You* didn't do any shooting?" he asked.

"Not me," said the visitor. "Some fool I'd never seen fired at random. A lot of them got scared. They all got scared at me. Curse them! I say—I want more to eat than this, Kemp."

"I'll see what there is more to eat downstairs," said Kemp. "Not much, I'm afraid."

After he had done eating—and he made a heavy meal—the Invisible Man demanded a cigar. He bit the end savagely, before Kemp could find a knife, and cursed when the outer leaf loosened.

It was strange to see him smoking: his mouth and throat, pharynx and nares, became visible as a sort of whirling smoke cast.

"This blessed gift of smoking," he said, and puffed vigorously. "I'm lucky to have fallen upon you, Kemp. You must help me. Fancy tumbling on you just now! I'm in a devilish scrape—I've been mad, I think. The things I have been through! But we will do things yet, let me tell you."

He helped himself to more whisky and soda. Kemp got up, looked about him, and fetched himself a glass from his spare room.

"It's wild—but I suppose I may drink."

"You haven't changed much, Kemp, these dozen years. You fair men don't. Cool and methodical. . . . I must tell you. We will work together!"

"But how was it all done?" said Kemp, "and how did you get like this?"

"For God's sake let me smoke in peace for a little while, and then I will begin to tell you."

But the story was not told that night. The Invisible Man's wrist was growing painful; he was feverish, exhausted, and his mind came round to brood upon his chase down the hill and the struggle about the inn. He began his story and fell away from it. He spoke in fragments of Marvel, he smoked faster, his voice grew angry. Kemp tried to gather what he could.

"He was afraid of me—I could see he was afraid of me," said the Invisible Man many times over. "He meant to give me the slip—he was always casting about! What a fool I was!"

"The cur!"

"I was furious. I should have killed him——"

"Where did you get the money?" asked Kemp *abruptly*.

The Invisible Man was silent for a space. "I can't tell you to-night."

He groaned suddenly and leaned forward, supporting his invisible head on invisible hands.

"Kemp," he said, "I've had no sleep for near three days, except a couple of dozes of an hour or so. I must sleep soon."

"Well, have my room—have this room."

"But how can I sleep? If I sleep—he will get away. Ugh! What does it matter?"

"What's the shot wound?" asked Kemp.

"Nothing—scratch and blood. Oh, God! How I want sleep!"

"Why not?"

The Invisible Man appeared to be regarding Kemp. "Because I've a particular objection to being caught by my fellow-men," he said slowly.

Kemp started.

"Fool that I am!" said the Invisible Man, striking the table smartly. "I've put the idea into your head."

# THE BLUE DIMENSION

By Francis Flagg

Author of "The Machine Man of Ardathia" and "Master Ants"



AM suspected of having made away with Doctor Crewe. Furthermore, my sanity is being questioned. That is all right; I can blame no one for holding to either or both suspicions. But, as a matter of fact, I have not murdered my friend, nor am I insane. Listen to me patiently please, and I will do my best to tell you of the wonderful discovery of Doctor Crewe, and in what manner he came to disappear.

As you all know, Doctor Crewe was sixty years of age, and a retired optometrist. He lived alone in this house with one servant and friend, myself. I am a man of thirty, young, strong. In a great many ways the Doctor treated me as a son. He paid me a liberal wage and made it possible for me to go to college. Sensible of the kindness he has shown me, I have hated to quit his service, even though graduated from the university for over a year and a half.

Doctor Crewe was a shy, retiring man with no friend, save myself, and few acquaintances. Engrossed in experiments of his own, he would often enter his private workshop and not emerge from it, sometimes for as much as twenty-four hours on a stretch. Except in a general way, he never discussed his experiments with me, for he was not a man given to much talk. I had not the least inkling of what it was that engaged his time and interest until two weeks ago. At that time he became very excited. God forgive me, I thought the excessive hours of work, coupled with little sleep, was affecting him mentally.

"Robert," he said, calling me into his workshop.

I went in. He was seated in a big chair right under the skylight.

"Have you ever read this?" he asked, holding up a large copy of the "Book of Mormon."

"No, sir. At least not all of it," I answered.

"But enough to know the story of how Joseph Smith dug up the tablets and was enabled to read and copy them?"

"You mean about the miraculous spectacles?" I laughed. "That bunk!"

"How do you know it's bunk?"

"Why, of course it is," I protested. "Who ever heard of such glasses before or since?"

"Nobody," he admitted. "And, as you say, Joseph Smith's story is probably bunk. But for all that, have you ever thought it might be possible to make a pair of glasses through which one could see—beyond this environment?"

"What do you mean?"

"Well, you know we are living an existence that is an enigma to the wisest of our scientists and philosophers. I believe it was Millikan, the physicist, who once, on being peremptorily requested to define what he meant by the term 'spirit,' retorted that he would gladly do so if his questioner would first define what matter was. As a matter of fact, matter is something beyond our comprehension. It is, of course, reducible to force. But what is force? You see, we can reason ourselves to an impasse."

"Granted. But what has that to do with spectacles?"

"More than you think. Consider that we are living at a certain rate of vibration. Everything vibrating within range of our own rate would manifest itself to us as matter, that is, as concrete material, such as mountains, trees, cats, birds, snakes, etc. Anything below or above our range would to us be merely space, non-existent. You follow me?"

"Not quite," I confessed.

"Well, let me put it differently. You know there are sounds so high in frequency or pitch that the human ear cannot hear them, and vice versa, so low as to be inaudible."

"I understand that."

"Good. Then please remember that everything we observe around us, the smoke of factories, the red of sunset, houses, trees, animals, men, are all things manifesting themselves to us at varying degrees of vibration. At a certain rate they impinge on the ear as sound, the eye as color, the tongue as taste, the flesh as feeling. If that be true, then there must be a

wealth of things all around us we cannot taste, handle or see."

I had never thought of this before.

"You mean," I said haltingly, "that as there are colors and sounds which go above or below our vision and hearing, so also there may be trees, animals—even men?"

"Why not? What is space to us may be reality to them, and what is reality to them may be space to us. I literally believe that, as the Good Book says, there are worlds within worlds."

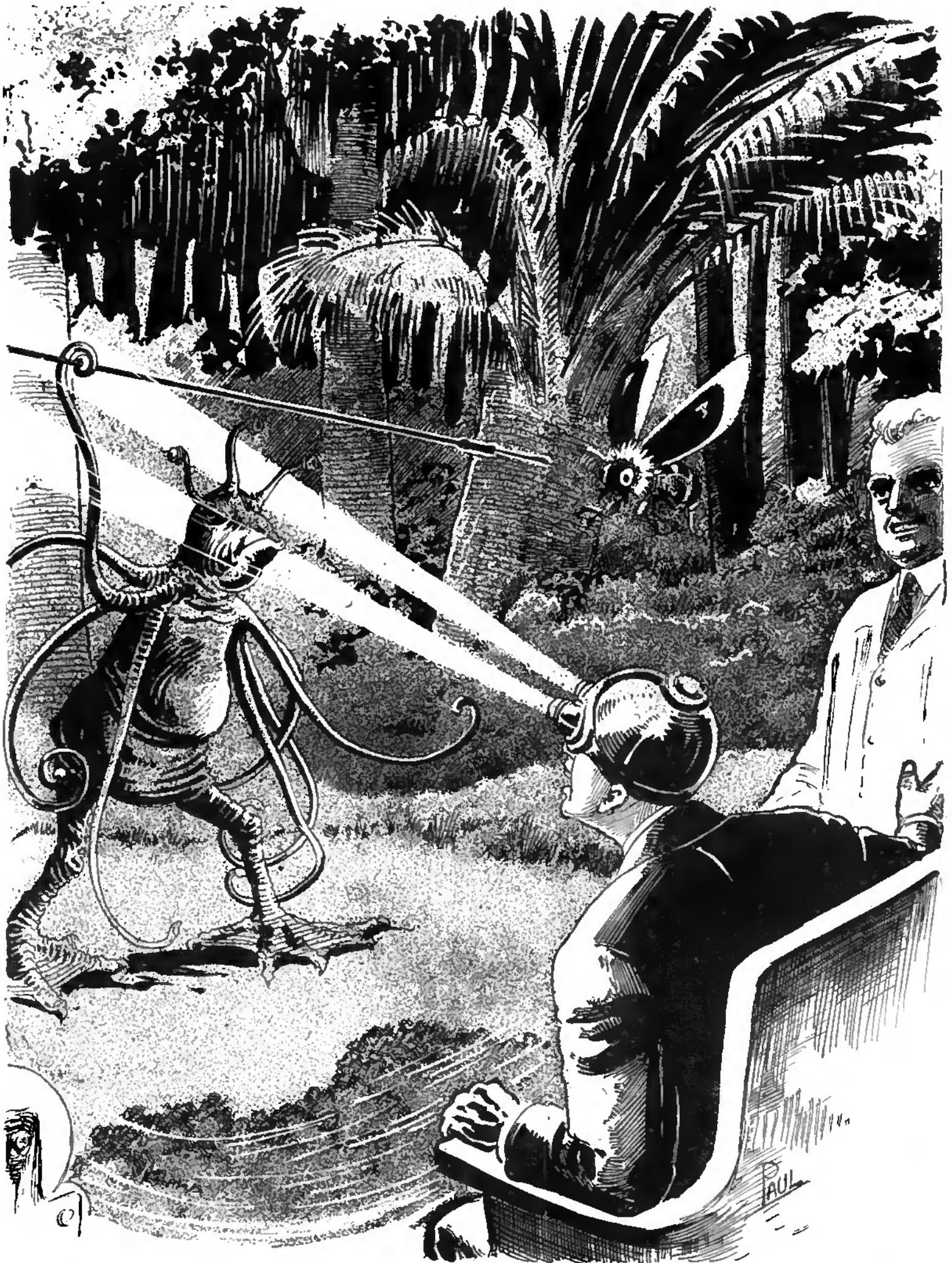
The conception was stupendous; I stared at him fascinated.

"Robert," said the Doctor impressively, "the world, as we know it, the world of our five senses, has been pretty well explored. Lots of people think there remains nothing more to discover. But what if some-

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*HERE is another Flagg story which you will instantly take to your bosom. A fish, swimming in his own element, probably will find it impossible to think—if he does think—that there could be any other dimension or any other plane where beings exist who do not swim. Likewise, it is difficult for us to imagine another totally different plane on which people could live without our being aware of their existence. The author of this story brings out his point very clearly and most interestingly, and almost overcomes this difficulty.*

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Frozen with terror, I glared at the awful nightmare which seemed to pause and stare right into my face. Even in that moment of stark horror, I realized that it was human—or what would have been called by whatever term passed for human in that other world.

one were to open the way into those hidden realms all around us, the countless planes above and below! Think of the strange races that might be found, the new lands that might be visited, the wealth of knowledge that might be garnered!"

I thought of it and my head swam. Then I got a grasp on my common sense. All this was wonderful, of course; it made fine conversation; but, after all, it was speculation pure and simple.

"You know, sir," I said smilingly, "you made me believe for a moment that such worlds existed and could be visited."

"I am glad of that," he replied quietly, "because they do exist, and one of them at least can be visited."

This, I thought anxiously, is the result of over-work.

"Won't you come to lunch, Doctor? You know you've had nothing to eat since an early breakfast."

"Now, now, my boy," he laughed. "I assure you I'm quite sane and not at all light-headed. I repeat that such worlds actually exist, and that I am the Christopher Columbus who has discovered one of them."

I must have looked my incredulity, because he said with some force, "I see you doubt my contention. There is nothing for it, then, but to let you see it as I have seen it."

He picked up from a work-bench what appeared to be a pair of goggles. They were attached to a cap piece made to fit over the head. The lenses were of queer design. "In fact," said the Doctor, "they are ground with forty-five inner facets specifically arranged so as to redistribute the light waves before they impinge on the retina of the eye. Nor is that all of it. There are really two lenses arranged for each eye-place, and in the space between them—about half an inch in thickness—is a space or cell filled with Radium-Tetra-Dimenol, a new substance. But I cannot tell you more, as I have discarded all the known formulae of optics in making these glasses."

He fitted the cap over my head, but as yet held the goggles above my eyes.

"I beg you not to be in the least alarmed, no matter what you see. Remember to keep quiet and not to endanger these lenses by any sudden move. Bear in mind the fact that you are in no bodily danger, that I am constantly by your side in this workshop, and tell me, if you can, what you see."

With that the eye-glasses were brought down until the rest-piece fitted the nose, and the side-flaps drawn back, were made fast in the rear. For a moment I was dazzled. My blinking eyes were lost in a maze of contrasting crystals. Then, so suddenly as to galvanize me with the shock, the crystals merged into one harmonious whole, seemed to expand, clarify, and I was gazing—gazing through the incredible aisles of a blue forest. It was a blue world that I saw. The trees, the giant ferns, the sucker-like blooms, were all blue. Not one prevailing shade of blue, no. The flowers, in some cases, were almost purplish red, and in others, shaded away into the most delicious contrasts of creamy whites and yellows. But the predominating color was blue. What could be seen of

the sky was greenish blue. The very atmosphere had a bluish tinge, as if the winds were colored and could be seen. Whichever way I looked, the blue forest was before me. I turned my head. It was on either side of me—behind me. A shiver of fear ran down my back.

"Doctor!" I cried nervously.

The pressure of his hand reassured me.

"I am right here, my boy. Tell me, what do you see?"

"A blue forest," I said; "great ferns, and other growth of the same color."

"That is what I saw," he replied. "It isn't a tangled growth, though; it is more like a natural park, isn't it?"

"Yes," I answered, "it is more like a park. Wait! There's something stirring in the bushes to the left of me. I can't make it out as yet. I . . . Good God!" I gave a convulsive leap. If the Doctor had not held down my hands, I should have torn the glasses from my head.

"What is it?" he cried; but I couldn't answer. The strength left my body. Frozen with terror, I glared at the awful nightmare which seemed to pause and stare right into my face. Even in that moment of stark horror I realized that it was human—or what would have been called by whatever term passed for human in that other world. It was, perhaps, seven feet in height, naked, and of an indigo color over all. The eyes were set at the end of short tentacles which continually moved and writhed and could bring the creature's vision to bear in any direction, or in several directions at the same time, for of organs of sight there were three. The mouth was a pouting thing that filled me with indescribable loathing, while the root-like legs ended in flat feet probably a yard in circumference. Four snaky branches were attached to the upper part of the body and were evidently arms. What made me conclude that this creature occupied the place of man in its own world, was the fact that it carried a weapon. This was a length of stick shaped like a short spear. That it was a weapon, and a deadly one, I soon had proof. Some monstrous sort of beetle came sailing through the trees. It was perhaps, a foot and a half long. The creature crouched, drew back what I must call one of its arms, and went through the motions of hurling the spear. The weapon never left its grasp, yet the insect fell as if struck by a bolt of lightning. The creature reached out with another of its snaky, branch-like arms. It seemed to have the ability of stretching it to an unbelievable extent. As the arm went, the tip of it became swollen, bell-shaped, finally falling over the stricken insect like an inverted cup. With a whip-like motion the prey was retrieved to the pouting mouth and swallowed—or rather absorbed—with an insuction of the lips. It was too much. The sensation of being alone in a weird wood, confronted by such a monster as this, made me shudder. When one of the writhing tentacles brought a saucer-like eye within an inch of my nose, I screamed and clawed at my head.

"For God's sake, Doctor," I screamed, "take them off!"

The glasses were removed. I stared at the familiar walls of the workshop with heartfelt relief. The blue forest, the hideous creature, were as if they had never been. I rubbed my eyes and laughed sheepishly.

"I'll admit, sir, that the thing scared me."

"What thing?"

"The indigo monster."

He shook his head. "I've never seen it."

I walked over to the faucet and drank a glass of water.

"Tell me, sir, isn't this some sort of trick you're playing on me?"

"In what way?"

"Oh, by arranging those lenses so as to create an optical illusion."

"No, my boy, no. What you saw is actual enough—only on another plane."

I couldn't believe it. That the blue forest, the incredible creature and the beetle it had swallowed, were all around me at that very moment, only manifesting themselves at a different rate of vibration, was unbelievable. It was too creepy an idea for me to accept without a severe mental struggle. What if something were to happen to the various rates of vibration, some accident merge them all into one! I wiped the sweat from my brow.

"Don't you think it possible, Doctor, that you may have accidentally brought about an optical illusion? That what I saw has no reality, save as the products of the glasses themselves, ground and arranged a certain way?"

"I thought of that," he replied, "and that is one reason I called you in to look through them. The question was this: Would you only see what I saw? Personally, I saw only the blue forest, the flowers. But you saw something else besides. That would tend to prove that the spectacles are not deluding us, that we are really gazing into another dimension. However, let me assume the glasses and see if I can observe what you did."

I helped him to adjust the spectacles. After a few moments he said, "There is not one such creature as you describe, but a dozen. Some are smaller than the others, and these I take to be females. In addition to spears, most of them carry yellow sacks. Undoubtedly the creatures belong to the dominant species in this strange world, though one would hesitate before ranking them higher than the savages in ours. In some ways they remind me of trees. I shouldn't be surprised to learn that they had evolved directly from the vegetable kingdom. Their legs are really roots with leaf-like protruberances. Now they are going away. They have disappeared to the right of me. The immediate forest is empty."

He was silent for a moment; but evidently saw nothing new, for in a few minutes he removed the spectacles.

"Robert," he said impressively, "you are the only one I have taken into my confidence. For ten years I have dreamed and experimented, keeping my own counsel. Until I am ready to announce my discovery to the world, I wish no word said of this."

"You can rely on my discretion, sir."

"Thank you, my boy, I knew you would say that.

But from now on I shall need someone's assistance. Will you help me?"

"Gladly," I replied, because the thought of that other world, the untold marvels that might be laid bare to mankind by the Doctor's invention, fired my imagination. The Doctor grasped my hand.

"I'll admit I had counted on you. Know then, that in conjunction with the glasses, I believe I have perfected a machine by means of which it is possible to enter that other plane."

I could hardly believe my ears.

"You mean," I gasped, "that you have invented a way of getting there?"

"Exactly."

"But how?"

"Briefly, by altering the present rate of vibration and bringing it in harmony with that prevailing in the other dimension. Obviously, if my body can be made to vibrate in accord with the blue world, I shall manifest there and not here. At least, I think so."

He led the way to what looked not unlike a big wringing machine of the roller type. The rollers, however, were of fine wire coils, interlockingly arranged, and there were twelve of them supported above a large tub filled with a metallic fluid. Several powerful looking electric batteries lay at the tub's base, on the floor.

"This," said the Doctor, laying his hand affectionately on the complicated apparatus, "is the Re-vibrator. The person or thing to be re-vibrated is run through those rollers, at the same time an alternating current of electricity is maintained in the wire coils which affects the molecules of matter and brings about the vibratory change. Just how this is done, I cannot tell you, for I do not know; but take my word for it, it is done."

I stared at the inert piece of machinery with mixed emotions. That anyone or anything could be run through its rollers to another dimension seemed the height of absurdity. Yet, after my experience with the glasses, I was distrustful of my own doubt.

"I have here some white mice," said the Doctor. "If you will put on the spectacles again, Robert, I shall run them through the rollers and you can see what happens."

With trembling hands I affixed the cap, the goggles. The same blue forest grew before me, but now I saw it from a slightly different position. In spite of myself I could not repress a little shiver. This preliminary shiver was always to be mine whenever I gazed through the glasses. To all intents and purposes I was transferred from the workshop and set down in a blue wilderness. To reassure myself, I gripped the sides of my chair and ran my hands over them from time to time. In my ears sounded the purr of grinding cogs.

"Watch very carefully, Robert," came the quiet voice of the Doctor, "I am sending the first mouse through."

Nothing happened.

I strained my eyes in the direction from whence his voice had come.

"I see nothing yet," I began, then gave a convulsive start, for in the blue air, to one side of me, appeared the head of a mouse. I stared at it tensely. The shoulders followed the head, the forepaws the shoul-

ders; then, by degrees, the rest of the body. No sooner was the body altogether in one piece than it fell a distance of several feet to the ground. And what a white mouse! It was now as large as an ordinary rat. For a moment it cowered on the purplish grass, its pink eyes darting from side to side; then, apparently recovering from its first surprise at finding itself in such queer surroundings, it ran nimbly up a tree trunk and was lost to view behind a mass of foliage. Two more mice came through and acted in a similar manner.

"But what made them so much larger?" I asked the Doctor, after removing the glasses.

He looked at me thoughtfully. "I cannot say for certain, unless the pressure of the atmosphere is much less on the other plane than it is here. But whatever the reason, it doesn't seem to have impaired the activity of the mice. Also they went through the rollers in good physical condition. If mice, why not men?"

Indeed, why not? It appeared perfectly feasible. Yet at the thought of entering that other world physically as well as visually, my flesh crept.

**A**FTER lunch, about three-thirty, the Doctor called me into the workshop again.

"So far," he said, "we have only looked into that other dimension from one spot, this room. How would it appear from some other place—say Lake Merritt Park?"

"I have no idea."

"Well, let's go and see."

Seated on a secluded bench, the Doctor opened his satchel and produced the glasses.

"Put them on, Robert," he commanded.

Nothing loath, I obeyed. The same startling metamorphosis took place in my surroundings; but this time I was on the edge of the blue forest and before me stretched a rolling plain. It was covered with a profusion of daisy-like flowers and low-growing shrubs. A herd of purplish-black beasts with six legs and tortoise-like heads were grazing in the near foreground. They were about the size of sheep.

Though now more or less accustomed to the sensation of being transported, as it were, into this mysterious other plane, I could not refrain from instinctively crying out when the herd of beasts suddenly stampeded in my direction. It was hard to realize that I had no existence for them; that I was so much space through which they sped like a whirlwind and were gone.

Not all of them, though. A half dozen of the six-legged beasts were left behind, stark and lifeless.

From the low-growing shrubbery through which they had evidently crept in a recumbent position, burst a band of the oddest huntsmen mortal eyes ever beheld. I call them huntsmen, because, though much shorter than, and in some respects different from, the indigo monsters seen in the forest, they, too, belonged to the same dominant species. In color they were not unlike yellow copper, and in height they could not have exceeded five feet.

If they had been the first "human" beings to meet my sight in this weird world, I should doubtless have considered them horrible enough; but compared to the hideous giants of their kind, they were almost beautiful

to observe. Formed much as were the giants, there was this difference in structure. The eyes—of which they possessed but two—were set on the ends of stable protuberances, and not of writhing tentacles. A feathery, fern-like hair grew plume fashion from the head and waved in the wind. The mouth was more pleasing than the pouting mouth of the indigo monsters, the lips flower-like, but the arms and legs were of the same general nature, though on a more delicate scale. I relinquished the glasses to the Doctor, who wished to observe them for himself.

"Yes," he remarked, "these creatures are undoubtedly of the same species as the ones seen in the forest, but palpably of a dwarfish branch. I am inclined to think them higher in the social scheme than the others. They are armed with the same sort of spears, but in addition carry knives or swords with which they are dismembering the game."

He rose abruptly to his feet.

"Robert," he said, "they are getting ready to move on. By means of the glasses I am going to try and trail them to their homes. I want you to lead me by the arm and see that I don't stumble into people and buildings or get run over. Keep track of the streets and the general direction, because later on I shall try and draw a map of the course I've followed!"

Then ensued one of the queerest walks I've ever taken. Oddly enough, the course followed by the creatures in that other world seemed to follow the streets laid out in this. There were times, of course, when the Doctor complained I was leading him away from their trail, but nearly always some street swung us once more in the desired direction, or they turned back into ours. For three-quarters of an hour we walked. Suddenly, in the vicinity of Fruitvale Avenue, the Doctor halted.

"Marvelous," he murmured. "Wonderful. I expected nothing like this."

"What is it?" I asked, all on fire with curiosity. But for nearly ten minutes he made no answer; he was absorbed in the contemplation of something he saw. At last I could contain myself no longer. I shook him by the shoulder.

"May I have a look, sir?"

"Yes, Robert, yes," he said, coming out of his spell with a start. "Of course you may, my boy."

I assumed the cap and goggles with trembling fingers. What new marvel could I expect to see? What further monstrosity? The glasses came over my eyes, the flaps were buttoned. I strained my vision to the utmost. The familiar blue grew in front of me. But what was this! No forest, no rolling plain, but a city. A great square of sapphire blue was all around me. Underfoot lay a flagged pavement of the same color, dotted here and there by showering fountains, strange trees, exotic blooms. This square was bordered with magnificent buildings. Like spokes radiating from a central hub, wide avenues ran away from the square. I looked about me with awe. Who owned this city? Surely not the indigo giants or the copper-colored dwarfs. This magnificent place seemed far beyond the capabilities of either to build. Here, undoubtedly, dwelt the real rulers of this other dimension, the superior race

of all, but where were they? Save for some gigantic butterflies, some creeping reptiles not unlike lizards, the place was deserted. Everything was in perfect order, no sign of ruin or decay, yet not a glimpse of inhabitants could I gain.

"The housetops, Robert," came the voice of the Doctor. "Look at the housetops."

Even as he spoke, I saw them. Were they living beings or statues wrought from navy-blue stone? There they were, like carven images, on the cornice of every building. Their basilisk eyes were set in a fixed stare, and on one outflung limb some terrible insect poised, with wings spread, as if ready for flight. It was ghastly. I felt the gooseflesh rising on my skin.

And there was another uncanny thing.

Try as we might, neither the Doctor nor myself could gain access to one of those buildings. Always, no matter how we moved, we were in the open, and the edifices of sapphire stone were so many sealed crypts.

"But that is natural enough," I exclaimed, after some thought. "If from another plane, people were to gaze at our world, they would not be able to look through wood or stone into our houses."

"True enough," replied the Doctor, "but you forget that, while, by means of the glasses, we are viewing the wonderful city, our bodies are capable of moving through the space its buildings occupy. Theoretically nothing should prevent us from pausing on the spot in this plane occupied by one of those buildings on the other plane and viewing its interior."

All the time we sat on the kerbing, talking and alternately gazing through the glasses, people in our own plane were passing to and fro and looking at us curiously. I wondered what they would say if I should grasp them by the arms and tell them that the space they walked through so carelessly was occupied by immense buildings of a strange design; that all around them were nightmarish monsters with three eyes and sucker-like hands; and that they were only separated from another world and all its untold terrors by a variation in the rate of vibration. They would call me crazy, of course. But what if they should catch a glimpse of an indigo giant through the spectacles? What then? I pondered over that thought as we walked homewards.

That night, the Doctor drew a map of the other world—or rather, of as much of it as he had seen or could visualize.

"The forest is here," he said. "To the east are the rolling plains; and southeast of us lies the Silent City."

He studied what he had drawn intently.

"That's funny," he remarked.

"What is?" I asked.

"The size of that city. It occupies only a section of East Oakland, and yet it impressed me as being immensely large." He shook his head. "The whole thing is an enigma, but one that shall not baffle me much longer."

Suddenly I thought of something. "Those huntsmen you followed," I exclaimed, "what became of them?"

"I don't know," confessed the Doctor. "When I saw the buildings to one side of me, I ceased following the

huntsmen and directed my footsteps toward the city."

**A**FTER he finished with his map, we spent several hours gazing through the glasses. It was night, too, on that other plane. In the blue forest dense darkness brooded. Nothing was to be seen but spectral lights fitting through the trees. Several times vague shapes blundered by; and once a bat-like something soared right into the space that was my face. So vivid was the scene on that other plane, so real the feeling of being surrounded by black night and at the mercy of unearthly creatures, that I was forced, from time to time, to remove the glasses and assure myself that I was not really there. It was after midnight when I retired to bed, and I left the Doctor still gazing through the spectacles. In the morning, however, he was afoot early, and appeared fresh and rested, more so than I.

"Well, Robert," he said cheerfully at breakfast, "this is the big day."

"We are going to take the spectacles out again?" I asked eagerly.

"Better than that, my boy; I am going through the machine."

I tried to dissuade him from his rash project until he had viewed the other plane more thoroughly with the glasses, but he was adamant.

"The mice met with no harm and neither shall I."

"From the machine, no," I replied, "but what has their fate been from other beasts? Perhaps by this time they have been devoured. Think of the indigo giants. What would you do if you fell in with several of them? And there are doubtless more fearful creatures of which we know nothing."

"True, Robert, true; but I shall take implements with me. A German lüger\* with plenty of cartridges; a compass. You might as well cease talking, my boy, my mind is made up."

Still I did not desist.

"Let me go, sir," I pleaded, even though my flesh crawled at the very thought. "I am younger than you, stronger."

"No," he said, "no. This is my adventure. I have been looking forward to it for a long time and do not mean to step aside for another."

"Then take me with you!" I cried. "In that unknown world two will be much safer than one."

But this request he also denied.

"You must stay on this side and be ready to operate the machine when I return."

There was nothing for it, then, but to repair with him to the workshop and listen to his last instructions.

"I am going to make for the Silent City on my first expedition," he said. "I expect to be gone only a few hours. Under no circumstances must you leave this machine in my absence." He laid his hand on the Re-vibrator. "Watch for me with the glasses, and when I give you the sign, press this button here. It reverses the action of the Re-vibrator and will restore me to this room. Do you understand me?"

I made him repeat his instructions.

"There, I'm sure you've got it, my boy. And now

\*A pistol with magazine for cartridges.

look through the spectacles and see if the road is clear."

With a heart full of misgivings I did as he bade. Nothing was stirring in the blue forest. Only the ferns waving gently, and the leaves of the tall trees.

"To make sure that the machine is functioning properly, I am sending the lüger and a box of cartridges through by themselves," said the Doctor. Almost with his words the lüger and cartridges materialized on that other plane. But now the lüger was the size of a large rifle and the ammunition box as big as a shoe-box. I remembered the mice, and a foreboding of trouble came over me.

"Doctor," I began, but never finished the warning, because the Doctor was coming through.

I saw his head. It was an enormous thing. I looked at it with horror. Behind it came the massive neck, the mighty shoulders. Inch by inch, seemingly out of nothing, the unbelievable body emerged, fell to the purple grass.

"Good God!" I exclaimed; for when the Doctor rose to his feet he was all of twenty feet tall. He stood up, a great colossus of a man, and stretched his arms experimentally, stamping with his feet, and taking several deep breaths. He smiled reassuringly at me and waved his hand in my direction, though of course I was invisible to him. I watched him with bated breath, as he picked up the lüger and retrieved the box of cartridges. Quite calmly he consulted his compass and map, got his bearings, and after a last glance in my direction swung off through the trees and ferns. His gigantic figure was visible for some distance, the head appearing above the tree-tops. Finally it disappeared and I was left to my lonely vigil—surely the strangest vigil ever kept by mortal man.

**L**UNCH time came and passed. The evening shadows deepened. Darkness fell over the blue forest in that other world—the creepy forest through which I had seen the Doctor walk and disappear—and still he did not come. A prey to the most ghastly of fears, I sat all night by the Re-vibrator, peering through the glasses at the spectral lights that wandered among the trees, shuddering at the bat-like forms which swept silently on and over me. And all the time I asked myself how it went with the Doctor, overtaken by night on that other plane. Had he succeeded in reaching the Silent City? Was he encamped there now or had some hideous beast destroyed him or some strange power taken him prisoner? I thought of those brooding images on the housetops and the blood ran cold in my veins. I had one consolation. Save for the navy-blue statues in the Silent City, on that other plane, no creature as large as the Doctor now was, had been seen by me. Even the indigo giants were dwarfed by the colossus he had become. And he was armed with an immense lüger—a deadly weapon. Yet for all that, anxiety consumed me.

Morning dawned. Haggard and worn, drinking cup after cup of black coffee, I watched through the leaden hours of the second day. The blue forest was strangely still. Or was it my imagination? Nothing stirred in its depths. No life, no motion. I might have been staring through a stereoscope at blended pictures. The

Doctor had said he would be only a few hours, yet the second night came and he was still missing. With the descent of darkness the blue forest became alive. It moved and murmured. Though I could not hear it murmur, I sensed it. Perhaps the blood was pounding at my heart. I cursed myself for ever having allowed the Doctor to embark on his rash journey. I should have restrained him—by force, if that had been necessary.

The third day dawned.

I watched it breaking in that other, that incredible world, that blue dimension separated from our own merely by a slight difference in rates of vibration.

"If he does not come this morning," I said to myself, "I shall take the glasses on the streets and go searching for him."

But about eight o'clock I saw him. I shouted aloud in pure joy, oblivious to the fact that he could not hear my voice. He came striding through the forest, ten yards at a stride, and most amazing sight of all, a dozen indigo giants came with him. The Doctor's clothes seemed much the worse for wear, torn and rent, but he himself appeared sound in body and limb.

I was beside myself with excitement. What strange sights had he seen, what adventures had he had? The indigo giants were evidently his friends. He had been to the Silent City. In a few minutes now, he would be back in the workshop with me, telling me of the marvels of that other plane, the secret of the navy-blue statues. I could not restrain another exultant shout.

Arrived at the spot where he had made his landing three days before, the Doctor looked about him hesitatingly. I could read what he was thinking. Was this the correct spot? To reassure him I ran a pencil—the first thing my fingers picked up—through the Re-vibrator. It dropped at his feet the size of a walking stick. At this sight the indigo monsters recoiled with every indication of wonder and fear. Instantly the Doctor smiled. He waved his hand. His mouth formed the words, "Reverse the Re-vibrator." I pressed the button he had instructed me to. Nothing happened. The Doctor pawed at the air with his hands, a perplexed look beginning to dawn on his face. For perhaps five minutes I waited; then I scribbled a note on a piece of paper and sent it through to him.

"What is the matter?"

He picked up the paper, now the size of a napkin, and wrote on the reverse side, "I cannot come back, because on this plane the machine has no existence."

"Good God!" I whispered, appalled. Then the following dialogue took place between us by means of written messages.

"What do you mean?" I asked.

"That I have overlooked a vital thing."

"In what way?"

"By forgetting that the Re-vibrator can manifest other things over here, but palpably not itself."

Through the glasses I glared at him in horror.

"But what are you going to do?"

"I don't know. I'm trying to think. In the meantime, Robert, can't you send me through some food—a pot of coffee? I'm starved."

"Yes," I answered back, "yes."



# A BIOLOGICAL EXPERIMENT

By David H. Keller, M.D.

Author of "The Revolt of the Pedestrians" and "The Yeast Men"



THE books have been tampered with! Ten of them are gone!"

The first Assistant Librarian of the Congressional Library rushed trembling into the office of his superior and, reaching the Librarian's desk, he repeated his startling statement.

The Librarian, who had taken thirty civil service examinations and been promoted thirty times in order to reach his present position, refused to be frustrated by the news, and sharply reprimanded the subordinate for his unnecessary excitement.

"Make a list of the missing books, and report the facts to me. You know the routine method of doing things in this department. In the future please adhere to it."

"But there is no routine, sir, no precedent for this. It is the first time that any books have been missing for several hundred years. You know that the rooms are never opened and the books never touched—and there is another thing. The assistant watchman who has been in charge of the books for the last year failed to report for duty and his monoplane is gone."

"Do as I tell you! Make an official report of the entire matter and I will investigate it. In the meantime, I will thank you if you will leave the room and allow me to continue my studies in mass education." There was a finality in his voice that definitely closed the discussion.

THOUGH it was only eight in the morning, a young woman was out walking on the lawn of her sister's country estate. Now and then she looked anxiously at the sky where the large passenger planes were humming their way toward distant cities. She paid little attention to these, but finally a smile replaced her anxious expression, as a small monoplane came hurtling down from the blue and landed skillfully on the lawn. A young man jumped out and ran toward her and as he ran he cried:

"I have the books, Elizabeth! I have the books!"

The girl ran toward him, as she replied:

"I am so glad. Do they tell what we want to know? Were you able to read them?"

He took her in his arms and kissed her before he answered her questions.

"I believe so," he finally said, between the kisses. "Of course the language is peculiar and there are lots of

words that I do not know. You see I have only been reading for two years, but I brought along a good dictionary of obsolete words and I believe that we can work it out. It will be a lot of fun to do it together."

She looked at him trustfully.

"Yes, Leuson, that is the right word. From now on we are going to do everything together. I have all my things ready and, best of all, I am ready for the new life with you."

Without the loss of any time, he helped her pack her various bundles into the plane and then securely fastened her into the passenger's seat. He took the aviator's position in front of her. They were ready to start, but for some reason he delayed. It seemed that the man was not sure of the wisdom of the adventure they were starting on. They waited a little too long, for an older couple came out from the house and walked toward the monoplane. They were the celebrated biologists, Dr. Hardner Gowers and his wife, Dr. Helen Sellers Gowers. It was hard to tell which one was the more learned scientist. In their early life they had been poor but had attained both fame and wealth by the sheer force of their combined powerful intellects. Following their companionate marriage, they had assumed all responsibility for their sister, Elizabeth Sellers, and also had claimed the right to control the details of her daily life, much to the annoyance and disgust of that young lady, who wanted to do as she pleased, when she pleased and as often as she pleased.

"Hullo, Leuson," called Dr. Gowers, "Going out riding with Elizabeth? The air

looks pretty but Helen and I have been so busy lately that we have not been up in it for ages. We have been hunting for you, Beth. We have a great piece of news that I am sure will please you. Your sister and I have decided to apply for a baby!"

"About time!" replied the young lady, sarcastically, "After you have done everything else that you

wanted to do, you finally make up your mind to apply for a child. You should have done that years ago."

"Now, Elizabeth," replied the older woman, "we have talked that over and over and you know that I just had to finish my special line of investigation before I could devote my time to a child. You have no idea what it means. Even with the most competent nurses, it takes time. I have been fortunate in locating three very excellent women who have had a lot of experience

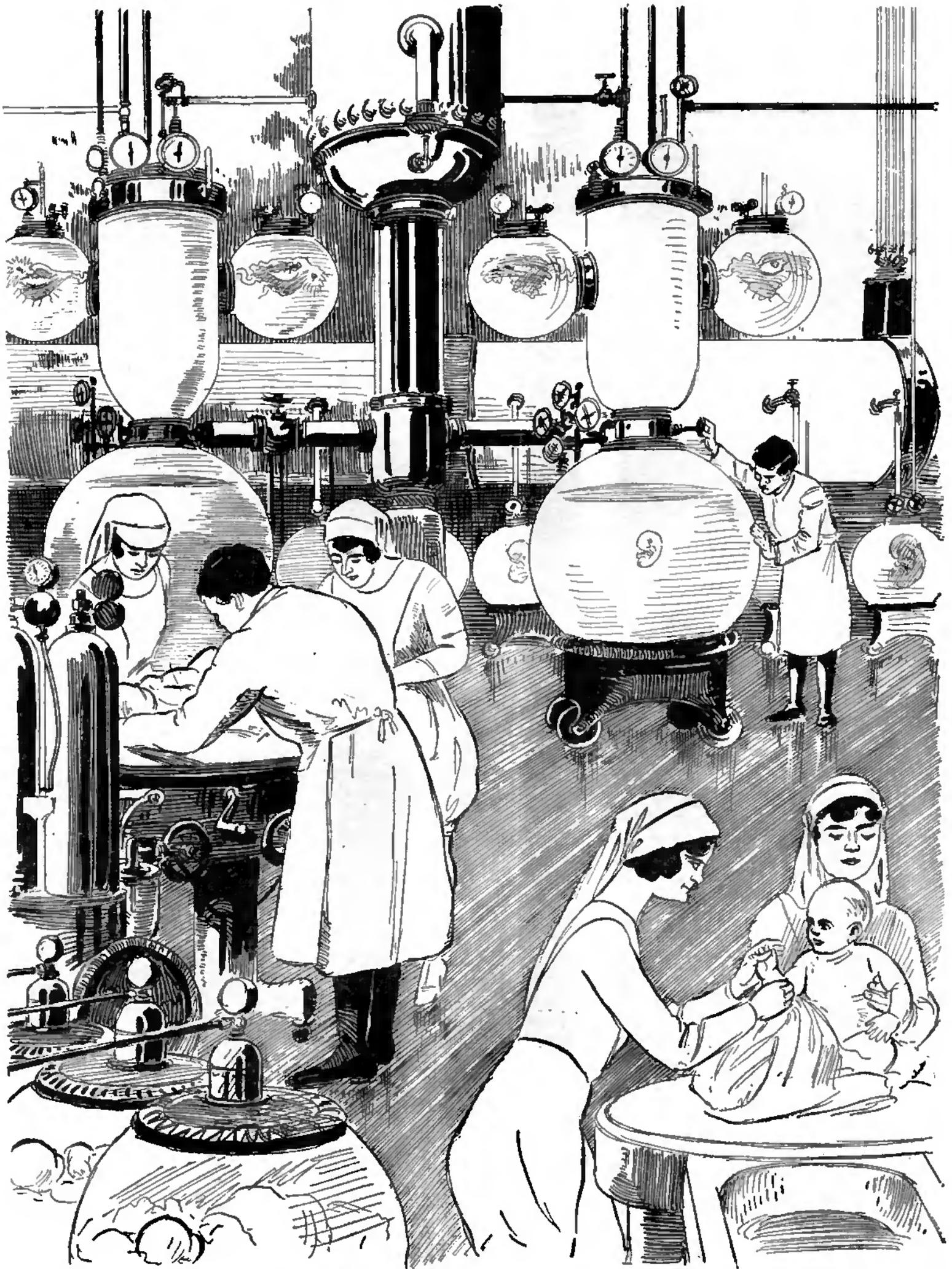
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*HERE is an exceedingly interesting story by the author of "The Revolt of the Pedestrians." Dr. Keller has touched a subject which will be of greatest interest to every woman.*

*Is it possible to propagate the race without fertilization? In other words, can we raise fatherless children? Biology teaches us that it can be done. We are not at all sure that such a thing may not come about in the future, and while it may not take on such proportions as outlined by the author, still, from a scientific standpoint, it may prove a great experiment.*

*We urge our male readers to let their female friends read the story. They will not regret having read it.*

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These experiments finally ended in the discovery that the human ovary could be kept alive and functioning under certain conditions in a glass vessel. . . . By a similar process to that used with the eggs of the sea urchin, these ova could not only be kept alive, but could be developed into fully matured babies. At a certain point in their growth, respiration started with a pulmometer. . . .

with babies in the Government Nurseries, and we are asking for a four-year-old child. It will not be so hard on me then as it might be under different circumstances. Some women are even attempting to take care of a baby without help, but of course, they have never done any research work. I am willing to give as much as an hour a day to the child and will do all I can for its future health and happiness."

"You see it is this way, Leuson," said her husband. "You and Beth are very young and naturally you cannot see the responsibility of applying for a child—it is something you cannot comprehend as we do. My wife has been very wonderful about it and has promised me repeatedly that she would join me in an application for a child just as soon as she completed her investigations into the life history of the *Cryptobranchus Alleghanien-sis*. This work, in two hundred and ten moving picture reels, is now completed; when it was shown to the International Society of Biologists, they made her a life member, an honor that has never before been given to any woman. It is true that she spent over twenty years at this work, but she has enjoyed every minute of it. She is just entering middle age and is well qualified in every way to supervise the care of a child. We are able to employ the best of help and can buy the most modern electrical equipment. We will welcome the child and give it every possible social and educational advantage.

"That is fine, Dr. Gowers," said the young man, enthusiastically. "If you were in my place, what would you advise me to do?"

The old Doctor smiled paternally, as he replied,

"Select an intelligent lady you can harmonize with and hand in your application for your papers and arrange for the preliminary treatment. You have a position under the Government and no doubt your wife could secure a place in the same office; then you can have a companionate marriage. I believe in early marriages and shall be glad to help you in any way I can. It may be that by the time you are thirty-five you can apply for a baby."

"I shall be glad to avail myself of your help," replied the young man. "Now we shall have to be going so we can have a long day's trip."

"Don't get tired, Elizabeth," advised the older sister. "You know you have passed all the examinations and the day for your operation has been set for next month. It is a great honor and I want you to be in the best physical condition."

Amid the roar of the engine, Elizabeth called back:

"Good-bye, Sis. When we come back you will see us."

They were off.

The two doctors walked back into the house. The wife said:

"I am in earnest about this new work of being a Mother. I am going to arrange a perfect program that will keep the three nurses busy."

"You will make a wonderful Mother," replied her husband, with a far-a-way look in his sad eyes.

ward along the Potomac. Although the machine was capable of three hundred miles an hour, Leuson seemed satisfied with a much slower pace, and they did not reach Pittsburg till late in the afternoon. At that time there were less than ten thousand people in that city for there was but little demand for coal or steel in the new age of atmospheric electricity and glass. Leaving the plane on the aviation field, the young people walked to the office of the local Judge. This official had been in office for so long that he had become careless of details and obsessed with the idea that he could not make a mistake. For this reason he did not thoroughly examine the papers Leuson handed him, but asked gruffly:

"So you want to enter into a companionate marriage?"

"Yes, sir," was the double reply.

"Are you able to support yourselves individually?"

"Yes, sir."

"You have your permits, vaccination certificates, life insurance, health, accident, tornado, air and happiness insurance?"

"Yes, sir."

"You each consent to an immediate and complete divorce in case you are ever unhappy living together?"

"Yes, sir."

"Then I pronounce you man and wife. Sign these papers so I can send them to the Central Matrimonial Office. Is this your first experiment?"

"Yes, sir."

"I was married eleven times before I could find a woman I could live with. I understand that is not an unusual experience."

The young people rushed from the office, and walked back to their plane. Leuson looked a little worried, as he said,

"I am sorry that I had to forge some of those papers, but let's go."

The monoplane, avoiding the usual air lanes, went steadily westward, finally resting on the grass of an isolated meadow among the peaks of the Ozark Mountains. There was sunshine here and a little singing brook and while three sides of the meadow were sheltered by dense woods, the other side was guarded by a sheer cliff of overhanging rock, which rose some hundreds of feet above the cleared field. The young people acted as though they were thoroughly at home. As a matter of fact, they had made frequent visits to this field and had thoroughly prepared, as far as they could, to make this place their home.

Traveling all day and night, they had reached the meadow just as the sun was first kissing the tree tops. They were tired, but they were far too excited to rest, so they started at once to unload the plane and carry their packages up a narrow, winding mountain path which the boy had constructed, and which ended in a cave one hundred feet above the level of the field. After everything had been carried, the plane was put under the trees and covered with waterproof canvas. They never intended to use it again, but they felt that it might be useful in an unexpected emergency. Finally the necessary things were all done and the boy and girl, for they were little more, sat down to rest on the nar-

**R**ISING rapidly into the air, the monoplane made certain circular movements and then started west-

row rock shelf in front of the doorway of their new home. They dissolved a few synthetic food tablets in a pint of spring water and slowly sipped their meal.

They put a few pillows behind them and sat there looking toward the west. The girl shivered but it was from cold rather than from fear.

"Now, tell me, dear, just what you have really found out about it all."

He drew her closer to him as he started to talk.

"Of course we are just youngsters, Elizabeth, but I guess we are old enough to know our minds, and decide what we want. I have been reading a lot of the history of the thing and I was just fortunate enough to be able to find some real old books and take them out of the Congressional Library.

"Years ago, when we first found each other and realized that we were in love and wanted to be different from other folks, we knew that unless we learned to read we should have to receive the same mass education that all the young people received. Even then we were tired of looking at the educational moving pictures and listening to the same lectures given over the radio. It was this that prompted us to seek positions where we could learn to read and have access to the old books. Do you remember how we used to talk about it? How in those back rooms in the Library were printed books that no one had read for centuries and yet which were carefully guarded under lock and bolt so no one would get them?"

"It seems odd, but we found that it was a fact that the citizens of a supposedly free country have had no choice in their education or amusements for over a thousand years. Every home has its radio, its movie, its television box; but every fact and picture that came to them was approved of and censored by the National Board of Education and Amusement. No one had a right to have a private opinion; everyone had to think like everyone else. There was a gradual death of individuality. Whenever a change was desired in mass opinion or action, an educational propaganda was started. Finally, all thinkers were engaged by the central government. If they wanted to make any statement to the world, they had to have their message passed by this National Board. The entire learning of past ages, put into books, was a closed secret, save to a few who were taught to read, that the art might not be entirely lost.

"As you know, we both were fortunate enough to secure this special education. Then finally my chance came and I was selected as the night watchman. After months of search, I located the books I wanted—and stole them and stole you. Now I want to tell you the history of this problem.

"This is June, 3928. A great many centuries ago life was very different in this world. Everything has changed during the last twenty centuries. But I want especially to talk about love, marriage and babies, and to give you some idea of the changes in these three important divisions of the human economy.

"Twenty centuries ago there were lots of babies and they were all born. That is just a four letter word that means nothing at all to you now, but at that time it was the only way whereby the existence of the human race

could be maintained. A man and a woman married each other and in the course of time a baby was born to them. Strange as it may seem to us now, the baby was the actual child of the two persons who called themselves its Father and Mother. These babies all reached the breathing stage of existence at the same age, they all looked alike, they all had the same average intelligence and it took a lot of care and love to raise them—also a lot of intelligence—and as a consequence, a great many of the little things died the first year. What I want you to understand is the fact that any two persons who were married had a right to have one child or a dozen. The license to marry automatically carried with it the right to have as many children as they wanted to. This was centuries before the National Child Permit Act was passed.

"There were so many babies in so many families in those days that it was quite a problem to raise them. The amount of detail and care each baby required must have been terrific. If a child was intelligently looked after twenty centuries ago, it took fully six hours a day of the Mother's time. At least so I have read in the old records. The condition is nicely illustrated in the old patents applied for at that time. Some are hard to understand but all seem to have for their object the lessening of the time that had to be daily spent on each baby. Life for parents in those days must have been one continual round of duty.

"Yes, I am satisfied that there must have been a lot of trouble twenty centuries ago with babies, having them the way they did and having to care for them. Then, too, there was such a scatter of the babies. Some families had a dozen and some had none or perhaps just one. Many of the babies were not well; they had a lot of diseases that we have not seen for over fifteen hundred years and some doctors were able to make a living just treating sick children. The sad part about it all was the fact that those who were wealthy and intelligent seemed to have the fewest children. It was only the poor and ignorant who had large families.

"Just about two thousand years ago a Judge, in what was then the United States, wrote a book about companionate marriage. I translated this into modern English and waded through it with a great deal of interest. Of course it is very far behind the times but we shall have to give the Judge credit for starting something. He had a law passed which allowed a man and woman to marry each other and live together as long as it was mutually agreeable to both of them. They were not supposed to have any babies born to them until they were fairly sure that they would want to live together for life.

"ONE hundred years later a law was passed to the effect that no woman was to have a child until she and her husband secured a permit from the Baby Board, and it was thought that this would diminish the number of babies in poor families. All children were supposed to be born in government hospitals, and a woman was not admitted without her baby permit. Naturally, lots of babies were born surreptitiously without permits. It all worked out very unsatisfactorily.

"By the twenty-seventh century the human race was

in a rather pitiful condition. All of the so-called savage races had been blotted out of existence by new and deadly diseases. The Caucasian race saved themselves after a death rate of fifty percent. Those who remained alive were almost degenerates in many ways. The extensive use of the automobile came near withering the legs of the *genus Homo*. The only perfect form of man or woman was of marble in the art galleries. The hospitals for the insane and feeble-minded and epileptic were crowded to their utmost capacity. As a final resort Congress passed a National Sterilization Act, affecting those who should be found unfit to have children.

"For a while it worked and then it was discovered that so many people were being sterilized because they were unfit to be parents, that the human race was rapidly shrinking in number. Sterilization solved so many of the problems of modern life that it became too popular—almost a fashionable fad. When a man and woman entered into a companionate marriage they thought they would feel a lot happier if they knew they would never have babies. This condition of affairs existed in and around 2800. The people actually abused the law and took advantage of the National Sterilization Board. You see, before a person could receive a sterilization permit the Board had to be convinced that the applicant was mentally and physically incompetent to have children; and many bright, intelligent men and women would go before the Board and take the examination and pretend to be feeble-minded just so they could receive the permit. Those were the very people who should have had the babies; yet they were the ones who did not want them. Having a baby in those dark ages was almost as bad as death itself.

"The human race at that time was not only degenerating as individuals but disappearing as a species. It was at that time that our scientists began to talk about synthetic babies. A lot of research and experiments were done on the lower forms of life. It was found that a piece of heart muscle from a chicken embryo could be kept alive indefinitely and go on growing in an incubator. Later on the surgeons were able to keep entire organs like the liver and spleen alive, and transplant them into the site of similar diseased organs. It was determined that the eggs of the sea urchin would grow into mature adults without the aid of the male; all that was necessary was to put them in water containing certain salts at a certain temperature.

"These experiments finally ended in the discovery that the human ovary could be kept alive and functioning under certain conditions in a glass vessel. Such an ovary was able to develop and expel a perfect ovum every twenty-eight days. By a process similar to that used with the eggs of the sea urchin, these ova could not only be kept alive but could be developed into fully matured babies. At a certain point in their growth, they were taken out of the sterile glucose solution and respiration started with a pulmometer. As far as any tests were concerned, they were just like all the other babies.

"A great many of these synthetic babies were made and allowed to grow up under ideal conditions. It was soon discovered that they could be kept free from all

the diseases of childhood, they could grow into vigorous adults and be compared very favorably with the best of the race—provided they came from the ovary of a woman who was perfectly normal. That caused a lot of thinking and the thinking ended in the rapid collection of material and building of large numbers of special laboratories to grow these synthetic babies in.

"When all was ready, the Universal Sterilization Law was passed. All young people were required to spend a few minutes under a special form of radium ray when they reached a certain age and no one was allowed to enter into a companionate marriage until this had been done. The continued supply of material for future use was provided for by one of the sections of this act which stated that all young women were to take an examination and those who were nearly perfect in every way were required to submit to an Oöphorectomy and were compensated for this by special pensions and privileges denied other women. In regard to this, I need not remind you that it was one of our reasons for fleeing from modern civilization. It was a danger that threatened you in all its horror.

"Anyway, the machinery was finally set into motion. The records show that the last child was born on the western continent on July 4th, 3009. Since then the race has been kept alive by the production of synthetic babies. About one hundred and fifty thousand babies are produced every year. They are all perfect in every way because any who show defects are not allowed to develop. The Government keeps them in nurseries till they are called for. We saw how that happened in the case of your sister and brother-in-law. After they were forty years old, they decided to apply for a permit to take a baby and they asked for a four-year-old child.

"These babies, grown under ideal conditions, the offspring of tested ovaries, have in a thousand years saved our race from degeneration. In fact, everybody now is perfect in practically every way. There is little sickness and people finally die painlessly of old age. Of course we have not a very large population, but what we have is composed of very fine individuals."

At this point Elizabeth Sellers jumped to her feet as she exclaimed,

"And yet in spite of the perfectness no one is happy!"

"That is it exactly!" agreed the young man. "There has been no trouble in making a living, everybody is comfortably housed and clothed, there is no sickness, food is abundant, everybody is working at some interesting work—and yet no one is happy! We saw that years ago and we know now that it is true."

**T**HE young woman sat down again and snuggled close to the man.

"Tell me again why they are not happy. I have heard you tell it before but tell me again. I want to hear it out here in the wilderness where we are alone—together."

The man put his arm around her and drew her close to him as he replied, and his voice had the soft tenderness of a breeze in the spring time, as it scatters pollen.

"They are not happy because love has disappeared from the world. When children grow up now, they

have only permit parents. They think they are falling in love when they enter into a companionate marriage. All they do is to share the same house during the hours they are not working. After they have accomplished all their ambitions require of them they try to satisfy their desires for a family by securing a baby permit and a child. The child can be of any age when it is taken into their home. It is a child from the ovary of a woman who may have been dead three hundred years. It is a child that never had a father. The man and woman pretend that it is their child but all the time they know that it is not so and so does the child. The four-year-old baby your relatives are adopting this week can think and talk. Can it believe that this man and woman love it when they let it stay in a government nursery for four years without claiming it?

"There has been a surplus of women. These have been used as nurses. Your sister will do nothing for her child except supervise its care by three experienced women who know a thousand times more about child culture than she does. The child will grow up to be intelligent, strong and beautiful, but it will grow up in an atmosphere devoid of love. A man and woman who are married, the way they are, in this period of civilization, do not know how to love a child because they never loved each other."

"But what is love, anyway?" asked the young woman.

"Love is sacrifice!" was the reply. "That seems to be the only definition. I have read the old books and when people in those old days were in love they always had to sacrifice themselves. A boy and a girl in love with each other waited for years till the time came when they could marry. They gave up their ambitions, their future, their success in life so they could marry. For years most of them felt, what was called in those days, 'the pinch of poverty.' There was sickness and constant work and struggle for the necessities of life. The love life centered around the house they lived in and they called this house a home. This is a word that disappeared from the English language years ago, centuries ago, when it was destroyed by the automobile, the aeroplane and moving picture, to say nothing of the companionate marriage.

"They lived in a house that they called a home and they had children. Every child they had made life harder for them. Knowing nothing about it they had to learn to raise babies and care for them. The little things were often sick. The father worked all day and helped care for the children at night and the mothers never ceased to work. The children died and the men had to borrow money to bury them. That was before the time of universal Government cremation. Often the wives died and left the men with children, with little babies one day old; or the husbands died and left the wife to struggle on till the children grew old enough to help. Everything in that life meant sacrifice and out of that sacrifice grew the thing the old poets called love. It was so very different from what we call love today."

"You know so much about the old love," whispered the girl.

"That is because I have read of it. At its best it was a beautiful emotion and at its worst it was worth

while. It made existence human. They lived like animals but they worshipped each other as though they were Gods. They were hungry and destitute and poor and sick and weary but when they faced the sunset of life together, they were happy—because they had sacrificed everything and as a result of this sacrifice they had found love. Their house was often poorly furnished and the place of much hardship but it was a home. Their babies were sick, cross and a constant care, but they were their own flesh and blood. When a man wrote about love in those days you knew he was happy in spite of everything.

"It is hard for a young man like me to tell whether all that has happened is for the betterment of mankind. We are taught by the Educators, that at the present time we are in a Golden Age. The factors that made life hard for the human race twenty centuries ago have all been disposed of. We no longer have disease, hunger, poverty or crime. All we know about such hardships is obtained from our ancient histories. Every detail of our life is provided for so that we can obtain the maximum amount of satisfaction for a minimum amount of effort. Nothing has been neglected.

"Yet you and I have fled from it all. Why? Simply because we wanted something that modern civilization refused to grant us. For some reason we became, even as children, atavistic. We wanted to live like the savages of twenty centuries ago. We wanted to toss aside every invention that had made life a luxuriant certainty and take our chance with the animals and the birds. Scorning a house with electrical appliances of all kinds, with radio, television, monoplanes, synthetic food, central heat and daily amusements of every kind furnished by the Central Board of Education and Amusement, we have determined to make out of this cave a home. We know there is water down in the brook; there is such a thing as fire and all around us is wood in the shape of trees. Somewhere near us there must be food of the kind our ancestors ate, meat and vegetables. If that fails, we have enough synthetic food to last us a year, but just as soon as we can, we must change our diet. These books I brought with us tell how to cook with fire. We shall have to make some furniture and somehow make receptacles of some kind to cook in. Every day we will be doing a dozen things that no man or woman has done for a thousand, fifteen hundred years. No doubt we shall do them rather poorly and clumsily at first. Still we have brains and books to instruct us in these ancient arts and we shall at least be able to keep busy. We shall have to keep busy to prepare for the cold weather."

"It will be a lot of fun," said Elizabeth, though her tone did not indicate anything but the most serious mood. "It will be real sport to work out all these problems and learn to do all these new things that were so usual and commonplace centuries ago. It thrills me to know that I will soon be doing things that no woman has done for so many hundreds of years. Over eight hundred years ago it was found that synthetic meat could be made so easily that it did not pay to keep animals for food supply any longer, so they were all turned loose. Their ancestors were carefully housed and fed to give mankind meat, milk, shoes and clothes

and now their descendants in large herds roam over the deserted farm lands. I am glad that we came. It is good to know that our vision has turned into a reality. I know that I shall never be sorry."

They talked on and on till the moon came up and finally they talked themselves to sleep out on the rock and did not realize what had happened to them till they awoke the next morning, rather stiff and sore from their cramped position and hard stone couch, but very happy in the fact that they had each other and that the cave was to become a home and that they felt an emotion which they knew was the old kind of love.

THE Librarian of the Congressional Library received the report that certain books had been stolen from the shelves. He was also notified of the fact that the assistant watchman had disappeared. Going to the card index of individualities, he was not at all surprised to find that Elizabeth Sellers, No. 237,841, had disappeared at the same time. He took her card out of the files, also the card of the watchman, Leuson Hubler, No. 230,900. After that he spent some hours of careful thought going over the pages of a small book in which he had kept some very personal records in pen and ink, something that at most only a dozen living men were able to do, for the art of penmanship had disappeared with the invention of the psychophone, an instrument that directly transferred and preserved the thoughts of a person, so that at any time in the future the small glass cylinder could be inserted into a radio and repeat the thought. This machine had completely supplanted the pen and the typewriter in the commercial, literary and educational life. Only a few of the savants were able to write, so the Librarian was more than safe in using that method to preserve his observations concerning No. 237,841 and No. 230,900.

After a week had passed he went out to call on Dr. Gowers and his wife. He was nearly thirty years older than they, but had seen a great deal of them socially, and admired them very much, especially for their ability to follow a certain line of investigation to its ultimate ending. In fact, he often stated that when these two were finished with the study of any problem, there was nothing more to do on the subject.

He found a charming family group out on the well kept lawn. There were the Doctor and his wife and three matronly ladies who wore the uniform of trained nurses, and they were all paying the greatest attention to a little girl who was playing with a rubber ball. Dr. Gowers welcomed him cordially,

"I am so glad you have come," he said. "I want you to see our little girl, Lilith. We have just taken her out on a permit and I am sure you will agree with me that she is far above the average for a four year old child. Having her with us has made the disappearance of Elizabeth easier to bear."

"Is Elizabeth gone?" asked the Librarian, in pretended surprise.

"She certainly has!" replied Dr. Helen Gowers. "She and a boy that was working in your library went up in the air a week ago for a ride over and they never came back."

"Is that so? Perhaps they had an accident."

"No, indeed. You know as well as I do that the last accident to a plane happened over five hundred years ago. No! They did not come back, for the reason that they wanted to stay away. Elizabeth took a lot of her clothes and jewels with her. They were married in Pittsburg on forged permits."

"Why I never heard of such a thing!" exclaimed the Librarian.

"Neither has anyone else. Such a thing has not happened for over a thousand years. I had a hard time before I was even able to find out what such a thing was called. Its name was *Elopement*. It has been so easy for young people to enter into a companionate marriage and everybody is so glad to help and encourage them to marry, that anything like this just never was thought possible."

"I confess that I cannot understand it," interrupted Dr. Gowers. "We have tried to be like parents to Elizabeth and I am sure that if she and Leuson had only come to us, we should have been glad to listen to them and help them apply for their preliminary treatment and marriage license. Of course, things might have been delayed for a few months by Elizabeth's operation, but her pension from that would have made it very easy for them to live the rest of their lives."

"Looks like the action of some lower animal," said the Librarian.

"That's just what makes us feel so bad," said the wife. "They just went off like two animals. I only hope that they will come to their senses and return for a pardon, which I am sure will be granted. Perhaps they will have a logical explanation for their conduct. Have you time to come into the house? I want you to listen to the daily programme I have arranged for these three nurses who are going to care for Lilith under my supervision. I have filled twelve psychophonic cylinders with my orders and I believe that it can serve as a perfect example of correct child culture. It may be good enough to use in the National Educational Department."

"Of course," added the proud husband and father, "you understand that this is our first child and we have only had her for four days. Helen is so capable and enthusiastic and confident about her ability, that she feels she has already added to the knowledge of the world by preparing this programme."

"I am sure," said the Librarian suavely, "that she will make a perfect mother, and just as soon as I can, I will drop in for the evening and listen to the twelve records. Just now I shall have to fly back to the Library. I am very sorry about your sister. If you hear anything of her, be sure to let me know."

However he did not go back to the Library; instead he went to see the Head of the Biological Maternity Units. The two men had been fast friends for many years. He spent several hours in conference, and when he finally returned to his office, he tingled with a strange enthusiasm such as he had not experienced for many years.

After that there was nothing for him to do but wait, which he did with a very definite impatience.

IT was late autumn; to be exact, it was the last day of November. The Librarian, who lived amid his treasures, was listening to a psychophonic lecture on the latest evidence of life on the planet Venus: at least he was pretending to listen, but most of the time he was asleep. He suddenly was aroused to find that there was a man seated in a chair near him. He looked at him a moment and then jumped to his feet,

"By the Seven Sacred Caterpillars! If it isn't Leuson Hubler! My dear boy, where did you come from and where have you been?"

The young man smiled as he replied,

"Did our disappearance cause much of a sensation?"

"Not much. The Gowers were so powerful that they kept it out of the daily-radio-news-transmission-service. Elizabeth's sister feels the disgrace keenly."

"I believe that. Well, we are safe and so far are having a wonderful time, but I just had to have some things that I could not make and I knew they were in your museum, so, considering you are to blame for it all, I made up my mind to come and ask you for them. I want an ax and a saw and a hatchet, several iron kettles, a frying pan, a rifle, some ammunition and—oh—a lot of things that we shall need to get through the winter on."

"I hardly know what you are talking about," said the Librarian, "but if you know what you want and can recognize them, I will give you everything. But where in the world are you living?"

"We are living in a cave."

"Like a pair of toads?"

"No! Like Gods! We are savages, Father, if you know what that means. We went back to the age of the Troglodytes. You are to blame for it all. You had me taught how to read and gave me a position where all the old books were available. You even picked out love stories of the ancient times and urged me to study them. It was you who first introduced me to the novels of Henry Cecil, such as *The Adorable Fool*, *Wanderers in Spain*, and *The Passionate Lover*. You urged me to dust and read *Prue and I* and *Reveries of a Bachelor*, and in the field of poetry you advised *Idyls of the King* and *Songs of a Spanish Lover*. I read those books when a boy and they made me different. And when I met Elizabeth Sellers, I met a girl who was willing to listen to something different and this is the result; so if it has been a sin and a crime to do what we have done, you are to blame."

The old Librarian smiled,

"Everything you say is true but it is only part of the truth. It has all been a wonderful experiment but the details had to be kept from both of you; otherwise you would not have been free agents; but before I tell you about it, let me assure you that I, at least, do not think that you have done anything wrong. Now this is what happened.

"About thirty-six years ago I had a daughter, and the same year my friend, the Head of the Biological Maternity Units, also took a little baby from the Nurseries. The two girls were of the same age and almost grew up together, as we were living next door to each other. We thought it would be a fine thing to give them a liberal education and so, by the time they reached

fifteen years of age, they knew a great deal and more than was good for them. They were beautiful women, and they had some very beautiful and impracticable ideas. They were both in love with two nice young men who, unfortunately, were also more or less dreamers.

"At the time of the yearly examination of the young women to select material for additional ovamaters to supply synthetic babies, these two young women passed a wonderful examination and were ordered to the operating room. They would have been pensioned so liberally that they could have married and lived comfortably the rest of their lives. What really happened was that they both committed suicide the night before the operation. You may not be familiar with that word, so I will tell you that it means to kill oneself. We were all so shocked by it—it was so unusual, that we kept the matter quiet; but it made a deep impression on my friend and myself. We talked the tragedy over and hastily decided to make what amends we could. Secretly, my friend operated on their bodies before we sent them to the National Crematory, and then he started to grow their children. It was my idea that he should continue with this work till he produced two children, a boy and a girl, and then destroy the two ovamaters. This was done, and as soon as I could do so, I applied for a baby and selected you. In order to avoid suspicion, we arranged to have the girl placed with the Sellers family. They had one daughter and wanted another. Unfortunately the parents died before the little girl was mature and part of her care was assumed by her sister, who was married to Dr. Gowers. But the sister was so busy with her experiments that she did not have much time to spend on the little one and she just ran wild, most of the time with you. The escapades of you two children nearly drove us all insane—for example, the time you broke the time record for a non-stop flight around the world, following the equator. Still, thanks to my early training, you wanted to be with books more than anything else, and Elizabeth was always willing to hear you talk and believed all you told her. You seemed rather slow, so I had Elizabeth put on the list for operation. That caused the explosion. My dear old friend, who is a sort of a grandfather to Elizabeth, is as pleased as can be about it all. He feels that it is a wonderful atonement to two dead women and a splendid and unique experiment in biology. Without your knowing it, we gave you a chance to be happy. It is no wonder you say that you have been living like Gods."

"So you two planned it all?" asked the astonished young man.

"Just about. Of course we did not know how you two would work out the details. We knew that you would have to get beyond the reach of the Government to even start. If the authorities found out where you were and what you had done, you would probably be placed in solitary confinement for life, though that is a punishment that has not been necessary for a thousand years. In this case, however, they would feel that it was imperative. Suppose your conduct became known? What if the young people adopted it as the latest fad? You can readily see that the entire economy of the human race would be disrupted. Of course

you can depend on two old men to keep your secret, but as far as the world is concerned, you had better consider yourself dead, for you must not come back."

"We do not want to come back, but I cannot see what harm it would do!"

"Just this. It would disrupt our present civilization. Suppose that Elizabeth has a child. The last birth occurred in 3009. But before that, for hundreds of thousands of years every child was born with a mother. The desire to give birth to a child was as much a part of their lives as the desire to eat and sleep. For nearly a thousand years, all women have been sterile and have had to be content with synthetic babies, but do you suppose that the desire to have babies of their own has disappeared from their mind and soul? No, indeed! It is still there and it is a powerful desire even though it is dormant and subconscious. If Elizabeth should appear in Washington, carrying her baby, if it became known that she had actually given birth to the child and that she had a husband who was the child's father, the women would wreck the Government. The older women would become wild because they had been deprived of what would seem to them to be the greatest privilege and blessing of their sex, while the young girls would refuse to accept the dictates of our government and would try just as hard as they could, to follow Elizabeth's example. There would be chaos."

"Then why did you secretly urge us to go on with it?"

"For two reasons. First as a retribution to your mothers, who decided to kill themselves rather than go through with the operation, and second, because, as scientists, we wanted to make sure it was still possible for a woman to have a child."

"Do you mean that you thought there was a doubt?"

"Certainly! And we had a right to think so. For at least forty generations these physiological functions of both sexes have been unused. We were unable to tell what would happen if a normal man married a normal woman. We did not even know if there were any normal people any more. We tried to find out what the physicians and biologists thought about it, but there again we were in trouble. No one had thought about such a thing for so long, that they could only guess, and, being scientists, they felt that each had to guess differently from the other."

The young man laughed,

"I think we shall be able to tell you the answer some time."

"That is the pity of it. You will be able to tell my friend and you can tell me, but you cannot tell the world. We should be pleased if you had a child, and we would try to arrange to secretly get you a child of the opposite sex so they could grow up together and marry at the right time. If we were only younger, we might even assist you in forming a small race, but it would have to be a race of savages, educated savages, but none the less composed of individuals who had to live under the same conditions that savages used to live under. Well, we have talked enough and I know that you are anxious to return to your wife. Let's go and get whatever you need from my private museum. I want you to take anything you need. We do not want

Elizabeth to suffer in any way. Tell her the story I have told you. Tell her that we love her and want her to be a brave girl. Just as soon as you go, I will step over and see her grandfather. Be sure to leave me a good map of just where you are. I wish there was some way of communicating with you, so we could be sent for—if you get into trouble of any kind. We will prepare a medicine chest for you."

AN hour later the young man jumped into his plane, kissed the old man good-bye and started out for his long trip back to the cave. In the monoplane were a number of things that would help make the winter more endurable. As soon as he left, the Librarian started out to make a midnight call on his old friend and the two talked till morning; and the things they talked about were the things that had interested young folks thousands of years ago.

The winter was severe. With all his education and effort and even with the use of a lot of common sense, Leuson could not keep the winter from being a hard one. The chimney smoked, the food spoiled, the roof of the cave leaked, the wolves killed and ate their little pig, their few chickens refused to lay, the traps did not catch rabbits regularly, and never a day passed without some new form of trouble, unforeseen and unpreventable. Yet Leuson Hubler was happy with his wife, Elizabeth Sellers, because they lived in a home and the thing that made the cave a home was love.

The winter passed and the spring came. The young man wanted to make another trip to Washington—to see if he could get help, advice or medicine. His wife refused to let him go: she felt that she would die if she had to spend a night alone. Together they studied over the old books and tried to prepare themselves as best they could for the event they now were certain had to be faced. Leuson captured and tamed a wild goat and in May she gave birth to a kid. He felt easier. No matter what happened, there would be milk. Elizabeth laughed at him and said she would tend to that part of the programme, but Leuson only took better care of the goat, and learned to milk it. He also ventured to send a radio message to the Librarian.

June was warm. Elizabeth rarely left the mouth of the cave. For over three weeks she had not been down on the meadow. Every day Leuson would take the goat and the kid down to the pasture. Finally he decided to keep the goat in the cave and bring it grass. He did not want to lose the goat. Elizabeth kept on laughing at him. He would laugh back at her and then go down the path with sorrow in his face and fear in his heart.

On the last of June, Elizabeth stayed in her bed. Leuson stayed by her side. They talked and now and then he gave her milk, warm from the goat. He did for her all he could and she helped herself as well as she was able to remember the instructions in the old books, and all through the night she kept on telling him that she had been happy in her home and their love and that she was glad she was going to have the baby and how proud she was that he was the father of the baby and how much she loved him and how proud they were going to be of their child—and when morning came she died.

The cause of her death was a simple matter. The average physician of the nineteenth century could have saved her. The only reason for her death was that she had given birth to a baby and there was no one there who knew how to care for her in a scientific manner.

Leuson Hubler, the first Father that the world had known for a thousand years, picked his daughter up and carried her into the sunshine. There, on the rock ledge, the kid was nursing the goat. The goat was bleating from hunger and the joy of nursing. Leuson gave her a handful of grain and let the baby drink with the kid.

As he knelt there, giving his daughter her first food, two old men toiled up the steep path. The Librarian and his friend were bringing the medicine that would have saved the life of the first Mother.

They were just a little too late.

**T**HAT fall, in the city of Washington, the National Society of Federated Women held their annual meeting. Five thousand of the leaders of their sex had gathered for the meeting and every woman in the nation was listening to the proceedings over the radio. It was the one time in the year that the women felt fully their sex consciousness. All through the year they believed that they were the equal of the male sex, but during this week they knew they were superior in every way. The usual programme was presented, the usual leaders of the feminine sex introduced. It was not till Thursday afternoon that the unusual occurred.

A man was introduced to the great audience. It was a distinct novelty, as only rarely was a man invited to take part in the conference.

Leuson Hubler walked out on the platform, carrying a basket which he placed behind the President's chair. Then he started to talk in a voice so clear and musical that there was hardly any need of the loud speakers, and even as he talked to the five thousand leaders of womankind, many more thousands of women in all parts of the land listened to his words over the radio.

He started to tell them about the old days. He talked in simple language, with well chosen words. Largely he repeated what he had said to his bride the first evening in front of the cave. He told about the gradual growth of unrest in the women and selfishness in the men and how with the companionate marriage had come a gradual deterioration of the human race. He went on to explain the gradual growth of the Sterilization Laws and how finally the Synthetic Baby was thought not only necessary, but highly scientific. Next he told of the disappearance of the home and the gradual death of family love. With the home and love had disappeared the father. There remained only houses in

which lived men and women who were "married" companions and nothing else. They had children, the seed of dead women, who had never known a husband's love. The children were loved only as permit children.

On and on he talked and as he talked there arose in the hearts of the women who listened a strange unrest and hunger for something that had once been their heritage. They listened and yearned for something they had lost a thousand years ago. Then he told them about Elizabeth and himself: how they were the children of two women who had killed themselves rather than to be denied their righteous inheritance. He told how they had loved each other as boy and girl and as young man and woman had fled to the wilderness rather than submit to the laws of the land. He told how they had lived and loved in the cave, and how they had wondered whether it was still possible for a woman to give birth to a living child: how they had tried to prepare for the emergency—about the goat in case anything happened.

The five thousand women silently rose to their feet: they crowded around the platform where he was weaving his magic spell—and he told about that first night and then about the last night—how she had said that no matter what happened she was repaid by the love and happiness that had been hers that year in the cave home—and then he told how she had died, but that she might have been saved—and that even in her death she had shown to the world that a normal woman could still give birth to a normal child—and then—

He reached down into the basket and, picking up his daughter, held the baby high above the heads of the five thousand women and he showed them a baby, born of the love of a man and a woman in a home.

For a while the hall was silent.

The women looked at the baby, and as the tears streamed down their cheeks, they knew at last what they had been wanting all those thousand years. They knew, but they needed a leader to tell them.

And Dr. Helen Sellers Gowers, large, efficient, determined, shouldered her way to the platform and stood by the man and the baby and said:

"This is the child of the woman I called my sister. She is dead, but we will never forget what she has taught us. I know what I feel and I know what you feel. It is too late for many of us, but it is not too late to save our boys and girls. There must be no more synthetic children, no more companionate husbands, no more mere houses. We can rule the country because we are the stronger. Let us go to Congress and tell the men what they must grant us."

And as they marched down Pennsylvania Avenue, the women of the nation cried in unison:

"Give us back our homes, our husbands and our babies!"

# BARON MÜNCHHAUSEN'S SCIENTIFIC ADVENTURES

By Hugo Gernsback

## 9. The Cities of Mars

**I**F there is one thing that annoys me, it is a nosey reporter. To be sure, they are harmless folk, are reporters, and suave and well-mannered as a rule, too. But somehow their eyes always appear to me as gimlets and their noses as huge corkscrews, but then those are the characteristics of the tribe, and really they can't help it. It is their business to drill holes right through your mind, and once their corkscrew noses have twisted themselves into your confidence they pull and pull till something comes up. A reporter can always dig news out of you, even if there's no news to be had. All of which might be of interest to you, and then again it might not. At any rate, the editor of the Yankton *Bugle*, who has heard about Münchhausen, sent a reporter to my laboratory in order to "write me up" and to find out if Baron Münchhausen was fiction or truth. Not that it was the first time that this particular reporter had called in vain. For I have a deep-seated aversion to the *Bugle*, which aversion includes everyone from the editor down to the job press. Hence I wasn't "in" to reporters heretofore. But on this occasion the reporter, who is a live one, succeeded in running the blockade. He "made up" as a water meter inspector, and as both the water meter, as well as my radio station, are located in the basement of the house, he had but little trouble in "torpedoing" me. Once established in a chair there was nothing to do but to submit to his tortures.

Of course, he did not believe that there was such a thing as Münchhausen, who was supposed to live on Mars just now and who was supposed to send nightly radio messages to earth, which are relayed to me from the moon by an alleged relaying plant located there.

However, the reporter was willing to obtain first-hand evidence for his paper, and if I did not object very much he would stay till 11 p. m. in order to "listen in." To strengthen the argument he pulled out some two for 50c. Perfecto's (reduced to 40c. Saturdays only at Frank Levoy's cigar store on Main Street). As my nargileh (Turkish water pipe) wasn't working, for lack of proper ammunition that evening, the argument proved convincing and I bade the reporter, whose name was Bill Snickles, to make himself at home. I explained

to him all the good points and qualities of my radio receiver, and after the second Perfecto I was willing to let him photograph the station. He called up the office for the staff photographer, and after the flashlight had been taken it became time to adjust the instruments. In another three minutes Münchhausen would be calling. I had placed an extra set of 'phones on Snickles' head and I could see that he was breathing hard with suppressed excitement. I had keyed him up to such a pitch that when my chime began striking the first stroke of eleven he jumped clear out of his chair. But I smiled a very superior, benevolent smile at him, as a father smiles at his uncomprehending babe. I then leaned back comfortably, toyed a bit with the Harmonic Ultra-Amplifier, adjusted the Selenium Vapor Enforcer, and turned once more the knobs of the coupled inductance balancer to make sure that I was tuned in for 90,000 meters—the wavelength used by Baron Münchhausen.

The chime had sounded its last stroke. In another second the dear old gentleman's voice would greet me as usual.

Have you ever wished to "show off" to your friends or to your relatives and the "show off" failed to materialize? Have you ever experienced the cunning feeling of an icy cold wave racing up and down your spine, to be followed immediately by a hot blast up and down the selfsame spine? And has the perspiration broken out all over you at the contemplation that the "show off" was a fizzle? Yes? If you have, you know exactly how it feels.

At 11:05 p. m. I began to wonder why it was so hot in the room. By 11:10 p. m. I was taking a Turkish bath. By 11:20 p. m. I calculated that my private temperature must have gone up to somewhere near 269° Fahrenheit, rising steadily all the while. By 11:30 p. m. I wasn't sure whether I preferred calling an ambulance or jumping into the ice covered pond in front of the house.

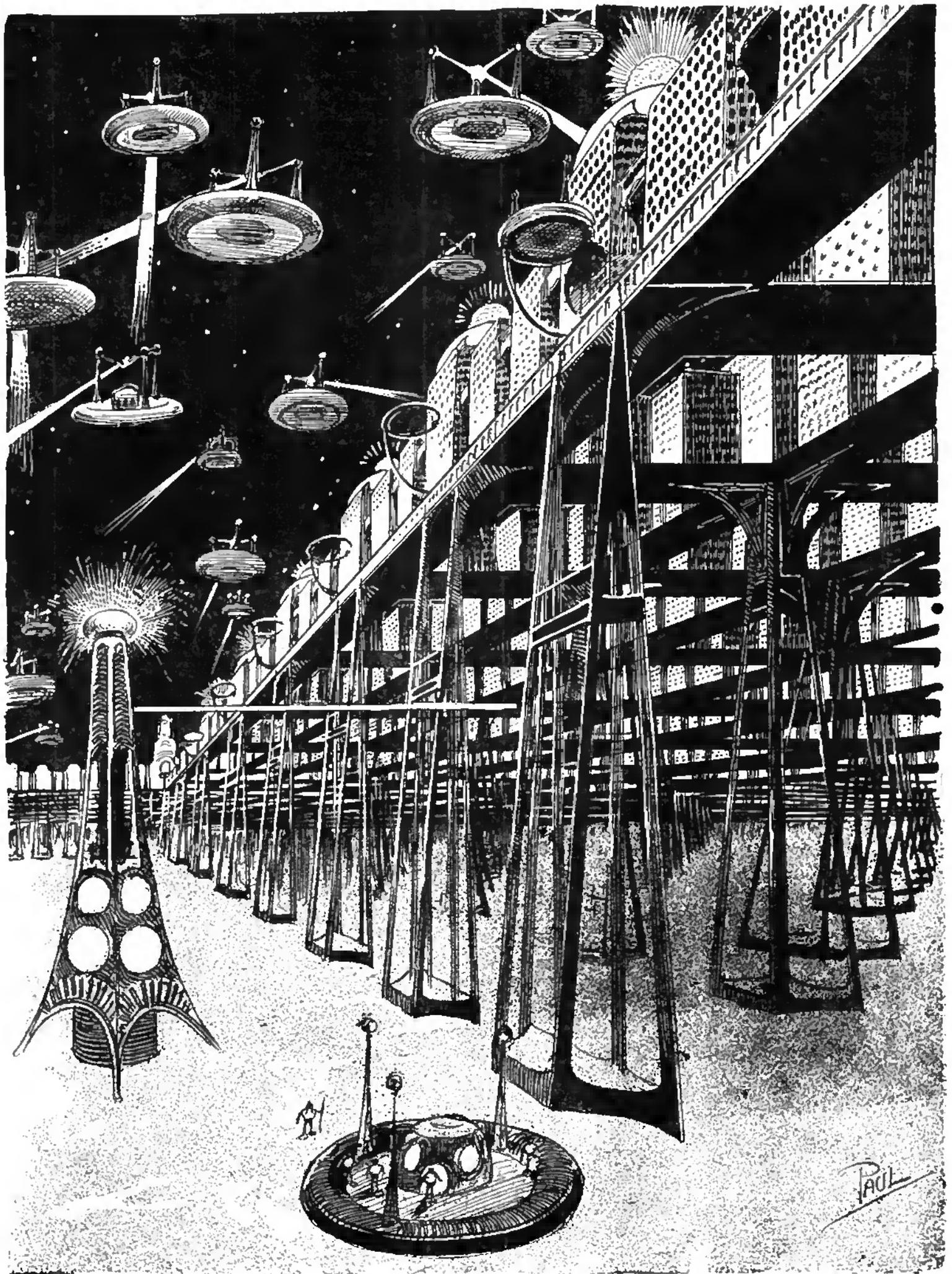
Münchhausen simply didn't "call." What was wrong? Why had he failed me for the very first time, just when I could least afford it? For the first time since I knew him I felt bitter toward him. What had happened?

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*M*ANY of our astronomers have noted from time to time that immense sandstorms frequently sweep over the face of the planet Mars. Since these sandstorms seem to cover a great amount of space, it must necessarily mean that the sand is very fine there. How intelligent beings might live permanently in such a sand-loaded atmosphere, is very cleverly brought out in this instalment.

*The range of telescopes, even within the last fifty years, has increased enormously. How far can science go in increasing telescopic magnification?*

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... all buildings and structures on Mars, with few exceptions, are located 500 feet above the ground, in order to make life bearable. Thus all "cities" are built high up in the air; this feature gives the stranger his greatest surprise. . . . We saw thousands of these flyers gliding noiselessly through the thin air, their intense yellow propelling light shafts playing all over the sky and over the ground.

And there was Snickles with a sarcastic grin spread all over his bird-like face, making biting remarks all the time.

"Maybe the ether gave out, what?" he mocked. Or: "Maybe Münchhausen has a Martian frog in his throat and can't talk!" Or else: "Isn't it possible that the message became lost in transit? In that case I would suggest that you put an ad in the *Bugle's* Lost and Found . . ."

That was the last straw. He didn't finish the sentence and he didn't wait to take his hat either. He went out like a blue streak, with me at his heels. But reporters, among other accomplishments, must be good runners. He is. At any rate, I did not catch him. Disgusted and in a white rage, I went to bed.

My ruffled feelings were not particularly smoothed the next morning when my young brother brought me a copy of the *Bugle* while I was still in bed.

Snickles had certainly outdone himself. The whole town would choke with merriment when they would read the account, there was no doubt about that. The headlines were enough:

**I. M. Alier Makes Stupefying Invention.**

**Receives Soundless, Voiceless, Messages from Mars.**

**Alleged Hero, Münchhausen, Speechless with Surprise.**

**Münchhausen Says He Ain't Sayin' Nothin'!!**

And so on, and so forth. The article was written so excruciatingly funny that I had to laugh myself, despite my rage. But the laugh froze to ice when my eyes had passed over the line where Snickles had written ironically:

"Undoubtedly Münchhausen was asleep at the switch!"

With one bound I was out of bed and was racing madly down to my radio barefooted. I gave one look at the lightning switch in the corner of the room and almost collapsed:

*The switch was grounded and had been grounded since noon of the previous day!*

For you may know that the Fire Underwriters nowadays require radio stations to have lightning arresters in order to protect the building from lightning. Thus when your station is not in use you simply connect the aerial to the ground by throwing a switch, and no damage can be done by a thunderbolt. Not only that, but in this condition the aerial becomes really a first-class lightning rod.

Sad to relate, however, certain idiots are apt to forget to throw the switch over when trying to receive messages, I being among them that evening. For when the reporter called so unexpectedly, I forgot all about the switch and never bothered to look around to see in what position it was.

Münchhausen had called, of course, of this I was certain. The message, however, had flown from the aerial directly to the ground, never entering my re-

ceiving instruments. Lost and lost forever! And my thoughtlessness had made me the laughing stock of the town on top of it! It was maddening. Right then and there for the next ten minutes I had what my little sister very appropriately designates as a series of rather violent "conniption fits!"

\* \* \* \* \*

**T**HAT evening, promptly, as always, Münchhausen "called." He did not waste much time in preliminaries, but went right to the point:

"Alier, my dear boy, I can't begin to tell you how wonderful this planet Mars is with all its marvelous inhabitants. Flitternix and myself are as in a trance half of the time. Our brains simply cannot digest all the thousands of wonders we see around us every minute. For a poor untrained human mind to be suddenly transplanted into a civilization hundreds of thousands of years ahead of terrestrial civilization is no easy matter. At times we are positively numb with astonishment and the more we see and learn the less we feel we know. Every new marvel opens up a dozen new unfathomable avenues, each one equally puzzling.

"But to proceed. Yesterday I explained to you how we had our first Martian meal at our host's residence and how we found that gaseous food that you don't need to chew is vastly more nourishing and satisfying than solid food. It does not overload the stomach as do solids, and the digestion is greatly improved. The gases liquefy in the stomach, of course, but the stomach never becomes distended. Besides, the Martians, trained rigidly from earliest childhood, know just how much gaseous food they can assimilate. This, I understand, is one of the reasons why the average Martians live over 150 Martian years, which is a period of 300 terrestrial years.

"After dinner, we were conducted to the roof of our host's mansion, where we made ourselves comfortable in the large transparent chairs scattered around beneath a cool, green, silky-appearing canopy. As I mentioned to you previously, the Planet Ruler's mansion resembles somewhat a colossal cathedral. The roof is about 250 feet from the ground and the entire structure rotates slowly around on its axis. This is the reason: While the Martians have no religion whatsoever, they know what we have known for some time—namely, that life on all planets is absolutely dependent upon the sun. Extinguish the sun today and all the planets throughout our planetary system from Mercury down to Neptune will become dead worlds. Without sunlight the rivers will cease flowing within three weeks. Within six months all waters on earth and Mars will have frozen down to the bottom. The vegetable kingdom will have ceased long before that and the animal kingdom, dependent upon the vegetable kingdom, will die even a more rapid death. In less than two years the last surviving being on any of our planets will have passed out of existence. There can be no organized life, as we know it, without the direct influence of a live sun.

"While the Martians are by no means sun worshippers, they nevertheless have a deep-rooted feeling for our luminary. This is strikingly illustrated by the fact

that the Planet Ruler's mansion is constructed in such a manner that powerful machinery revolves the entire structure silently during the entire Martian day; the first rays of the morning sun thus shine into the Ruler's private rooms, and as the sun keeps on rising, the house keeps pace and thus the entire day till the last sun ray disappears at the western horizon, the Ruler's windows are bathed in sunlight. During the night the house does not revolve.

"The day we were on top of the Ruler's mansion was still our first day on Mars. It was then in the early afternoon, after lunch time.

"Down below we looked upon the 'city,' which seemed to be laid out in form of a vast semi-circle, as far as we could ascertain. To the west we could just glimpse one of the waterways.

"We stepped to the balustrade and peered down, completely stupefied with what we saw. But Flitternix, his mind full of astronomical observations, called my attention to the heavens and I followed his command reluctantly.

"'You will observe,'" said he, pointing at the sun, 'that it appears quite a bit smaller than when seen from the earth. Also it does not appear yellow-white, as it does to terrestrial inhabitants. You will note it has a rather reddish hue; that is because we are now a good bit further away from it, a matter of over 60,000,000 miles further than on earth. In other words, we are now one and two-thirds times as far away from the sun as we are on earth. But you must have observed how warm it is everywhere on Mars, as far as we have visited it, and that the day appears fully as bright, if not brighter, than on earth. Naturally you will wonder, for on Mars, as well as anywhere else in the world, certain physical laws hold good. Thus heat and light diminish inversely as the square of their distance; in other words, a 16 candlepower lamp two feet away gives only one-quarter the light (four candlepower) of the same lamp if seen at one foot away. Heat acts in exactly the same manner. Then why is it that the day is as bright, and the heat as great as on earth, although we are twice as far removed? According to the physical law just mentioned Mars should only receive four-ninths of the light and heat from the sun which the earth receives. Why does it get more? Early astronomers on earth reasoned with a similar logic, and they had thus come to the conclusion that as Mars is so far removed from our sun, the temperature on Mars must necessarily always be far below the freezing point. Accordingly they reasoned that life on Mars, as we understand it, was not possible. But then the telescope suddenly revealed that the Martian snowcaps *do* melt every spring, and if this is the case the temperature even in the polar circles, at times *must* be above the freezing point. But why?

"'The answer is simple enough. The earth has a very dense atmosphere with many clouds. On Mars the reverse is true, it has a thin atmosphere and practically no clouds all the year around.

"'Professor Lowell estimated that over the earth as a whole, the proportion of actual to possible sunshine for the entire year is 50 per cent. In other words, the sun only shines practically one-half of the time it might

if there were no clouds. On Mars, on the other hand, the sun shines 99 per cent of the time. Also, there are no cooling rains or snows in the temperate zones to chill the atmosphere, consequently a great deal more heat is absorbed and retained on Mars than on earth. Furthermore, an enormous amount of energy is lost on earth, where the sun rays must travel through a dense blanket of air, whereas the air on Mars is thin and clear. For this and other reasons, too technical to dwell upon, we find that light and heat are practically the same on the two planets, with several points in favor of Mars.'

"**W**HILE I was still turning these facts over in my mind, Flitternix suddenly pointed to the sky and shouted rather excitedly:

"'Look at the moons!' I followed his finger and I saw the wonderful spectacle of two full moons shining in the sky. It was still light and for that reason the effect was not as wonderful as the one we now witness, when we see Phobos and Deimos during the night time. At that particular time the moons shone as pale as our own moon does in a bright afternoon with the sun still up.

"Phobos, the larger of the two moons, is only 4,000 miles distant from Mars and, as I mentioned before, it revolves around Mars in the incredibly short time of seven and one-half hours. In a single Martian day it therefore revolves three times around Mars, which means it rotates faster than Mars itself. Although it revolves in the same direction as Mars and the rest of the planets, namely, from west to east, on account of its greater speed *it appears as if it were moving from west to east*. Its speed, to an unaccustomed human observer, is really disquieting. While we were looking on we could actually see how terrifically fast Phobos moves. When Flitternix first called my attention to it, it was quite high up in the sky. Ten minutes later we watched it plunge with express speed below the eastern horizon! It is positively uncanny to see a heavenly body that looks as big as our moon perform such celestial gymnastics, but the fact remains. Deimos, the smaller of the two moons, revolves at a distance of 12,480 miles from Mars. But as it measures only about six miles in diameter, it naturally appears quite small as seen from Mars, even when full. When we saw it that afternoon it did not appear very much brighter or bigger than the evening star as seen from the earth. As a matter of fact, it does not look like a moon at all to Martians, as we understand 'moons'; it looks rather like a very bright star. During the night its face does not always appear as a disc to the naked eye, even when it is full. It is too small and too far removed. Nevertheless, it is a true moon.

"Having finished our contemplation of the sky, we turned anew to the view directly below us. Of all inspiring and majestic sights, I do not think that there is one that can rival a Martian 'city.' I once thought that New York, seen from the Woolworth building, was about the grandest view one could ask for, but it appears positively ridiculous compared with any of the Martian great centers.

"To begin with, the Martian cities are not built upon

the ground, for a very important reason. Nearly all of the Martian continents are deserts, irrigated only in comparatively small sections near the great waterways. The land, therefore, which is practically flat, is sandy, as all true deserts are. For ages upon ages this desert sand has been rolling back and forward over the planet till it has lost the characteristics of real desert sand as you know it on earth. It has become a fine, impalpable dust, extremely choking if it finds its way into the lungs.

"This fine desert dust is the greatest bane of the Martians and they fight it constantly and heroically. But as nothing but vegetation—which, again, is dependent on water—will permanently stop the dust, the fight is almost hopeless, for the Martians lack water to irrigate the entire planet. Naturally the dust is not quite so bad near the waterways, but the large centers spreading for a few miles inland are not thus protected, especially if the wind blows from the land side over a broad expanse of desert. Even the slightest breeze brings its cloud of choking dust and a strong wind sometimes obscures the sky.

"But when it storms, pity the poor Martians! Through the large telescopes on earth, 40 million miles away, earth's astronomers have frequently seen huge sandstorms sweep over sections of Mars as large as France! Can you imagine what such a storm means? We witnessed one yesterday and it was awe-inspiring, terrific.

Hours ahead of the storm the Martians ran for their sheltered lofty houses and closed everything airtight. All traffic on the canals, on the ground, as well as in the air, ceased for two hours, while the storm was in progress. From the eastern side of our host's windows we saw the approach of the dust. It came rolling on in gigantic red clouds like an ocean, and although it was forenoon, the sun was blotted out almost entirely. The dust is so fine that you could hardly hear it as it was hurled against the thick window panes in immense quantities. On and on it came, seemingly without end; sometimes we would get a glimpse of sunlight, but oftener we were plunged in total darkness. After the storm had lasted for two hours it stopped as suddenly as it had appeared and the sun smiled down on us again as before.

"Within ten minutes after the storm, myriads of aerial flyers could be seen spraying the buildings and structures with compressed air to clean out the red dust from the corners where it had accumulated. When we looked around this morning there was hardly any evidence of the terrific sandstorm of yesterday. Of course, such storms as the one we witnessed are rare and do not occur more than six times a year; Martian houses and structures are built with a view of getting rid of the dust as quickly as possible when it does come in avalanches.

"Accordingly all buildings have sharp gable or pyramid roofs, and every wall and balustrade is built with a gable. Every window sill points downward at an angle. There is not a structure on Mars that is exposed which is flat, or which has a single flat projection extending from it. Everything is built to get rid of

the dust as quickly as possible, for this fine and extremely dry sand slides down a sharp incline with great rapidity.

"From the foregoing you will easily understand that the Martians cannot permanently dwell near the ground. It is an exceptionally calm day when your Martian can walk on his planet without his respirator hood over his head. From this it follows that as he cannot dwell upon the ground, and as intelligent beings as a rule do not care to burrow themselves into the ground, there is but one thing to do, and that is to go above the surface of the ground. Indeed, this is precisely what the Martians have been forced to do for hundreds of thousands of years.

"It was soon found that the ordinary dust did not usually rise higher than 400 feet above the surface of the planet. At this altitude the air is sandproof except for such severe storms as the one we witnessed yesterday.

"For this reason all buildings and structures on Mars, with few exceptions, are located 500 feet above the ground in order to make life bearable. Thus all 'cities' are built high up in the air, and it is this feature which gives the stranger his greatest surprise.

"Imagine immense metal towers stretching skyward mile upon mile, supporting a vast city raised 500 feet up in the air. Imagine these towers partly roofed over with metallic roadways and buildings and you have a faint idea of how a Martian 'city' appears.

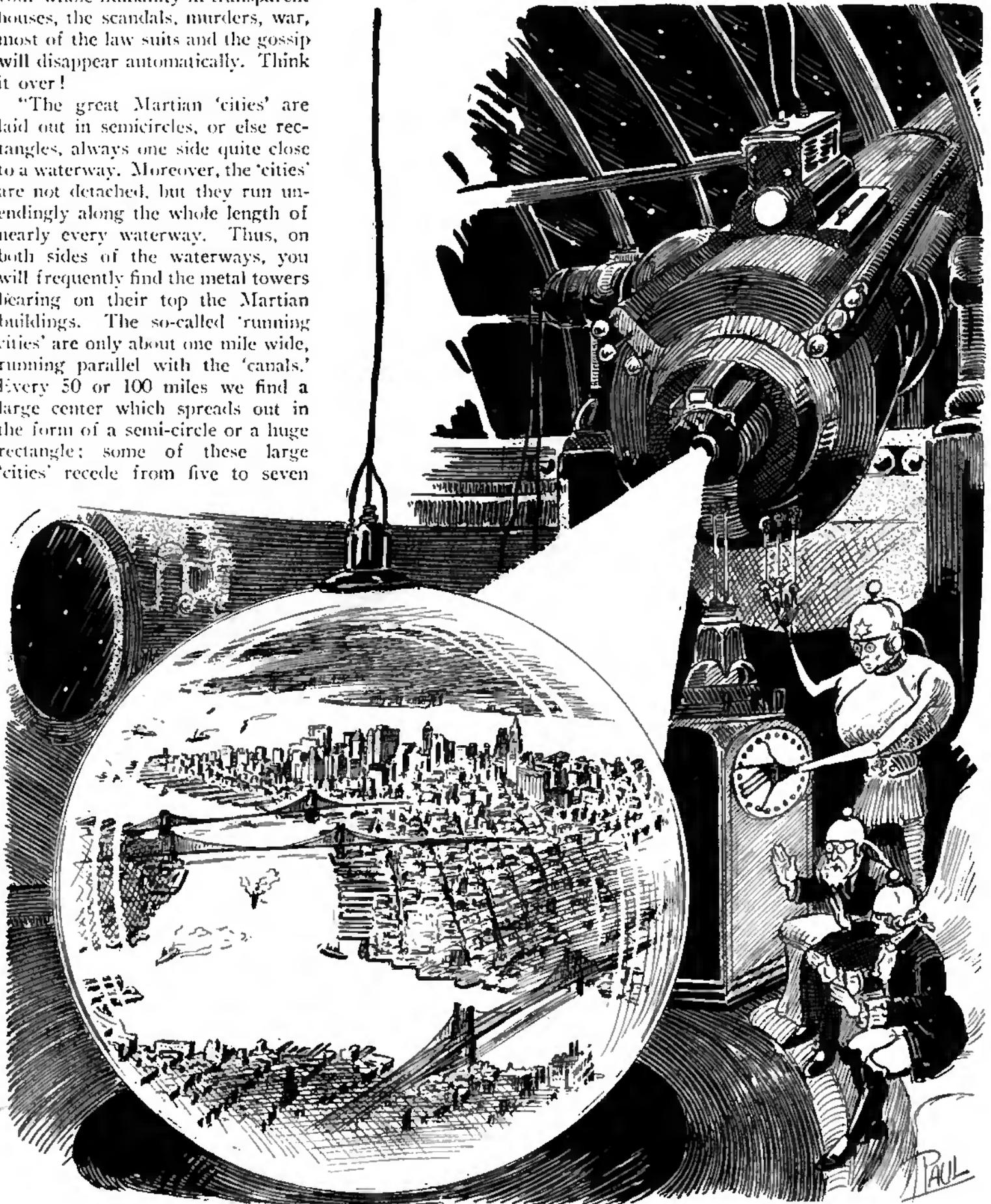
"When we had first 'landed' on Mars we naturally thought that we had touched the ground. As a matter of fact, we had not 'landed' at all, but we were still 500 feet away from Mars proper. We simply had descended in the aerial Martian city, but this we did not know till later.

"Every building is constructed of the universal transparent material *tos*, giving the structures a curious but pleasing appearance. The transparency of this wonderful material is so great that it is possible to actually look straight through an entire building, wherever there are no obstructions of opaque objects. I might say that the latter are rare, for the Martian loves nothing better than transparency, and for that reason he builds nearly every object out of *tos*—from a table down to the floor, which is also transparent. You might think that such a house, open to everybody's curiosity, would bring with it many delicate as well as embarrassing situations, but this is not the case—at least not for the Martians. These people have long since learned that anything worth doing cannot possibly be open to criticism from fellow inhabitants, whereas closeted, non-transparent rooms make for nothing but laziness and vice. When all of your actions are open to the entire world, you are more apt to lead an upright life than otherwise. For that reason no false, make-believe civilization exists on Mars as it does on earth. For that reason, too, the Martian is an upright, healthy, truth-loving individual, not a hypocrite as are nine-tenths of the human race. The Martian has no secrets, he knows no vice, he has no scandals, and he has little occasion to feel ashamed of himself. Why? Because everyone can see at *all* times what he is doing.

"Pick up any one of your newspapers. What do their text pages contain? Seventy per cent scandals, murders, war, law suits, gossip; 10 per cent sports; 10 per cent business; 5 per cent science and advancement, and 5 per cent miscellaneous subjects. If you place your whole humanity in transparent houses, the scandals, murders, war, most of the law suits and the gossip will disappear automatically. Think it over!

"The great Martian 'cities' are laid out in semicircles, or else rectangles, always one side quite close to a waterway. Moreover, the 'cities' are not detached, but they run unendingly along the whole length of nearly every waterway. Thus, on both sides of the waterways, you will frequently find the metal towers bearing on their top the Martian buildings. The so-called 'running cities' are only about one mile wide, running parallel with the 'canals.' Every 50 or 100 miles we find a large center which spreads out in the form of a semi-circle or a huge rectangle; some of these large 'cities' recede from five to seven

miles from the waterways. Of course, these large 'cities' are connected on both ends with the 'running cities'; for that reason there is no beginning and no end to the Martian 'towns.' Nor do they go by any particular name. Each spreading city has a number, while



Little by little our host manipulated certain knobs and again the view was magnified enormously, while in the center we now beheld a marvelous view of the City of New York, as if viewed by an aviator a few thousand feet above the earth.

the running ones,, located between the spreading ones, have a figure and symbol like our letters. Thus the Martian Capital at which we reside at present is termed 1. The first large 'city' toward the south is termed 2. The 'running city' which connects cities 1 and 2 is termed 1A. Of course, the Martian symbol is not 'A'; this is merely my equivalent or my own translation for it. The numbers of the houses for quick orientation are termed in 'fractions,' according to their location. Thus, for instance, a house located in the 'running city' 1A is

1A  
numbered  $\frac{1}{10}$ . This means that it is the tenth house

south, counting from the 'city' 1. As every Martian knows the location of every 'town,' the numbering system is simple and does not lend itself to confusion.

"As nearly all of the land on Mars is practically desert, except that near the waterways, it follows that no 'town' ever reaches more than 10 miles inland. This fully explains the vast 'connecting cities.'

"All the streets run perfectly straight and cross at right angles, American fashion. All buildings and houses are detached from each other, none are ever

found built close together. Usually eight buildings constitute a 'block,' three to each side, with the center space left open.

"The 'blocks' are separated by wide arched roadways; wherever two of them cross each other, there are usually two bridges flung diagonally across which meet in the center.

"The roadways themselves are of a heavy metallic construction and are entirely perforated with round conical holes about one inch in diameter with about one inch of metal between them. By this method, all dust and dirt falls through the streets to the ground 500 feet below. Thus the roads appear clean perpetually, even after a sandstorm. The houses . . . . . but, hello, my chronometer tells me that I have but ten seconds left to talk before the telegraphone wire on my radiotomatic on the moon will be full to capacity. Well, good night, my boy, till tomorrow, good night! . . . . ."

\* \* \* \* \*

The usual rap, r-r-r-ap, f-flum, f-flumm and everything was quiet once more.

## 10. The Planets at Close Range

**W**HAT is modesty? From childhood up I have been taught that this quality was more or less of a virtue, but developments of late cause me to believe that it is hypocrisy, plain and simple. I have found since, that modesty is something in us which we wish to make other people believe and which they realize perfectly is not so, or perhaps it is trying to make the other fellow believe something that you know isn't so. All of which might have a passing interest for you and then again it might not. Perhaps the above may have a certain bearing on this story and on the other hand it might not.

I have no fault to find with the Martians, and I believe implicitly what Münchhausen has been telling us about the utter frankness of the Martians and their habits. Only it doesn't work on earth, or at least it doesn't work in Yanktown. As will be remembered, Münchhausen told us in his last talk that the Martians live in transparent houses, for reasons best known to themselves. As will also be remembered, he told us that anything that is worth doing—on Mars—is worth doing with everyone looking on. He told us that non-transparent rooms make for nothing but laziness and vice; also that when your actions are open to the entire world you are more apt to lead an upright life. We were told that for that reason no false make-believe life was lived on Mars as it is on earth.

I tried the Martian recipe the other day, and I must confess here that it was a dismal failure. Everyone knows, of course, that everyone else is apt to take a bath once in a while for strictly personal reasons, the only difference being that the frequency varies with individuals, according to taste and the available supply of water and soap. I know that *you* take a bath and you know that *I* take a bath; certainly there is no secret about that. Nobody should find fault with such universal custom. But when I tried it the other day, leav-

ing my bathroom window wide open, it somehow didn't work out according to the Martian recipe. At least Officer Mulligan, on the beat, who I believe had never read about the Martians' habits, didn't approve of my custom and very promptly arrested me when a big crowd collected in front of my bathroom. You see, it happens to be located on the ground floor. I have since given up every attempt to convert antiquated humans living on an uncivilized globe, to Martian standards of civilization. Perhaps in a hundred thousand years from now, humanity will not feel so peevish about it, but until that date I shall believe in the proverb, "When in Rome bathe as the Romans bathe."

\* \* \* \* \*

That evening, promptly, as usual, Münchhausen "called." On the minute of 11 p. m., the familiar whining, screeching sound reverberated in my 'phones, and immediately the Baron's sepulchral rasping voice was heard once more.

"Good evening, my dear boy; mighty sorry I had to cut myself so short last night but, at that, I believe that the telegraphone wire on my radiotomatic was full to capacity before I stopped speaking. If my memory serves me right, I believe I had been telling you about the elevated cities on Mars—and how the Martians do away with their choking dust filling up the atmosphere near the ground. I told you how the elevated Martian cities had perforated, metallic streets so that the fine dust would filter through the perforations, thence to fall to the ground. Possibly it occurred to you that in a few hundred years this dust, settling on the ground below, would rise high enough to fill up the 500 feet of intervening space between the ground and the elevated streets. If no means were taken to do away with such accumulating dust and sand this, of course, would be the result, but nothing of the sort happens, for

Martian ingenuity naturally precludes any such occurrence. But how is the sand and dust done away with? It is a very simple matter indeed. Mars, as we know, is a very ancient world, which has cooled for centuries back. There are no more live volcanoes on Mars, for the very simple reason that the inside of the planet has cooled ages ago, just as your moon is cooled today. Take the earth, which is a much younger heavenly body than Mars. On earth, as yet, the interior is in a molten state, proven by the fact that volcanoes, as well as hot springs, still exist. Hot gases must naturally abound, for if this were not the case there would be no pressure to force the molten lava through the craters of the terrestrial volcanoes. But a molten mass as well as hot gases take up room. Suppose the interior of the world would cool today; immense hollows or voids would naturally be created inside of the earth. This is precisely the case on Mars. It now has immense hollows and voids, and these are used for many different purposes by the Martians, in their conquest of their dying world, as I shall show later.

"For one thing, every few miles beneath all Martian cities immense funnel-shaped holes are excavated, till one of the voids is reached. The openings of these holes are constantly kept clear by the Martian engineers. How simple, then, is the thought of pushing the surplus desert dust and sand into these holes, to do away with the sand nuisance. Very ingenious means are used in thus getting rid of the dust, and after every sand-storm, which are more or less frequent; the surplus sand and dust rolling on from the open deserts is forced into these openings as fast as it accumulates. Of course, it is impossible to thus get rid of all the sand, but it helps to a certain degree to make life bearable on the planet.

"**Y**OU will remember in my report of last night that Flitternix and I were on the Planet Ruler's mansion on top of the building looking down, that evening, on the vast Martian capital that lay below us. We were watching in amazement the gravitationless flyers, which are used by the Martians almost exclusively for their transportation. I have told you previously that these flyers are flat, pancake-like, metallic bodies with three masts spaced equally distant from the center. We saw thousands of these gliding noiselessly through the thin Martian air, their intense yellow propelling light shafts playing all over the sky and over the ground. It is indeed an inspiring sight to see thousands of these flyers in the air all the time, and the spectacle becomes even more amazing when night comes. The yellow emanation rays are highly luminous, and for that reason no other searchlight is required. As long as I have been on Mars I have never witnessed a collision, although these astonishing vehicles fly so close to each other that one sometimes thinks they must collide. Each Martian building on one of its sides has a metallic landing platform extending at right angles from the building. There the flyers land to deposit passengers or freight.

"We were watching this amazing spectacle; it was in the early evening and the sun had just set. Being accustomed to twilight we naturally thought it would

stay light for some time to come, but no sooner had the sun disappeared behind the western horizon than the landscape became pitch black. I was about to comment upon this unusual phenomenon, when Flitternix forestalled my questions, launching into his usual astronomical reflections.

"'My dear Baron,' said he, 'no doubt you are surprised to find there is no twilight on Mars, but the reason, of course, is very simple. The earth, to which you are accustomed, has a very dense atmosphere. After the sun has sunk below the horizon, its rays still strike the atmosphere about you, although you cannot see the sun itself. Naturally, it does not become dark immediately for the reason that the light is diffused in the air above you up to about 30 miles above the surface of the earth. In other words, the sun on earth acts exactly like a searchlight, which is hidden from your sight while its light shaft plies above your head. You can see the light perfectly overhead, and the sun's rays act in a similar manner on earth.

"'On Mars, however, the atmosphere is very thin and only reaches a comparatively few miles above the surface of the planet. Therefore but little light is diffused in an attenuated atmosphere, as is well known to you; for this reason, no twilight can exist on Mars; this you have just witnessed. As previously experienced during our stay on the Moon, where there is no air of any consequence, everything must be dead black or white; there cannot be any grays in the transition from light to dark. On Mars, of course, such extremes do not exist because there is still some atmosphere to diffuse the light.'

"While Flitternix was still talking, we saw the marvelous sight of the city below us being illuminated at the precise moment when the sun had sunk out of sight.

"Nearly every structure and building on Mars is of the same height. On top of their cone-shaped roofs several immense, transparent spheres are spaced 20 to 25 feet apart. These balls are usually arranged in a circle or in an equilateral triangle. No sooner has it become dark on Mars than these transparent balls emit a dazzling rose-white light. This light does not emanate from these globes in form of a shaft, as we are accustomed to see coming from searchlight illumination. Quite the contrary; the light spreads out in all directions for a distance of over 500 feet. The strange fact is that the light is as strong at this distance as it is in the immediate vicinity of the spheres. As a matter of fact, it is strongest about 25 feet from the balls themselves. Inasmuch as every building and every elevated structure gives forth this spreading light, every object within 500 feet of the light balls is illuminated almost as strongly as by sunlight. This creates the curious result that when walking in a Martian street after nightfall, daylight is simulated in a perfect manner and it is hard to realize that it is not, indeed, sunlight that is pouring down upon you. Not only do these transparent light balls give out light rays, but the rays also emanate heat prodigiously. This is quite necessary. I have spoken before of the fact that the Martian atmosphere is very thin and attenuated. Naturally, such a thin blanket of air cannot retain the solar heat

during the night, and for that reason the nights on Mars are extremely cold. This is true of the temperate as well as of the other zones. For this reason the light rays of which I spoke before have been made to produce heat as well, otherwise it would be too cold to walk on the streets after nightfall. As it is, the temperature is but slightly below that which exists at noon time. It will, of course, be plain to you that as soon as the sun rises in the morning the light balls are switched off, for then there is no further need for them.

"You might think that it would be an enormous undertaking to light and heat vast cities by such artificial means, but the cunning Martian, wherever possible, lets Nature do all of his hard work. I have already shown you how the Martians moved the water in their canals and waterways by means of the all-dominant sun, and if our luminary can perform useful work during the daytime, why not use it at night? I have mentioned before how the Martians harnessed the sun's energy, storing up enough power to use the surplus after sunset. Thus we find the curious phenomenon on Mars that the intelligent beings inhabiting this planet have harnessed enough energy from the sun during the daytime to furnish them with light and heat during the night. The sun's energy during the daytime is converted into electricity, as I have already shown, and is then stored for further use. Consequently, the night illumination and heat is derived primarily from the sun and costs the Martians nothing. When you consider how crudely you humans use your energy, it must dawn upon you that you are still very young children. At that the inhabitants of the earth are doing precisely what the Martians are doing, except that they do it in a very bad way. You are already deriving 100 per cent of your light, heat and power from the sun *indirectly*. The coal which you are mining this minute derived its original energy from the sun. Millions of years ago great forests—which were directly a product of the sun—sank into the earth, and the wood carbonized. This wood you are burning as coal today. In other words, you are using sun-power, stored millions of years ago. Even your water-falls from which you derive your power are directly dependent upon the sun. Without the sun to suck up the water from the seas into cloud form, your water-falls would run dry within one week. The Martians, who have long ago exhausted such means of utilizing the sun-power, are now using the sun-power supplied by the sun yesterday. You on earth today are using sun-power stored millions of years ago. After your coal supply gives out and after your water supply is not as abundant as it is at present you will revert to exactly the same means as do the Martians on their dying planet today.

"AFTER dinner the Planet Ruler took us to a vast circular room high up in the mansion, which we presumed to be his study. The thing that struck us most forcibly at once was an enormous glass-like, transparent rod which broke through one of the transparent walls of the room. This rod probably measured two or three feet in diameter, and as far as we could see it was about 15 feet in length. We afterwards found out that it extended 75 feet beyond the building, pointing

toward the sky. The thought immediately forced itself upon us that it was a form of telescope, which indeed it was. It was arranged in telescope fashion and by means of machinery located outside of the room, the far end could be made to point to any object in space. As the mansion of the Planet Ruler revolves around its axis, as I have already mentioned to you previously, the telescope may thus be pointed at any star or planet and will follow it with the same apparent speed as that of the planet. In this manner the whole mansion acts exactly like a terrestrial observatory. At the end of the rod we saw a box-shaped form, which, as we were informed later, converted the light rays falling through the transparent rod into electrical impulses, which in turn were magnified enormously and afterwards were reconverted into light once more. A crude analogy would be your ordinary terrestrial selenium cell, which converts light rays into electrical impulses, if required to do so. Of course, the material used by the Martians is not selenium, but is a substance which is not yet known on earth.

"Directly in line with the transparent telescope and several feet away from it, hung a large transparent globe, measuring about five feet in diameter. The Planet Ruler motioned us to be seated in the transparent *tos* chairs, which we did. Without moving his hand, the Planet Ruler caused the light to vanish from the room. He accomplished this by thought transference, merely concentrating his attention on a thin wire near the ceiling of the room, which, vibrating in unison with his transmitted thought waves, caused the light to be turned off. He now adjusted the *tos* rod carefully for a few moments till a tiny light ray fell upon the center of the transparent globe, which, as we ascertained, was filled with a fluorescent liquid. Immediately the ray struck the globe, it shone forth in a beautiful pinkish-white light. After adjusting several knobs at the end of the *tos* rod we suddenly made out the form of the earth floating in space. Clearly the countenance of the earth, with its continents and oceans, stood forth inside of the transparent globe, exactly as if we had been looking at an artificial globe of the earth, such as are used in school rooms. The sight was indeed magnificent and the earth now looked to us exactly as does the moon to an astronomer viewing that body through a powerful telescope. We were still gazing enraptured, when our host turned another knob and the edges of the earth seemed to become blurred until they vanished entirely. In the center of the picture, however, we could make out the North American continent enormously enlarged, exactly as it looks on a map. As this was in the late terrestrial summer, few clouds obstructed the view and we could apparently see the entire section of the United States, only part of Canada being hidden by clouds. Little by little our host manipulated certain knobs and again the view was magnified enormously, while in the center we now saw what we made out to be a bird's-eye view of Long Island. We saw this island as it would probably appear to an aviator from five to eight miles above the earth, with the Atlantic Ocean on the south and east and Long Island Sound on the north. Again the knobs were manipulated and we beheld a most marvelous

view of the City of New York, as if viewed by an aviator a few thousand feet above the earth. We were absolutely thunderstruck at such a marvelous achievement of Martian ingenuity, but our friend did not stop at this. He kept on increasing his magnifying power till it was possible for us to actually see people walk in the streets as plainly as if they had been seen from the top of a skyscraper! It gave us a very strange, uncanny feeling, to be sitting over 60,000,000 miles away from earth and still to be able to see the people walk around. It proved to us again that there is nothing impossible for science, given intelligence and adequate means.

"After this exhibition, our host showed us all of the planets at a close view, and we were shown that none of the planets except the earth bore life. We saw that the planet Mercury, the nearest planet to the sun, was dried up like a baked clay ball on account of its proximity to the great luminary. It became patent to us that no life could exist on that planet on account of the enormous heat received from the sun, only 35 million miles distant. The planet Venus was not baked dry as badly as Mercury and still abounded in water, but we could not see any trace of vegetation and the air seemed to be filled mostly with dense water vapor, in which organized life probably could exist. Turning to the planets outside Mars' orbit, we next were shown the monster world of Jupiter, which is three times larger than all the other planets combined. This planet is still in a semi-liquid state, and we could see what terrestrial astronomers have long presumed, namely, that Jupiter has no solid crust as yet; it is still a partly liquid ball with dense gases and vapors filling its heavy

atmosphere, so that it becomes difficult to view its actual surface.

"The most spectacular view was enormous Saturn with its mysterious rings. We saw that this planet also is in the same state of formation as Jupiter, but it has already cooled down considerably. As is known to terrestrial astronomers, its rings are by no means solid but consist of myriads of little moons and meteoric fragments, some of them not larger than an ordinary house, spinning around its parent body and kept there by gravitation. These little moons, for moons they are, rotate closely together, even colliding at times, and it is thought that Saturn's rings will collapse at some future date, to fall upon the parent planet or otherwise coalesce into one or several enormous moons to supplement the existing nine Saturnian moons.

"But, as usual, my time is getting short. I would like to tell you a whole lot more, my dear Alier, but in a few seconds the telegraph wire will be full to capacity. It is certainly too bad that I did not provide for making the wire twice as long; my daily chats with you could thus be twice as long. However, as I am some 60,000,000 miles away from the radiomatic plant upon the moon, there is no way to change the matter now. Good-night, my boy, and tomorrow night, at 11 p. m., to be exact—terrestrial eastern time—I will ask our Planet Ruler to give us a good view of the earth, selecting Yanktown and showing a little house on top of which I hope to see my good friend, I. M. Alier. I know he will be there, so good-night once more \* \* \*

The familiar whining sound, a rasp, the usual low click and the ether between the moon and the earth was quiet once more.

(To be continued next month)

## READERS' VOTE OF PREFERENCE

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# The GOLDEN GIRL of MUNAN

By Harl Vincent

## I.



HAD you been present in a certain studio apartment in New York City at ten o'clock in the evening of January 16th, in the year 2406, you would have witnessed a surprising series of events. As it happened, Roy Hamilton was alone in his studio when the thing occurred which altered his entire life and led up to the historic destruction of Munan.

An unusually handsome man in artist's smock, his hair a tousled dark mass, his jaw set, and his black eyes snapping with determination, Roy alternately sat at his writing desk for a few minutes at a time, then paced the floor in impatient annoyance. This procedure was repeated again and again, his impatience rapidly increasing.

On his desk there reposed an instrument comprising a disc of silvery gray metal, framed in darker gray, and mounted vertically upon a base of similar material. This instrument was Roy's private videophone, and it was the calls from it of a voice repeating, "NY-19-635," that occasioned his numerous returns to it. As he returned and answered his number, a face would appear in the disc and inform him in a monotonous voice that no success could as yet be reported on his call. Each time this was a signal for his renewal of the nervous pacing and muttering, accompanied by further rumpling of his hair.

It was preposterous! Here he had been trying for two hours to get a connection with one of his patrons in Paris. Constant reports there had been that something was wrong with the continental video. Pity that the Terrestrial Videophone Company couldn't keep their confounded voice and vision ether waves working, he thought angrily. Or whatever kind of waves they were! Roy was no scientist.

His number was repeated again. This time, not in the accustomed voice of the operator; but in a low, sweet and compelling feminine one. A voice of gold, thought Roy, as he dashed to the instrument. Surprised, he did not view the usual clear-cut image in the disc; but, as through a dense veil, an extremely indistinct vision met his gaze. The features of the girl could not be discerned. Possibly she was beautiful; possibly not. At any rate, the voice, though far away, was clear, and it certainly was beautiful. The most beautiful voice he had ever heard, it seemed.

"Mr. Hamilton, I must speak rapidly. We have

probably upset the entire video system in thus attempting to get you. No doubt the connection will not remain for long," she spoke.

"You know me?" Roy replied, astonished. "I am sure that I have never had the pleasure of hearing your voice before."

"Please, please listen," begged the voice. "There is no time for explanations. What I have to say is of world importance and it may never again be possible to establish this contact."

"All right, lady. Go ahead," said Roy, though he had not the slightest idea as to what was coming.

"Remember from your history, the consolidation of the Powers in 1950?" asked the golden voice. Remember the two thousand undesirables, sent away on the steamship *Gigantean*? The *Gigantean* which never returned, and from which no word ever came back to the world?

"The Terrestrial Government and the world at large thought they were well rid of a bad lot. But the *Gigantean* was not lost. Neither were the two thousand reactionaries; men and women from all walks of life. The ship eventually reached one of the uncharted islands of the Pacific, where the passengers landed and took up their abodes.

"With materials from the ship, they established their homes. With the machinery from the vessel, one of the scientists of their number did wonderful things. Soon he discovered means of producing a wall of neutralizing vibrations completely surrounding the island. This wall prevented and still prevents the approach of any visitors from the outside world, since under its influence all electrical and mechanical vibra-

toins are entirely stopped. Thus no aëros have ever been able to reach the island, which they called Munan, and the secret has been preserved for four centuries and a half.

"Four hundred and fifty years they have multiplied and now number over a

million persons. Many deadly secrets are in the hands of those, whom I must call my people, much as I hate to do so. The lust for revenge has been handed down from generation to generation and now they are prepared. The date has been set when a hundred thousand men will set forth to devastate and conquer the entire outside world, where peace and happiness have reigned these hundreds of years. With them will be carried the ~~best~~ of weapons ever conceived by man, and these are of such nature that it is utterly impos-

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*HERE is a rather unusual story which we know you will enjoy. The story contains an excellent mixture of science, romance and adventure, and will hold your interest to the end. Many novel thoughts are brought out in this story, and you will find it difficult to lay the book down before you come to the end.*

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On his desk reposed Roy's private videophone, and it was the calls from it that occasioned his nervous pacing back and forth. His number was repeated again. This time, not in the accustomed voice of the operator; but in a low, sweet and compelling feminine one. . . . Surprised, he did not view the usual clear-cut image in the disc; but, as through a dense veil, an extremely indistinct vision met his gaze. The features of the girl could not be discerned.

sible for your unprepared billions to combat them.

"I cannot dwell now on the miseries of Munan. But a pitifully small group of us, mostly women, are against this move and we must prevent it. We have selected you, partly because of your own vitality and athletic prowess, partly because of your close friendship with Professor Nilsson. He, your greatest scientist, we believe will be able to avert this catastrophe, if anyone can.

"But you must both come to Munan. We are sure you will do this, as we have learned of the characters of both through the one spy we have been able to get through to the outside. Think of the utter destruction of probably three-quarters of your inhabitants, which you may be able to prevent.

"We have set the date for your arrival and at the appointed time we will contrive an accident which will temporarily remove the neutralizing wall and permit you to land in Munan. Convince Professor Nilsson of the extreme necessity of this and come in a fast aero. Win, and your reward will be the everlasting gratitude of the world. Fail, and your fate will be no worse than had you refused."

Here followed minute directions as to the exact location of Munan. Busy with pencil and paper, Roy barely had time in which to set down the latitude and longitude; also other necessary information, including the time and date when they would be expected. No sooner had he finished than the dim features and the golden voice faded from his video completely. He was left cold and trembling.

The soft pleading voice lingered in his mind to the exclusion of all else. He tried to picture this girl. Her vision had been terribly blurred, sometimes fading almost entirely from view. The voice, though! That told him that she must be young, lovely, tender. Ever a sentimentalist, he visioned more his meeting with this girl than he did the seriousness of the mission. Instantly he decided that he would go.

"NY-19-635," spoke the humdrum voice of his video-phone operator. "something has been wrong with the video for two hours and a half. The past half-hour it has been absolutely dead all through the terrestrial system; something never before experienced. However, all is well now and you may have your Paris connection."

"Oh, hang the Paris connection!" was Roy's reply. "Give me NY-20-325 right away."

"Hello, Roy," almost instantly responded the deep masculine voice of his friend, as the face of Professor Nilsson appeared in the disc, "what in the world are you calling about at this hour, and what are you so pale and mussed up over? Have you seen a ghost?"

"Maybe I have, Prof; but if I did, it was a ghost with a wonderful voice and such a story to tell as has never been heard before. This is serious. Can you come right over?"

"Well, seeing that it is you, my boy, and seeing that you look so ill, I will do it. But you know that I can not remain for long."

"You may stay longer than you think, when you hear what I have to tell you."

"Maybe so; maybe not. At any rate, expect me in ten minutes. I am worried about you."

The voice and face of his dearest friend and adviser vanished, and Roy proceeded to remove his paint-bedaubed smock and brush his hair, so as to present a somewhat better appearance when the professor arrived. Observing his reflection in the glass over his dresser, he saw that he did indeed look shaky.

## II.

**B**Y the time the professor arrived, Roy was in a much calmer mood, and was seriously going over the information he had jotted down. His friend rushed in, and when he looked at Roy he laughed aloud in relief.

"Well, you certainly look better. What happened to you, anyway?" was his greeting.

"Prof, when I tell you this story, you are going to be as hard hit as I was. Here; what do you make of this?" he said, handing over the paper on which his notations had been made.

"Why, Roy, this is the definite location of some place or other in terms of latitude and longitude. Also, I see the date February first, and the notation 'two A. M. Washington time.' Something about green beacons, too. Where did you get this and what does it mean?"

"That's my own handwriting, and I'll tell you in a minute how I came to write it. In the meantime, sit down and make yourself comfortable for a long talk."

"Roy, have you an atlas around this old workshop of yours?" asked the professor. He seemed suddenly to take more interest in the paper. "I believe this location is out in the uncharted wastes of the ocean somewhere."

"If it is, it will be pretty good proof of what I have to tell you," was the retort.

Roy produced the atlas and the professor at once turned to a double-page map of the western hemisphere.

"Just as I thought," he muttered. "Look here, Roy, are you spoofing me or what? There is not even an island within a thousand miles of this spot, and it is at least that far off any of the transoceanic aero lanes."

"Then it shows that I wasn't dreaming. Sit tight and listen to this yarn," said Roy, as they pulled their chairs close to the table.

With the golden voice softly whispering in his consciousness, Roy told his story. The professor listened intently; never interrupting, but occasionally starting in surprise, occasionally nodding as if in confirmation. Almost word for word, Roy repeated the plea of the girl as it had come to him, and when he had finished, the professor sat silent for several minutes, evidently deep in thought.

"Funny," he finally said, "I have always thought there was something mysterious about the disappearance of the *Gigantean*. You know she was the last one of the old floating ocean liners. When the Powers got together away back there in the middle of the twentieth century, and formed the Terrestrial Government, with headquarters in Washington, there still remained a group of widely scattered radicals, who were against the consolidation. They did not believe that war was actually made forever impossible by the many irresis-

tible weapons which science had developed. They fought disarmament and the consolidation bitterly, and stirred up much discord. Finally, in desperation, the Terrestrial Government rounded up the ring-leaders in various parts of the world, put them on the *Gigantean* and told them to go wherever they pleased, but to never appear near any inhabited coast on pain of destruction, by means of beam energy, of the ship and themselves. With the abolishment of all surface travel on land and sea, and the establishment of the beam lanes uniting all countries with innumerable aero connections, this seemed easy. The only logical course for the exiles was exactly that which was explained by your mysterious voice. I am inclined to believe the whole story."

"I am, too," said Roy, "and I also think that we ought to see this thing through."

"Good for you, my boy. And I am with you to the end." They gripped hands.

Reaching for the paper on which Roy had scribbled the instructions, the professor again scanned it closely. "What is this about two green beacons?" he asked.

"The voice said that we were to land between two such lights when we reach Munan," answered Roy, "and that we could not possibly make a mistake about it, since all of the regular landing stages in Munan are lighted by white beacons at night. She said that they would have the green ones especially prepared for our arrival, and in a safe place."

"Strange that no one has discovered this hiding place in these hundreds of years," mused the professor. "But I suppose the fact that it is so far off the regular lanes of aero travel explains it. That, together with the fact that anyone who might by accident have reached it, never could have returned to tell the tale. Think, though, of how much spying on us they have been able to accomplish in all those ages. Quite naturally their civilization will be as far advanced as our own. They may have made even greater scientific advance than we, if that island has good natural resources. According to history, a number of eminent scientists were originally among them and the descendants of these would undoubtedly have obtained still further knowledge."

"Well, how about getting some sleep?" said Roy, with a yawn, "I am all worn out and tomorrow is another day. Shall we start making our preparations at once?"

"We certainly shall, as we have only a little over two weeks in which to get ready. Your suggestion about the sleep is a good one though, and I am going home. Good thing we are both bachelors and able to decide for ourselves. Well, good night, my boy. See you in the morning."

The professor was gone and Roy betook himself to bed.

### III.

**D**URING the succeeding two weeks Roy and the professor were very busy indeed. Many things there were to be accomplished, and they dared take no one into their confidence. One of the most important items was to provide for some means of

warning the world in case their mission should be unsuccessful. This was done by writing a complete record of the affair and the part they intended to take in it, sealing the records and depositing them with a bank president who was intimately known to the professor. They left instructions that the packet was to be opened only in case it was not called for in person on the fifteenth day of February at noon. They had two weeks from the time of their start in which to save mankind! And mankind had only five days from that period in which to save itself, if they failed! The date set by the Munanese was the twentieth.

This detail satisfactorily arranged, they applied themselves to the task of making ready for the journey to Munan. On the third day after the mysterious disarrangement of the terrestrial videophone system, which was still the main topic of conversation and conjecture by the experts, the professor took Roy with him to his laboratory.

"Roy," he said, "I have a big surprise for you. One that I did not intend to make public at once. Possibly I shall never be able to publish it now. But it is going to serve us admirably in our present dilemma."

"We sure do need any help that can be obtained from your discoveries. I hope that you have something that will save the day," Roy said, as they entered the laboratory building.

"At least," said the professor, "we have here the vehicle which is going to carry us to Munan swiftly and safely. Whether it will bring us back, remains to be seen."

Leading the way to a large room on the second floor, he commenced removing the canvas cover from what resembled the hull of a small submarine boat of the early twentieth century. As the cover was completely withdrawn, there was revealed a cigar-shaped metal body about sixty feet long and fifteen feet in its largest diameter. This did in some way resemble the archaic under-water craft.

"This is the big surprise, my boy," the professor stated, "and we are going to have time to test it thoroughly before starting on the big adventure. This is an aero, the like of which has never before been constructed.

"Unlike the standard aeros mine does not depend upon beam energy for its motive power. Had we to rely upon the regular thing, we should be in a bad way for the job at hand. No existing beam could be used, since none are set for the proper direction. Thus we should have been compelled either to construct our own beam transmitter, for which there would not be time, or to take the Thomas Energy Company into our confidence and arrange for them to provide our power.

"My aero utilizes stray electronic energy as the old time sailing vessels used the winds of the ocean. But here we obtain both lifting force and propelling power from the losses of the regular energy beams. Of course you know that there are some losses in our standard beam transmission systems. These are very slight, but are constantly building up a supply of stray impulses, completely filling the earth's atmospheric envelope and extending far out into space. This storage of energy will continue as long as it remains unused,

and until my discovery there was no means of tapping this huge reservoir. In the meanwhile all space is gradually filling up with these stray electrons, which are merely chasing each other about at terrific speed but producing no useful energy.

"The most important part of my discovery is a peculiar metal alloy which has the property of absorbing this potential energy and converting it into useful forms. If the use of this form of energy ever becomes universal, the present stored supply will eventually become exhausted. When this occurs, the use of the stray impulses will have to be reduced to a total amount not exceeding the usable losses of the regular energy systems. We have no free energy here and never will have. We are merely increasing the efficiency of the present energy systems."

They entered the aero, which was provided with a tiny galley, a small but perfectly equipped dining salon, a cabin having sleeping accommodations for twelve persons, and the control room which also contained the propelling machinery. Storage compartments, refrigerating and heating equipment and ballast filled the spaces between the rectilinear walls and floors and the curvilinear outer shell. Roy exclaimed at the luxury of the appointments as he followed the professor through the cabin and into the control room.

All of the propulsion machinery and the controls were housed in a cubicle in the bow which was not over twelve feet square. In the center of this, mounted on a heavy pedestal, was a sphere about two feet in diameter. For all the world this reminded Roy of one of the globes used during his school days in the study of the geography of the earth and other planets. The sphere was constructed of metal having a purplish tinge and its surface was covered with fine corrugations. Two small driving motors were in evidence, and the sphere was so mounted as to permit its axis to be swung into any angle with relation to the longitudinal axis of the cigar-shaped vessel. Mounted upon a pair of encircling rings and so arranged that its position with relation to the sphere could be varied at will, was a truncated cone about a foot long and six inches in diameter at the large end. This object was constructed of the same purplish metal and its axis was directed towards the contour of the sphere tangentially.

In the front of the room was the control platform. Two or three control levers, a periscope arrangement for obtaining unobstructed vision in all directions, and a glass case containing the navigating instruments completed the equipment of this pilot house.

"Is this all there is to it, Prof?" asked Roy.

"Absolutely all," replied the professor. "Simple, is it not? Let me explain it to you briefly so that you will understand something of the operation of the aero which is to carry us on our mission.

"You have observed the sphere and the conical object trained upon it. Both are of adamite, the alloy which I mentioned. When in operation, the sphere is protonically charged, and the truncated cone of adamite collects the electrons, taking them from their regular orbits and redirecting them in a continuous stream against whichever portion of the sphere it is pointed at. If you remember your ancient history, you will recall that in

the early twentieth century a vessel for travel on the ocean surface was invented by one Flettner. This vessel obtained its driving force from the winds by means of two large vertical rotors on the deck. In much the same way as these forces were transmitted to the hull of Flettner's vessel, we utilize the stray electronic energy to drive our aero.

"Our sphere may be rotated on its axis in any plane. The electron collector may be directed upon its surface at any angle. By proper adjustments of the angles and the speed of rotation of the sphere, we obtain both lifting power and propulsive force. The direction and speed of our vessel is determined by the force transmitted to its hull through the pedestal. This force is the resultant of the angles and velocities, and its direction and magnitude may be varied at will. We are not limited in this resultant force as was Flettner. He was dealing with winds of low velocity, whereas we are utilizing an electron stream with a velocity of 186,000 miles a second.

"The speed attainable by our aero is limited only by the density of the atmosphere and the temperature we can bear in our cabins. I have found that about six hundred miles per hour is as fast as I want to travel at ordinary altitudes, since at much greater speed the room temperature becomes somewhat uncomfortable, even with the refrigeration system in operation. This is due to the friction of the atmosphere on the hull. Of course at greater altitudes, the air density decreases and the speed may be proportionally increased. Were we to proceed outside the atmosphere, we should be able to approach the velocity of light, if we so desired."

This partial, but lucid, description was fairly well understood by Roy, and he was utterly astounded by what he had seen and heard. It seemed so absurdly simple that he wondered why it had not been thought of centuries ago. And what a storehouse of this energy must now be in reserve, he thought, after the centuries during which these stray impulses had been accumulating.

With the inspection of the *Pioneer*, as the professor had named his machine, completed, they went ahead with plans for the trip. It was agreed that Roy should gather and store in the *Pioneer*, all clothing, foodstuffs and the like which would be required, while the professor was to spend his time in stocking the aero with the scientific needs of the expedition.

The succeeding nine days were spent in making these preparations and in making two trial trips in the *Pioneer*, the aero performing beautifully on both occasions. An important feature of the trial trips was Roy's instruction in the operation of the aero. He learned easily, and was pronounced a finished pilot at the end of the second journey.

All was in readiness on the twenty-eighth of January and the two men contemplated the results of their labor with satisfaction. Roy had provided several changes of raiment for both; tropical and arctic regalia being included, in case of their being taken far from their course and making a forced landing in some rigorous climate. Condensed, but appetizing food and drink had been provided in sufficient quantity for a two months trip in case so long a time was found necessary

for some unforeseen reason. All such supplies had been carefully stowed away in the rear compartments of the *Pioneer*.

The professor had installed oxygen apparatus on board the *Pioneer* in case of the necessity of entering high altitudes. He had packed away, in various compartments, numbers of scientific instruments. The purposes of these were unknown to Roy, but the professor assured him that many might be found necessary. Stores of chemicals and of laboratory equipment for chemical experiments were included. The professor also had taken a number of odd weapons from his extensive collection. Some of these he said were very effective, regardless of their ancient source. In addition to these, he told Roy, there were weapons of his own devising, which might prove a great surprise to the Munanese, should it become necessary to use them.

With this work completed, the professor set about plotting their course. He proved to be no mean navigator. To be on the safe side, he figured on an average speed of four hundred miles an hour. Their course as laid out, passed directly over New Orleans and measured almost exactly seven thousand miles from New York. It therefore behooved them to leave seven teen and a half hours in advance of the time set by the girl for their arrival. This meant that the start would be made at eight thirty in the morning of January thirty-first, and arrangements were made accordingly.

In the short time intervening, the two were occupied in straightening out their personal affairs so that all would be in order in case of their failure to return. This was a comparatively simple matter for each, since neither had any immediate relatives to be concerned over.

Finally the morning of the fateful day arrived, bright and clear but very cold. At a half hour before the appointed time, both men were at the laboratory.

The sliding roof had been opened over the *Pioneer* and all was in readiness. With the interior of the aero comfortably heated, both men sat in the control room watching the minute hand of the chronometer as it approached the time of eight thirty. Minutes seemed hours, and neither spoke.

At last the time was at hand, and the professor was at the controls. Precisely on the minute, he turned the switch which started the sphere revolving, and adjusted its angle with reference to the cone, which was pointed directly upward beneath the sphere. Without a sound, the *Pioneer* arose vertically, gathering speed as the revolutions of the sphere became faster and faster. They were off!

#### IV.

**W**HEN the needle of the altimeter registered four thousand feet, the professor changed the angles of the sphere and cone, headed in a southwesterly direction, and settled down to a steady speed of four hundred miles an hour.

At eleven eighteen by the chronometer they passed over New Orleans, and by eleven forty were headed out across the Gulf of Mexico. At one thirty in the afternoon they were leaving the southwest coast of Mexico and passing over the broad expanse of the

Pacific. The professor now turned the controls over to Roy, instructing him to keep the helm so adjusted that the needle of the inductor compass continued to point to the vertical mark. The altimeter was to be kept at four thousand feet while the professor went astern for his lunch.

Roy took the controls with enthusiasm. He could not understand the professor's matter-of-factness, though he could understand his hunger, as neither had stopped for breakfast. Roy was beginning to feel the pangs of hunger himself. They were more than five hours out now; practically a third of their journey had been completed. As time passed, the impression left in Roy's mind by the golden voice which had brought about this trip, became stronger and stronger. The rich, mellow tones of this voice seemed to ring in his ears, drawing him on. Something within his consciousness told him that he was going to his destiny. Reckless of the future, this thought grew on him until he began planning all sorts of things. But these were happy thoughts; somehow he had no thought of the dangers to be encountered, nor of the fact that his own life and those of countless billions of his fellow-men depended on the success of this expedition.

His meditations were cut short by the return of his friend, who announced that he was feeling much better after a hearty lunch. Relinquishing the controls, Roy suddenly realized that he was even hungrier than he had thought, and betook himself to the miniature saloon for his own lunch. He found that the professor had kindly prepared an appetizing meal for him. An atomic percolator on the table was busily preparing steaming hot coffee for him, and he shouted his thanks through to the professor before he sat down to eat. The meal was piping hot and delicious. He returned to the controls much refreshed.

By now it was four p. m. by the chronometer; their journey was nearly half over. As Roy peered at the periscope reflector, noting that nothing but the tumbling surface of the Pacific was visible in all directions far below them, the professor startled him with a remark:

"Well, we will not be running into darkness for hours yet, but if my weather sense is correct, we are going to encounter a storm very soon."

"What," exclaimed Roy, "no darkness for hours? Why, it is after four o'clock now, and these are the shortest days of the year."

"Yes. Four o'clock, Washington time," said the professor, dryly, "but you must remember that we have been traveling away from the sunset hour. We shall not see nightfall for four hours or more, if my dead reckoning is correct. At two a. m. tomorrow by our time, we shall be in Munan. There it will be only ten p. m. of today's date."

"Right. I never thought of the difference in time, Prof.," was Roy's response, "but look at the periscope. Isn't that a storm coming up, way ahead of us?"

"Yes, that must be the one I smelled," the professor responded, "but the *Pioneer* has nothing to fear. We shall simply go up over it, and I hope that by the time we reach Munan, the storm will have passed. In fact, I know it will, because such storms usually cover a comparatively small area, although they travel rapidly.

However, their speed is as nothing compared with ours, and even if it is traveling in the direction of Munan, we shall far outdistance it."

With that the professor manipulated the controls, and the altimeter at once showed the increase in altitude. Six thousand, eight, ten, twelve thousand feet and there it stopped.

"There is no real need of rising further, as we shall be well above the storm now," said the professor. "But I would like to test out the oxygen apparatus, so we are going up further. I shall be compelled to correct my reckoning on this account, but that will not be difficult, and if we lose any time, it can be quickly made up by increased speed."

Closing one valve and opening another, the professor pulled back the altitude control; the cone swung way around to a new position, and the *Pioneer* shot skyward at an angle of about forty-five degrees.

"That is what those railings around the operating platform are there for," laughed the professor, as Roy swung about and wildly grabbed for one to keep his balance. "Better strap yourself into the seat beside mine here, as we may do a little more of this sort of thing before we return to a lower level."

Roy complied, as the professor adjusted his own strap. A slight hiss told of the functioning of the oxygen apparatus, and Roy glanced at the altimeter. Already it showed forty thousand feet, and was mounting rapidly. Their speed was tremendous; fifty thousand feet a minute now by the 'rate of rise' indicator. At their angle, this meant over eleven hundred miles an hour, air speed. Fifty, seventy, one hundred, two, three, four hundred thousand feet read the altimeter and there was the *Pioneer* restored to an even keel. Roy took a deep breath. It was becoming very cold, but the professor had already turned on the atomic heat and soon the control room returned to normal temperature.

"I must provide for thermostatic control of the room temperature, when I get the time," spoke the professor, more to himself than to Roy, "but our oxygen supply seems to function perfectly anyhow. We are far outside the upper limits of the atmosphere now, and we have been for several minutes."

"Everything seems to work to perfection," was Roy's only reply, as the descent started at a reduced speed.

When they had finally returned to their altitude of four thousand feet, the storm was far astern, but they could see from the turbulent surface of the ocean that it had been a serious squall. The professor again gave over the controls to Roy and disappeared astern. He returned soon and announced that he had checked his reckonings and that they were but slightly off their course and somewhat ahead of their time schedule, rather than behind. Making a minor correction in the setting of the compass, he told Roy that he wanted to lie down for a short while to get a little rest, and returned to the cabin.

Roy had plenty of time in which to think while the professor rested, and as the distance to Munan became rapidly less, he thought more and more on the seriousness of their mission. Still the voice which had brought them kept intruding on his consciousness. He

began to believe that there was some thought transference connected with this, for he simply could not shake off the impression of the voice. It was now somewhat different than when he had heard it over the video; then it had been sad and pleading; now it was confident, cheering. But it retained the charm, the golden quality which had first interested and captivated him.

When the professor returned, night had long since fallen and only a few hours of the trip remained. He advised Roy to get some sleep himself, saying that he would remain at the controls anyway until they landed. Roy was too excited, however, and occupied the seat at the professor's side for the rest of the journey.

At last only a half hour remained and soon, directly ahead, they made out a faint speck of light which grew rapidly in size until it was finally discerned as the lights of a city in the distance. Again the *Pioneer* arose until an altitude of about fifteen thousand feet was attained. All lights were extinguished, with the exception of the small ones in the instrument case, and soon they were directly over Munan. The time was exactly two by their chronometer as the vertical descent commenced, and in a few seconds they made out the outlines of the island.

The city itself occupied only a small portion of the island's surface. The remainder of its area was in darkness, with the exception of scattered groups of lights which probably marked the locations of farms and mines. Shortly, they located two tiny spots of green light in one of the darkest spots on the island.

"Your friend certainly kept her word," said the professor, as he maneuvered the *Pioneer* to a position directly over the two green beacons, which appeared to be about three hundred feet apart. "The neutralizing wall must have been out of service all right, and there are the green beacons as big as life."

Swiftly, but without a shock at landing, the *Pioneer* dropped between the two guiding lights and came to rest as the professor opened the switch.

## V.

WITH his pulses beating madly, Roy rushed to the manhole, which was the only exit, as well as entrance to the *Pioneer*. He desired to be the first to set foot on the soil of Munan, but the professor stopped him as he began to unfasten the clamping bolts.

"Not so fast," warned the professor. "We are not sure whether we will be met by friend or foe. Possibly the enemy has learned of your friend's plans and has only allowed us to land so as to make away with us before our world can be warned again. We had better go out armed. Better to die fighting, if we have to die. And if we are met by friends, it will do no harm."

"Professor, you are always right," admitted Roy, as the professor went to the locker where he had stored his weapons.

He returned at once with two small, pistol-like contrivances, one of which he thrust into Roy's hand.

"This," he said, "is a very ancient weapon. In fact, this device is one of those which contributed in bringing about the conference of the Powers in 1950, resulting in the disarmament and consolidation of the various

peoples of our world. This device projects the disintegration ray which immediately destroys entirely any animate object at which it is directed. Just press this little button and the ray shoots forth, but be sure you have it pointed in the right direction. I am sure that this is just as effective now as it ever was, but we do not know what sort of weapons we may have to combat here. But I suppose we are as well prepared as we can be, under the circumstances."

The arm was examined curiously by Roy, who had never seen one before, except in the museum.

Unbolting the manhole cover and swinging it open, the professor courteously allowed Roy to leave first, knowing that he was extremely anxious for this honor. They stepped forth into the darkness—even the green lights were now extinguished. Cautiously they left the *Pioneer* and advanced into a clearing which was dimly visible by the faint light from what few stars were out. Weapons in hand, they waited breathlessly.

Suddenly a voice spoke, clear, sweet, compelling. Roy's heart seemed to leap and turn over in his body. It was the golden voice of his dreams, and very softly it spoke the words of welcome which he would never forget.

"Dear, brave strangers from The Outside. I was sure you would come. Roy, I have been sending my thoughts out to you for the better part of twelve hours. Several times we were almost *en rapport*; never quite. Professor, I know you will not fail in this great undertaking. I thank both of you with the deepest gratitude. Follow me to our hiding place, where we shall meet the rest of my group and find a haven for your aero, and rest for yourselves."

While speaking, the girl of the golden voice approached the two until finally she stood beside them. By this time their eyes had become more accustomed to the darkness, and they made out the dim outlines of a small figure, evidently cloaked in some dark material. The features could not be discerned even when she stood directly before them, but the voice of their welcomer thrilled them both.

She grasped Roy's hand, and at its touch his body tingled from head to foot as from an electric shock. Surely the possessor of this tiny and delicate, although firm, hand needed assistance and protection, he thought as they were led in silence towards the edge of the clearing, where the tree-tops were faintly visible against the almost black sky. As they neared these trees there was a slight rustle ahead of them, and a masculine voice spoke out in a very low tone:

"Is all well, Thelda?"

"All is well, Ramon. You may light your torch," she replied, and with that there was a click and the beams of a hand light revealed the way ahead through the forest.

For a short way they traversed a heavily wooded space and soon, after emerging from the woods and climbing a slight grade in the open, approached the base of a sheer vertical cliff of stratified rock. Feeling along an entirely smooth and unmarked section of this wall, Ramon, their guide, soon found the depression for which he was searching. At his touch, a section of the solid stone swung back, revealing the entrance to

a long, unlighted passage. They entered and silently the stone door swung to behind them. With the way lighted only by the beams from Ramon's torch, they followed a winding passage for a considerable distance and finally reached a large circular cavern, which was so brilliantly lighted as to dazzle them temporarily.

Their guide led them directly to a large council table, around which were seated some thirty people, only about six of whom were men. As they reached the group, all eyes were focussed on the strangers, but Roy's eyes were only for the girl at his side. She threw off her cloak as she turned to the council table, and there stood revealed in her transcendent beauty. Even the professor gasped: Roy stood spellbound.

Although small in stature, her slimness and the erectness of her carriage gave her the appearance of greater height. Vibrant with life, her face was turned partly towards Roy, so that he was enabled to study the perfect profile intently. Fluffy red-gold hair seemed a fitting halo for the piquant oval of ivory creaminess which was her face. Large, golden brown eyes, wide set beneath perfectly arched brows, with their expression of sadness and innocent appeal, belied the firmness of the small chin, the sauciness of the very slightly upturned little nose, and the sweet promise of the rosy lips, now barely parted in excitement.

The words of her presentation of them to the assembly were unimportant to Roy's ears; the voice and the girl herself held him in a trance. To him she became the "Golden Girl" at once. Her mellow voice; her golden coloring; the beautiful spirit revealed by her spoken thoughts; all contributed to this impression. Thelda, her name might be; but in Roy's innermost thoughts she would always remain the "Golden Girl." Then and there he resolved that, whatever the cost, he was going to win this girl for his wife and take her from this terrible island to his own home.

"People," she spoke to the assembled listeners, "these are the two of whom we learned so much through the visit of Thandar to 'The Outside.' This man," turning to Roy, "is Roy Hamilton, to whom I made my plea on the night when we disrupted the videophone system of The Outside. This man," nodding in the professor's direction, "is Professor Nilsson, the famous scientist of The Outside, in whom we have placed our hopes. Both, as we all know, are brave, courageous men, and I am sure that our confidence has not been misplaced. May the Supreme Power, in which we few of all Munanese believe and trust, be their guide and protector."

Thelda then sat at the head of the council table, and her glance met Roy's. A slow flush enheightened her beauty and told Roy that his feelings were at least partly returned. Frankly the eyes of each appraised the other.

A handsome and imposing man, who sat at Thelda's right, arose and addressed the strangers:

"Gentlemen, I am Landon, Thelda's chief adviser," he spoke. "Our dear leader has brought about your coming to us. Like her, we can not convey to you adequately our gratitude for your noble response to our appeal. We thank you in the name of mankind, which is ignorant of the fate with which it is threatened. For ourselves we care not. Many of those here may lose

their lives in this undertaking. One lost his life tonight in contriving the power house accident which closed off the neutralizing wall for a half hour to permit your entrance. We have terrible powers to combat; but we feel sure that, with the help of you two, we shall succeed. After you have obtained the rest which you so badly require after your arduous journey, I shall again call the council together and our entire problem will be placed before you. Our workmen have, by this time, transported your aero to an adjoining cavern, and we believe that you will find yourselves more at home in your own quarters than in any we could provide. We shall now disband until tomorrow and allow you to return to your aero."

With Landon's conclusion, all members arose from the council table and crowded around the two strangers, introducing themselves, and overwhelming Roy and the professor with thanks and with wishes for a good night's rest. These people were a remarkably striking looking lot; the men were physically very powerful and of classic and dignified features; the women, though slightly smaller in stature than those of the outside world, were far more beautiful, with a loveliness that was almost ethereal in character. None could compare with Thelda though; and, as he and the professor were led to another passage by Ramon, Roy kept his eyes on her until she was lost to his view.

They found the *Pioneer* reposing on the floor of another huge cavern similar to the first. Ramon explained that an opening to the outer atmosphere had been provided at the top of this cavern and that this was of sufficient size, though hidden by underbrush which grew at the top of the cliff, to permit of easy entrance and exit for their aero. How the *Pioneer* had been transported to the spot, he did not explain. This cavern was unlighted, and they were left at the man-hole of the aero in darkness as Ramon departed with his torch.

Entering and flooding the *Pioneer* with its own light, they soon disrobed and, without further discussion, sank into the deep sleep of utter exhaustion.

## VI.

ROY awoke at one, by his watch; nine o'clock in the morning by Munan time, he remembered, and set his timepiece back accordingly. Finding the professor still asleep, he dressed quietly, so as not to disturb him and set forth to investigate his new surroundings. He stepped out from the *Pioneer* and found the cavern in which she reposed dimly alight from a circular opening high overhead, through which the light of day was admitted, and through which it would be necessary to guide the aero when they left. He returned for a pocket torch, and started down the passage through which they had entered this cavern. When he reached the large council chamber, he found it as brightly lighted as previously. On the far side of the cavern he observed a sort of raised dais on which there was a smaller table than that about which the company had assembled the previous night; also several easy chairs, one of which was occupied by none other than the Golden Girl, who was busily engaged with several books and a large map. At sight of her beauti-

ful head bent over her work, his heart again behaved unaccountably, and he approached silently, almost reverently.

When within a few feet of the dais, he spoke. "Good afternoon, fair lady. Or rather I should say, 'good morning.'"

Somewhat startled, for she had been so absorbed in her work, that she did not notice his approach, she raised her head. When she saw who it was, she smiled and replied, "Good morning, Roy. I hope that you are now refreshed after a good sleep. And you must not mind my use of your given name. That is our custom. You are to call me Thelda, too."

Again, when their glances met, there was that indefinable something which passed between their minds and told both that a close bond existed. Each was momentarily confused, but Roy seated himself, as Thelda motioned him to a chair beside her own, and soon the embarrassed feeling passed. They found themselves at once discussing seriously the object of the trip from The Outside, as the outer world was spoken of in Munan. Roy was full of eager questions concerning Munan itself, and Thelda launched forth into a discussion of the subject nearest and dearest to her heart.

It seemed that Thelda had been the only daughter of one Paul Serano, who had been the leader of the small group of thinkers who were opposed to the designs of the Munanese against The Outside. He had been working on plans for frustrating these designs for ten years. Thelda's mother had died at the time he first conceived these plans, and Thelda herself had been but ten years of age when this occurred. A few months before the call to Roy and the professor, Serano had been apprehended by the Zar in an attempt to obtain certain information regarding the exact nature of the plans for the conquest of The Outside, and had been summarily executed. This left Thelda an orphan, hunted by the Zar; and the group of faithful adherents to her father's beliefs had made her their leader in his stead. Despite the fact that she was only twenty, she was well qualified to lead them, because she was not only greatly loved by the group, but she had worked with her father constantly since the conception of his idea and was more familiar than any of the others with that which had been accomplished. She was compelled to live in apartments connected with this underground refuge, as were several others of the group, to escape the hand of the all-powerful Zar. Luckily, however, most of the group were not known by the agents of the Zar as being non-adherents. These were enabled thus to live normal lives in the city, and ten or twelve of them were in the employ of the Zarists, endeavoring to get all information possible. Thelda's father had been a scientist of repute in Munan; the only scientist in the group; and with his demise the group had become desperate, for it was necessary to combat the designs of the Munanese by means of Science. This had necessitated the sending of an emissary to The Outside, which was accomplished with considerable difficulty. The emissary had returned with knowledge of the professor and of his friend, Roy. The call to New York had followed.

By the time Thelda had reached this point in her

narrative, the two were joined by the professor. Soon the party was augmented by the arrival of Landon and two of the women members of the group, who were known as Zora and Merna. Zora was a very beautiful woman of possibly forty years of age; nearly that of the professor, thought Roy, as he noted from the corner of his eye that she and the professor had engaged in earnest conversation.

Thelda and Landon decided that it was not necessary to call a meeting of the council, but that the entire situation could be discussed immediately among themselves. Landon was requested to give to the two strangers the entire story in as few words as possible. This being agreeable to all present, the six proceeded to the council table, where a map of the island and city of Munan had been laid out.

Roy and the professor examined this map closely, noting that the island was roughly elliptical in shape, about seventy miles in length and about thirty miles across at the widest point. On the map, surrounding the island at a distance of some five miles from the coast, was a broad red line which Landon explained represented the neutralizing wall. The city itself occupied only one end. The rest of the island, which was of volcanic origin, consisted of part mountain and part level land, a small portion of which was covered by forest. The caverns were located almost exactly in the center, and were under the surface of a mesa-like projection of the largest mountain, which was known as Leyris.

"Friends from The Outside," commenced Landon, "there is much to be done within the next twenty days, if the designs of our accursed people are to be circumvented. For this reason I am going to make my story as short as possible.

"Beginning with the founding of Munan and leading up to the present time, I need not tell you much more than Thelda reported over your videophone system. That conversation was very difficult of attainment, for none of us fully understood the operation of the apparatus which Paul had perfected for this very purpose before his death. However, we did paralyze the terrestrial video system as you know, and Thelda did get her message through.

"Munan was conceived in hatred, and the descendants of those original two thousand have handed down that hatred of The Outside, which gradually intensified through the ages. In each generation there would be a few who, like ourselves, were born with the love of mankind in their hearts, but as quickly as these were discovered by the Zar they were killed off in cold blood. Thus, by a process of enforced evolution, there was developed a race of cold-blooded creatures who call themselves men and women, but who are in actuality, fiends incarnate. There has been practically no internal strife, because the Munanese has a single-track mind. His venom is all directed against The Outside. Such is the power of evolution. Our group is entirely different. In all evolution there are reversions to types, which types may have been remotely located in the roots of the family tree. We are those reversions; thank the Supreme Being. We were born with love in our make-

up instead of hate, and none of the early training could remove this love.

"Zar Taled the fourth, our present despotic ruler, decided about fifteen years ago that the time for the conquest of The Outside was nearing: He set the date for February twentieth, 2406. Meanwhile all efforts of the inhabitants, excepting those in pursuits necessary for the business of living, such as food production and the like, have been expended in preparation for the great event.

"The time is approaching rapidly and all is in readiness. Ten thousand aeros have been constructed; each is capable of carrying ten men and a cargo of ten tons. These are stored under heavy guard in the Zar's arsenal directly on the other side of Leyris. They are the product of the not-to-be-despised scientists of Munan, and are very speedy and powerful. The secret of their motive power is known only to a trusted few; but we do know that it is from an inexhaustible source. These aeros, like your own, have no external wings or propelling mechanism. Unlike the *Pioneer*, though, they are provided with an impregnable means of defense, and a horrible and inescapable offensive weapon. They can be made invisible! The mines of Munan have yielded metals and chemical elements unknown to The Outside, and from these our chemists have compounded a substance similar in consistency to the house paint of ancient days. This substance, when applied to its surface, renders the metal munium invisible. The Zar's aeros are constructed of munium and will be painted with this compound. Thus the aeros and all they contain will be absolutely non-existent as far as human vision is concerned. What avail would any of the energy beams of The Outside be against an attacker who could not be seen?

"The offensive weapon is also a product of our chemists. It is a highly concentrated liquid which has the property of completely disintegrating any object with which it may come in contact, excepting only the metal crysinum. The ingredients of this liquid are found only in Munan and are extremely rare, even here. Two hundred years have been spent in accumulating a sufficient supply and storing it away in crysinum containers. One drop of this liquid on the *Pioneer* would utterly destroy it and all within it. A crysinum bomb weighing less than one hundred pounds, dropped from the sky on your city of New York, would entirely destroy it with all of its inhabitants, and all within a radius of thirty miles besides. Do you see why we warned you and sent for you?

"The centuries old plan of the Munanese is this: On the day appointed, ten thousand aeros, rendered invisible, are to set forth. Each aero will carry a crew of ten men and a cargo of two hundred of the crysinum bombs. Two thousand of the aeros are to head for the North American division, two thousand to the African division, two thousand to the European division, and so forth. Each fleet is to spread out over its particular area, destroying the principal cities and industrial centers. No quarter is to be given; in fact none could be asked, since the inhabitants would not have the slightest idea of the cause of the destruction, nor where to sue for quarter. After the wanton destruction of

all of the great cities and probably eighty per cent of the population of the globe, the Munanese intend to take possession and start the foundations of a new civilization in accordance with their own ideas.

"The small group you saw in this chamber when you arrived, with a few workmen who were taking care of your aero, and your two selves, are all that stand between The Outside and this dreadful catastrophe. Possibly we shall fail; but we have every confidence in you, Professor, as the only man who can avert the holocaust; and in you, Roy, as a valiant supporter of our cause and of the professor in his part of the work. That is all."

## VII.

**A**T the finish of Landon's talk, Thelda had bowed her head into her arms, which had been folded before her on the table. Roy sat in stunned silence, while the professor drummed nervously on the table top with his fingers, staring at Landon the while. Finally the professor started shooting rapid-fire questions at Landon, and Thelda straightened up with interest, though her eyes were brimming with tears. Roy wanted then, more than anything in the world, to take her in his arms; to comfort her and cheer her. He had the utmost confidence in the professor's wizardry.

"Landon," asked the professor, "you say these invisible aeros are stored in an arsenal directly across and on the other side of this mountain?"

"Yes, that is correct, Professor, but this arsenal is under heavy guard, you must remember," replied Landon.

"Have you any samples of the metal crysinum and of the deadly liquid with which the bombs are filled?"

"We have several articles constructed of crysinum but the liquid has never been seen by any of us. In fact, so great is the secrecy surrounding the production of this liquid that the chemists engaged in the work have been kept isolated by the several Zars for centuries. The secret has been handed down through the generations of this one family, who have all been chemists."

"Have you knowledge of the exact location of the storage vault of the crysinum bombs, Landon?"

"We have a suspicion that they are stored in caverns similar to these, under the arsenal on the other side of Leyris. Even now, one of our number who is employed in the arsenal, is investigating this very point. She may be discovered as a spy at any time and executed. When Doreen, for that is her name, joins us, you may question her yourself, Professor."

"Very good, Landon. Now you might enlighten me on just one more point. You say that Paul Serano, before his death, had developed the equipment with which you paralyzed the video and made the call to Roy. Is that equipment still in existence?"

"It is, Professor. It is located in a smaller cavern only a few steps from here. I will show it to you."

At this the professor arose and followed Landon through another winding passage, up a flight of steps cut into the stone, and to a small compartment fitted out as a workshop. As he examined the various mechanisms in this room, some completed, others only

partly so, he commented to Landon regarding the stone steps they had just mounted. These were considerably worn as if by long usage, and Landon gravely explained that the caverns had been the refuge of similar fugitives for centuries.

"It is a pity that Paul could not have lived to complete his wonderful work," remarked the professor in admiration, as he examined some of the results of Serano's labor, "but I do see a faint glimmer of hope here. For one thing, here is a beam-transmitter not unlike some of our own, and after I master its workings, we may be able to find good use for it."

When they returned to the council chamber, several others of the group had arrived, and the professor sat at the table and addressed them:

"Friends, I do not want to seem officious," he said, "but I believe it will be to the advantage of all concerned if you will give complete authority to me over all activities of the group from now on. I see a vague basis for hope, but our work must be done with the greatest care, or failure will be the result. Will this be agreeable?"

Thelda answered at once, "Indeed it will, Professor. I am sure that all here will agree now, and I can vouch for the rest. We trust you implicitly and I, for one, feel encouraged already. Do the rest of you here consent?"

There was a chorus of assent, and the professor asked at once, "Where is Doreen, the lady member, who, you stated, was employed at the arsenal?"

"Here I am," spoke up a young woman who had just entered. "Any questions you would like to ask me, I will gladly answer to the best of my ability, Professor. But I must leave for the arsenal very shortly."

Doreen and the professor drew aside to a settee and conversed animatedly for several minutes. Roy saw that Zora watched this procedure closely, and he chuckled to himself. When the professor returned to the council table, he stated that he would like to have some private conversation with Roy. Not that he had any secret plans, he explained, but that he wanted Roy's advice on something he had in mind before putting it to the rest. Naturally there was no objection, so he and Roy retired to Serano's workshop.

"Roy," he said as they entered the room, "this is even more serious than I had contemplated, and although I have an idea forming in my mind already, there is one big obstacle which may block the successful carrying out of our plan. The young lady I just spoke with told me that she is confident that the supply of the deadly liquid and of the crysinum bombs is in one great chamber immediately beneath the arsenal. She has, however, been unable to locate this chamber, and is now fearful of entire failure, since she has been under more or less suspicion for several days. It is absolutely necessary that I obtain a sample of this liquid; also that the precise location of the supply be determined. One possibility is suggested by another statement of Doreen's. She told me that Pietro, the commander in charge of the arsenal—a man with a viciousness of disposition not exceeded by any of the Munanese—has a soft spot in his heart for Zora, who is employed in the Zar's palace as tutor to his children.

She suggests that, through Zora, this information might be obtained."

The professor flushed as he repeated the last words, much to Roy's secret delight. "Well, how do you think this could be arranged?" asked Roy.

"By the usual power of woman over man," he replied. "The trouble in this case is that Zora has repulsed him for years. Besides, she is under constant surveillance in the daytime, when in the Zar's household. I hesitate to approach her on the subject, as I consider her a very high type of woman and she might seriously resent the suggestion. What do you think?"

"But," Roy answered, "we are all in this thing to the bitter end, and I am sure that she, as well as any of the others, will do anything that might be necessary. I can see your interest in this admirable woman—as you, no doubt, can see mine in the glorious Thelda. But we must not think of personal preferences now. My advice is to put it up to her at once."

They reentered the council chamber, and the professor called Thelda, Zora, and Landon aside to talk over the matter. To his surprise, Zora did not oppose the plan, although she made it plain how repugnant it was to her to be compelled to change her attitude with respect to Pietro's suit. She felt, however, that she would be able to act the part. Knowing how important such a move might be, she did not hesitate. It was decided that she would return to her duties and again take up her normal life in her city apartment, using her own judgment as to the best means of ensnaring Pietro and inveigling him into a disclosure of the desired information. It was with the deepest regret that the professor completed the arrangements and, as a final precaution, he provided Zora with one of their ancient hand weapons and taught her how to use it. Zora felt that at least a week would be required for her work, and the portion of the group which was assembled bid her good bye and good luck when she left. The professor accompanied her to the end of the passageway and did not return for some little time. What took place between them at this parting will never be recorded, but when he returned, he seated himself at the council table with the most serious mien he had displayed since their arrival.

### VIII.

**A**FTER Thelda, Landon, Roy, and the professor had partaken of a satisfying luncheon in Thelda's apartments, they returned to the council chamber. The professor and Landon repaired to Serano's workshop where they spent the afternoon, thus leaving Roy and Thelda together. This suited Roy exactly, and did not seem to be unpleasant to Thelda, either. She spent the time showing him through the various connecting caverns of the underground refuge, and the several luxurious living compartments which had been hollowed from the solid rock. The permanent dwellers were mostly in their living quarters, and Roy became better acquainted with these during the several visits they made. More and more was he impressed with the beauty and the sweetness of the women of the group. They far outshone the beautiful women of The Outside, not only in physical perfection but in mentality as

well. He soon observed that much of their conversation was perfunctory, and seemed to be only a medium of establishing contact for an actual interchange of thoughts. When he remarked about this, Thelda informed him that his surmise was correct; that thought transference among the group was a common accomplishment; that it was a development of their own mentalities and was not shared by the Munanese in general. This amazed Roy and to him accounted for some of the sensations he had had of hearing the golden voice when he was still thousands of miles from Munan. What if Thelda was now reading his thoughts? If she were she must already know that he loved her. It must be then, that she was not unreceptive, since her actions were very friendly, even affectionate. True, this might be due to her gratitude to the two strangers for their response to her plea for assistance. Try as he would he could obtain no inkling of what was in the mind to which his own must be almost an open book. But his resolve to win this glorious creature did not abate in the slightest degree.

That night when the council assembled, Zora, Doreen, and Ramon were missing. They had anticipated the absence of the courageous Zora, but the non-arrival of the other two caused considerable uneasiness in the group.

Thelda, in calling the meeting to order, advised the members of what had been done thus far. Unanimous approval was given of the acceptance of the professor's leadership, and of what he had already accomplished. The professor then arose and addressed them:

"Dear people. I am not ready as yet to give you any real hope; but I can say that my research thus far has been successful, and that if your dear comrade, Zora, succeeds in her mission, our hopes will be strong indeed. The time is very short, but there is nothing which can be done outside of that which is now being attempted. It will be necessary for Roy and myself to remain hidden away here with those of you who are already forced to reside here permanently. I know that this will gall the adventurous spirit of my friend from The Outside, but it is absolutely imperative, for if either of us ventured forth into Munan and were recognized as strangers and captured by the Zar's police, all of our plans would be brought to naught.

"This afternoon, with the aid of Landon, who provided me with samples of the metal crysinum, I have learned several things of value. As you know, crysinum is as transparent as crystal, as hard as steel, and as light as aluminum. Today I have, in your deceased leader's workshop, succeeded in making a chemical analysis of this metal, also in determining its electrical and mechanical properties. I have also constructed several vessels from this material; retorts, beakers, test tubes, and thistle tubes, for use in analyzing the deadly fluid when we obtain a sample. The most important work of the afternoon was the construction of a receptacle of crysinum which may be used for obtaining the required sample with safety. This receptacle must be placed in Zora's hands at once, and I would like to have a volunteer to carry it to the city without delay."

Two-thirds of the assembly volunteered at once, and the professor chose the young woman Allayne and the

man Theron to accompany her. Both were residents in the city and, so far, had not been under suspicion. Allayne was well acquainted with the location of Zora's apartment, and Theron was physically well able to protect her from any ordinary danger she might encounter. When these two left, the professor continued:

"What we would like to do is to obtain one of the crysinum bombs from the Zar's storage vault, load it and our entire group into my aero, rise vertically ten or fifteen thousand feet and destroy this island by dropping the deadly bomb from the aero. The group could then proceed to The Outside at leisure, since the destruction of the city and its power houses would forever remove the neutralizing wall. Unfortunately, this is impossible, since the size and weight of one of the bombs is entirely too great to permit of its successful removal from the heavily guarded secret storehouse. Our next best hope is to obtain a small sample of the compound, with the idea that I shall be able to determine some means of destroying the entire supply from a distance. That is the reason for Zora's distasteful assignment, and that is why I have sent Allayne and Theron with the crysinum receptacle. Let us have hope."

When the professor finished, there was a babble of excited voices. All seemed pleased with his progress and all were considerably encouraged. As the evening wore on, the uneasiness over the continued absence of Ramon and Doreen increased. Surely some misfortune must have overtaken both. All that could be done was to hope and pray that they had not been apprehended; that the safety of the remainder of the group had not been endangered by their capture, if captured they had been.

It was very late when Theron and Allayne returned, and their report confirmed the worst fears of the group regarding the two missing members. Doreen had been arrested in the arsenal and executed by the Zarist troops, after being tortured savagely in an effort to learn of the whereabouts and identity of her accomplices. The brave girl had steadfastly remained silent and finally died a noble martyr to the cause she had espoused. Ramon had been killed outright by a police officer, when he was discovered in an attempt to carry away some records from the administrative offices of the Zar's "Council of Five," where he was employed. In sadness was this news received by the group. The report of the successful meeting with Zora did little to cheer them up. As yet Zora had been able to do nothing; the turmoil caused by Doreen's discovery made it unthinkable to approach Pietro in any way.

For several days Roy was in a miserable state of mind. The professor spent practically all of his time in the workshop, and Roy felt absolutely useless as an adjunct to the group. What made him feel still worse was the fact that he was being studiously avoided by Thelda. She addressed him pleasantly enough when he saw her, it was true. But he found it impossible to engage her in conversation alone. She always made some excuse to get away, and the little intimate talks in which they had engaged on the first day could not be repeated. After the fifth day he became morose and uncommunicative, spending the greater part of his time in the *Pioneer*. Little as he saw of the professor,

he spoke very little to him when he did see him.

Finally the professor, busy as he was, noticed this, and took Roy to task one night when he returned to his sleeping quarters. "Roy," he said, "do not let this thing break your spirit. What is tormenting you anyhow?"

"Well, for one thing," was the response, "I am about as much use around here as two tails would be to a dog. Why was I ever chosen for this expedition?"

"That is not the only trouble with you my boy. Do not think that I am unaware of your love for the little leader of this group. And do not feel discouraged at her actions. The little girl is aware of your feelings towards her, and is only taking some time to make up her mind as to what to do about you. I have observed her closely several times, and am confident that your feelings are reciprocated and that all will be well. Give her a little time, and do not give up hope. As to your uselessness; what is anyone else in the group doing? Outside of my own efforts, in which I do not now need your help, the only other work for the cause is being done by Zora. I am becoming much worried at her silence. We have only slightly over a week left. So forget your grouch, my boy. Get a good night's sleep, and you will feel better in the morning."

Acting upon the professor's advice, Roy turned in. In the morning he stepped out of the *Pioneer* with more confidence than he had felt in several days. If he could only get out into the sunshine, he knew that he would feel different.

## IX.

**M**EANWHILE Zora had been having her troubles. She dared not approach Pietro directly, for this would be certain to arouse his suspicion. Instead, she carried on her work in the Zar's household as usual. Evenings, attired in the most attractive gowns and looking her absolute best, she frequented the hotel, where she knew that Pietro was accustomed to dine. On the third evening he encountered her in the lobby and stopped at once. A change in expression came over his cruel face, the admiration and tenderness in his demeanor made him appear, for the moment, almost human. As he addressed her, Zora did something she had not done for years. She greeted him civilly and with a half smile. Thus encouraged, Pietro begged her to dine with him. Not wishing to overdo her part, she refused, but after an hour's insistent pleading on his part, she compromised and agreed to meet him for dinner the following evening. With triumph in his eyes, Pietro left her. She returned to her apartment, there to do a little gloating on her own part. It had not been a bad night's work, she thought.

The following evening Zora appeared at Pietro's hotel, ravishingly gowned, and a picture of mature beauty from the top of her exquisitely coiffured head to the soles of her modishly shod feet. Pietro was speechless with admiration at first, but eventually recovered his equanimity and proudly led her to his table in the dining room.

Dinner was a success. Zora was friendly, but not too much so. Pietro was as if enchanted by his com-

panion's nearness. He was exultant, too, and pressed his advantage to the utmost. He begged her to accompany him to the opera after dinner, but she refused. She cleverly turned the conversation to the subject nearest and dearest to his vain soul; his high position in Munan, and the arsenal of which he had complete command. Zora feigned great interest when he boastfully told of the importance of his work, and, insinuatingly, she flattered him until, in his vanity, he finally offered to take her to the arsenal and show her through it. This was the identical thing for which Zora had maneuvered, but she did not display too great enthusiasm, and consented to visit his stronghold the next evening only after considerable persuasion from him. Pietro informed her that he could do her no greater honor; that he was risking his position, perhaps even his life, in thus violating the strict order of the Zar that no outsider was ever to be admitted to the arsenal. He thought that, in thus impressing upon her the risk he was running for her sake, she would reward him by further softening in her attitude towards him. Little did he realize the purpose behind her acceptance of his offer. Little did he realize that he had been tricked into making this offer.

Next night Zora appeared at the hotel as usual, but this time she had with her and hidden in her clothes, the hand weapon which the professor had given her, as well as the crysinum receptacle which he had sent. After dining with Pietro she was taken to a small aero, which left from a landing stage on the roof of the hotel. In a few minutes they had reached the gates of the arsenal, where they were stopped by two huge guards who menaced them with leveled weapons. At a curt word from Pietro, they lowered the weapons and allowed the two to pass, muttering disapproval. With a growl, Pietro warned them to be silent, on pain of death, and with that they entered.

Now was Zora's opportunity, and she used all of the feminine wiles at her command to further put the braggart at her side under her spell. She succeeded admirably, for Pietro took her from one end of the arsenal to the other, explaining to her eager ears all that was seen. Finally they had completed their inspection of all buildings on the surface and Zora's heart fluttered wildly as they neared a blank metal wall at the far end of the remotest building. Hesitating for a moment as they faced the wall, Pietro was about to turn around and leave. Something had told Zora that the secret for which she searched was hidden behind that blank wall, and for a moment she leaned her body close to Pietro, the fragrance of her breath on his face, her eyes bright with expectancy. With a shrug of decision, Pietro took a small instrument from his pocket and placed it close to the metal wall. There was a stream of crackling blue fire between the instrument and the wall and suddenly, before their eyes, the partition had vanished, disclosing a spiral of steps cut into the solid rock and leading downward. He produced a light and again presented the instrument to the point where the metal wall had shut them off. Again the crackling flame and the wall was in place, closing them off completely from the room they had just quitted.

As they descended the winding steps Zora counted

them carefully while Pietro was informing her, with the greatest solemnity, of the unheard-of privilege she was being accorded. Only five persons in all Munan knew of the whereabouts of this hiding place, he told her. Only the Zar and he were in possession of means of entry, and his life would surely be the penalty were the Zar to learn of this visit. In convincing words, Zora assured him that she would never divulge the fact of the visit to a soul in Munan, making the mental reservation that the professor was not of Munan, therefore that she could tell him without breaking this promise. After counting one hundred and thirty-two steps, Zora followed Pietro into a huge cavern similar to their own council chamber but much larger. Here were stored the nearly two million crysinum bombs, and a vat of the liquid which they contained. Here was the chance for which Zora had worked. She must not fail! Pietro told her of the terrible effectiveness of the bombs, and of the difficulty in producing the liquid content. With the fanatical fluency of the Zarist, he expanded upon the conquest of The Outside which was so soon to come.

While he talked, his greedy eyes devoured her and suddenly, with no warning, he had leaped to her like a wild animal and, extinguishing the light he carried, had her in his arms and was crushing her to him with brutal strength. Zora struggled frantically and finally squirmed into a position where she was able to draw the professor's weapon from the folds of her gown. Breathlessly she held it against Pietro's writhing body and pressed the button. There was a purple flare which lighted the entire cavern momentarily, and Zora lost consciousness!

## X.

THE eighth day had passed and still no word from Zora. The group was becoming panic-stricken and the professor, although deeply worried and heartsick himself, was endeavoring to calm and reassure them. For three days the members of the group who lived in the city had been unable to learn of Zora's whereabouts. She had not been seen, either at her apartment or at the Zar's palace during that time. Further than this, it had been reported this last day that Pietro had disappeared, and the authorities were at this moment searching for him. A strange woman had been seen to enter the arsenal grounds with him, but neither had been observed to leave. Possibly, even now, the authorities were searching underground passages for the two. The situation never had seemed more serious.

Roy had been avoiding Thelda for several days, as she had avoided him, though it hurt him greatly to do this. Now, in this hour of darkness, she turned to him for comfort and he was overjoyed. They were seated apart from the remainder of the group in solemn conversation, when all were startled by the shrill cry of a feminine voice from the passage and Zora, haggard, worn, and bedraggled, burst in upon them. Thrusting a small metal cylinder into the professor's hand, she cried, "Here is the sample," and collapsed in a heap at his feet. Tenderly he lifted her limp body and, in sudden abandon, pressed his lips to hers. Realiz-

ing that he had betrayed himself, he flushed to the roots of his hair, relinquished her to the women, and rushed off to the workshop with the crysinum cylinder which she had handed to him.

No time was to be lost as the excitement in the city might well lead to their detection. Frenziedly the professor worked in the laboratory, with Roy and Landon drafted as assistants. At last Roy was doing something to help and he was happier than he had been since the first day. Soon Thelda came to the workshop with Zora, who had been revived by the kind administrations of the women of the group. With a fond glance at the professor, who returned it with some embarrassment, she told her story:

"Professor, you must go right ahead with your work," she started, "for I am a hunted woman now and there is a chance that we may be discovered, though I am pretty sure that I left no trace in coming here. It was necessary for me to dispose of seven Munanese with your marvelous weapon, but as they are utterly destroyed, leaving no tell-tale bodies, the chances that my escape can be traced are fairly remote. If no others saw me, we are safe."

With great rapidity, she told her story up to the point where she had struggled with Pietro in the underground storeroom. All listened intently while the professor proceeded with his first test of the deadly fluid.

Great was the care with which he handled the small cylinder which Zora had brought. He spread on the floor a sheet of crysinum about four feet square, then directed Roy and Landon to bring him as large a loose stone as they could carry from one of the passageways. The two men struggled back with a block of stone between them which must have weighed close to two hundred pounds. This they deposited on the sheet of crysinum in the center of the room. All stood aloof at the professor's bidding as, carefully, he allowed one drop of the precious liquid to fall on the surface of the rock. As it struck, there was a slight puff of yellow vapor at the point of contact. They watched in astonishment as the vapor quickly surrounded the stone with a venomous sputtering. Immediately the rock began to shrink in size and, in less time than it takes to tell, the large piece of solid granite had completely vanished, leaving not a trace on the surface of the glistening crysinum sheet.

The onlookers let forth a simultaneous gasp as the last of the rock disappeared, looking at each other in wondering realization that the properties of this fluid had not been exaggerated in the slightest degree. Zora, as soon as she had recovered from the surprise of the sight, continued with her story, and the professor went on with his experiments:

"When I recovered consciousness in the underground chamber, I realized that I had lain there for a long time. Now I know that it was for nearly seventy-two hours. I remembered what had occurred. Hearing no sound, I felt around for Pietro's body, but could not find it. However, I found his torch and, as I flooded the cavern with light, I saw that there was no body in sight. Near the spot where I had lain in a coma, I found all of the metal articles his pockets had contained, including the instrument with which he had

obtained entrance to the spiral stair. I could not then understand what had become of him—whether he was still alive and had left of his own accord, or whether his dead body had been removed by others. At any rate, I did not forget what I had come for and, advancing to the open vat of the deadly liquid, I filled the little crysinum cylinder carefully.

"Then I appropriated the instrument which had belonged to Pietro and cautiously crept up the spiral stair. When I reached the metal wall, I listened intently, but could hear no sound. Placing the instrument near the wall, as I had seen Pietro do, I located a small switch or push-button on its side. This catch I pressed. As had occurred when we entered, the crackling flame appeared and the wall vanished. I stepped into the room through which we had passed, and found it deserted. It was still night and I extinguished Pietro's light. With a palpitating heart, I traversed the length of the building and stepped into the open air. Keeping in the shadows as much as I could, I finally came to the gates without having been discovered. My problem now was to get out, and I racked my brain for means of doing so. Only the two guards were in sight and they paced to and fro before the locked metal gates. Finally I tiptoed close to the bars and addressed the nearest guard softly. He drew over to the gate, and I tried to convince him that Pietro had sent me out alone. He called the other guard at once and both leveled their weapons at me. There was nothing for me to do but point your weapon at each in turn and press the button. As a purple ray shot forth twice in rapid succession, both bodies stiffened, emitted a purple aura for a moment, and disappeared into thin air as we have just seen that stone vanish. Now I understood what had become of Pietro and I was glad—glad. It is horrible to feel that way, but I could not help it.

"Luckily the nearest guard had been very close to the gate, for, with his disintegration, there fell to the ground the bunch of keys which had swung from his belt. These were within my reach and, thrusting my arms through the bars, I obtained them and let myself out, re-locking the gates behind me. As I ran down the hill from the arsenal, I plumped straight into the arms of four of the Zar's police. Eluding them, I continued at the greatest speed of which I was capable. Apparently they wanted to capture me alive, for they did not discharge their weapons. The first gained on me, then the second and third, and in turn I was forced to dispose of them with the disintegrating ray. I had become exhausted, but I kept on running until I reached the entrance to our retreat. I thought that I had lost my fourth pursuer but, just as the stone swung aside for my entrance, he crept up on me from the underbrush. That was when you heard me scream. Luckily, I was able to get the professor's weapon into action again and I disposed of him as I had of the others." She shuddered at the memory of the wholesale slaughter.

All were much excited over her story, especially the professor, but the two women left at once so as to permit the professor and his two assistants to continue with their work.

Zora's narrative was later repeated to the assembled council, who now numbered but nineteen, excluding the three men who were hard at work. Several had been killed that day in the city, during the excitement which followed the discovery of Pietro's disappearance and of the open entrance to the secret vault under the arsenal. The disappearance of the two guards and four of the Zar's police had given the impression that a great conspiracy was under way, and the Zar was executing suspects right and left. The professor would indeed have to hurry.

## XI.

**T**WO days and three nights the men worked almost incessantly, alternating between the workshop and the *Pioneer* and only obtaining occasional snatches of sleep. During this period none of the group dared leave their hiding place. Thelda and Zora became constant companions. Before long, both had admitted privately their love for the two strangers from The Outside. Thelda ruefully thought of her avoidance of Roy and the reaction which it had produced. She had done that after the first day for the reason that his thoughts had told her of his love, and she had not been sure of herself. Now she realized that she loved this young man and could never live without him. But she was no longer able to bring his thoughts to her mind, for there was now a misunderstanding between them. She lived in constant dread that her treatment had killed the love which had at first existed. Zora's feelings were of a much calmer nature. She was serenely confident, and happy in the love which she felt sure was returned.

In the meantime, Roy was much too busy to have constant thought of Thelda but, strangely, the golden voice intruded itself upon his consciousness at the most unexpected times. Success had crowned their efforts, and on the morning of the third day, the three tired men burst forth into the council chamber with a shout of triumph which brought all members of the group on a run.

"Folks, we have the solution," the professor exclaimed loudly. "Listen. Get all of your belongings together at once and carry them aboard the *Pioneer*. We are all going to The Outside to finish our lives in peace and happiness. And we will destroy this miserable island as we leave."

There was a shout of joy as all gathered around to hear the details. At that moment there was a crash at the entrance to the main passageway. Their retreat had been discovered by the Zarists!

"No time for explanations now, people!" cried the professor. "Get everything you wish to take with you and stow yourselves away on the *Pioneer* immediately. The entrance stone is some ten feet thick, and should resist their efforts for a long enough time to permit our escape. Evidently they have not learned the secret of opening the door. But hurry."

The group scattered in all directions as the crashing at the entrance continued with increased violence. Soon there was the sound of automatic rock drills from the passage, but all, except the three men were already aboard the *Pioneer*. With a sudden terrific jar and

a yell from the attackers, the stone door came down and they swarmed through the passageway. Roy, Landon and the professor had remained behind to see that all reached the aero safely. As they retreated towards the passage leading to the chamber in which the *Pioneer* rested, the enemy streamed into the council chamber in great numbers. Roy and the professor shot forth the purple rays from the hand weapons time after time, bringing down many of the Zarists and temporarily stopping the rush. Landon recklessly hurled himself into the massed troops and was down at once. Seeing that nothing could be done to save poor Landon, Roy and the professor ran for the aero and just had time to get the entrance manhole bolted from the inside when the attackers entered the second chamber. In a flash the professor was at the controls and the sphere started revolving as the enemy swarmed around the aero. With a great rush, the *Pioneer* arose, straight as an arrow, for the circular opening far overhead and they were in the sunshine, rising at terrific speed.

## XII.

**W**HEN the altimeter indicated thirteen thousand feet, the professor turned the controls over to Roy, instructing him to keep the *Pioneer* hovering in its present position. He pulled a lever which uncovered all portholes in the bottom of the aero, and as he rushed back to the salon, he cried to all of the excited group to watch the scene below through the glass covered openings. All complied immediately, kneeling on the floor about the several windows. The professor uncovered a small mechanism which had been installed in the salon, and started manipulating its controls as he peered through the telescopic sight.

"Watch Leyris now, folks," he shouted, and as they turned their eyes in that direction, there was a hum from the machine which the professor was operating. A faint ray, like a beam of sunlight which might have been reflected from a mirror, shot earthward, striking exactly at the last building of the arsenal, which could be seen as a small object far below.

Immediately there came a violent upheaval at that spot and a heavy yellow vapor poured forth from the point at which the ray had been directed. This yellow vapor crawled swiftly over Leyris like an octopus surrounding its prey, and the mountain melted away beneath their eyes as had the stone in Serano's old workshop. The vicious yellow vapor continued to pour forth as from the crater of a volcano, and all in its path went the way of the mountain.

Munan was overtaken by the fate it had decreed for The Outside. None could escape. No quarter could be asked. None could have been given. No pity stirred the breasts of the little groups watching in awe-struck silence.

When the vapor reached the city, tall buildings sank into the yellow turbulence like pillars of ice undermined by boiling water. The population could be seen swarming into the ocean like a rippling massed formation of army ants. In five minutes all that remained of Munan was a seething mass giving the appearance of ebullient sulphur. This rapidly disappeared into the

depths of the Pacific, leaving in its wake a foaming swirl, which drew down with it the last of the survivors.

Gone were the invisible aeros. Gone was the deadly fluid and the supply of crysinum bombs. Gone was the race which hated the world with so great an intensity that this same fate had been planned for billions of innocent and unsuspecting victims. Gone were the results of centuries of misdirected mental and physical effort. The Outside was saved!

The various groups around the portholes reacted suddenly; some jumped to their feet and shouted for joy, others among the women sobbing in hysterical relief. Slowly the professor arose from the ray generator and looked for Zora. She came to him immediately and thanked him with tear-dimmed eyes, and the others crowded around, embracing him in their joy and praising him as the deliverer of mankind and of themselves from a most terrible fate. After what they had just witnessed, they could visualize more clearly than ever the awful destruction which had been prepared for The Outside, and their thankfulness knew no bounds.

Disengaging himself, the professor addressed the group, which was crowded into the little salon:

"Dear friends, we have accomplished what we started out to do. We should be grateful to the Supreme Being who has aided his humble servants in saving the world at the expense of Munan, the accursed. There are only twenty-one of us left now, with poor Landon gone. Though we are somewhat crowded for sleeping accommodations, you will be able to make yourselves fairly comfortable on board the *Pioneer* for the comparatively short journey ahead. With your consent we intend to return to New York in the shortest possible time. The neutralizing wall has now left us forever, along with the island of Munan, and we can depart unhindered. We shall arrive at our destination in twelve hours. Afterwards I will tell you the story of our labors for the past few days and how this destruction was accomplished. For the present, suffice it to say that, in the experiments with crysinum and the deadly liquid, I discovered that a stream of electrical impulses of a definite frequency would cause a reaction between the fluid and the enclosing metal which would start the destructive action and render the metal no longer a resistant. The rest was easy, since we had available the small beam transmitter which had been constructed by your deceased leader. This I was able to modify so as to produce the required frequency, a ray of which you saw projected to the spot which Zora reported as the location of the supply of crysinum bombs.

"Now tell me; do you all wish to return with us to our home and there take up peaceful lives as inhabitants of our world, which nevermore will be 'The Outside' to you? Or had you rather be landed in some other location less thickly populated? Roy and I have both grown to love you all during the short time we have known you and we hope to have you always near us."

Enthusiastically, all decided to make the city of the strangers' choice their own future home, and to remain together as a group, at least until such time as they

had become accustomed to the new order of things. In little knots they gathered on the several settees in the salon and cabin, there to discuss plans for the future, which, for the first time in their lives, seemed bright.

### XIII.

THE professor proceeded to the control room, where he found Roy anxiously awaiting him.

"Well, it is all over, my boy, and our dear old world is saved," said the professor in a tired voice. "Let me have the controls and we will start for home at once. If all goes well, we will be there in time to get to our own familiar beds by midnight, Washington time. Do you realize that it is now only eight a. m. Munan time? That attack on our retreat was intended as a surprise at dawn. Fortunately none of our number had been able to sleep on account of the excitement and all could thus prepare quickly."

"Yes, I noticed the time before we left," replied Roy, who was still shaken up because of the destruction of Munan which he had witnessed in the periscope. "But, Professor, I do think that you should get some rest at once. You know you not only worked harder, but had considerably less sleep than poor old Landon or myself these past few days. You must be worn out."

"I am pretty well exhausted, Roy," he responded, "but another twelve hours will do no harm. Besides, I feel a personal responsibility for those dear people we are taking back with us. You may relieve me at the controls if you wish, but I want to be here all the time. I could not sleep now if I would."

He took the controls from Roy and headed for home, bringing the speed of the *Pioneer* to nearly six hundred miles an hour. Softly Roy closed the door as he left.

Seeking out Thelda, he found her alone in the tiny galley, examining the cooking utensils with deep interest.

"I knew that you would come to me, Roy," she whispered as he closed this door also and sprang to her side. "Oh, my dear, why have you been so blind, and why have I been so uncertain? Your mind spoke to mine long before you had even reached Munan, long before I had even seen you. I knew then that you were destined to love me. I think that I have loved you myself ever since I first heard your voice, which was over the videophone."

"Thelda, dearest. My wonderful—golden girl," was all that Roy could say, as he folded her yielding body to him and their lips met in the first kiss. No further words were necessary—their minds were now in close communion and to each was revealed the perfect sincerity and deep affection of the other.

The *Pioneer* sped swiftly toward what was now to be the home of both. There, high above the Pacific, as Roy and Thelda continued in their embrace, the sturdy arco carried another happy pair.

Forward, in the control room, the professor had just turned his beaming face to gaze into Zora's adoring eyes. They smiled in complete understanding, and two more pairs of lips met in a kiss of real love.

# OUR OLDEST READER

Editor, AMAZING STORIES:

Gentlemen: I have been a reader of your magazine for the past four or five months and thought I'd drop you a letter (typed for me at the office of a friend), to let you know what your oldest reader thinks about AMAZING STORIES. I think I can lay claim to being your oldest reader, because if I last three more years I'll be 100 years old, and I rather think I'll live to be 100. And it is my hope that if I deserve any kind of a heaven, it will be a place where I can learn to know all the mysteries that stretch in an endless vista before the limited sight of us mortals.

First of all, let me disagree with one of your correspondents who complains about the quality of art work and the paper in your magazine. Your cover designs may not be artistic, but they have a kick to them, and that's what I read the magazine for—the kick. As to the paper being cheap, you should know, but it suits me fine. At my age it is hard to read much. Many magazines have a smooth, shiny paper, and with the strong light I have to use it is almost impossible to read them without a headache. The dull finish of your magazine does not glare under strong light, and anyone who has any regard for his eyes ought to appreciate this fact. The only improvement I could suggest would be to use a blacker ink.

I have always been a voracious reader of scientific fiction, and it has been during my lifetime that many of the great scientific fictionists have done their work. When I was a boy, long before the Civil War, I traveled 300 miles on horseback to see a "flying machine" that a mechanic was building at Troy, New York. He had been getting "funny writeups" in all the papers in the country for his crazy notion, and his delight was pathetic when I actually expressed confidence that some day men might fly. I helped him with the machine for some weeks, but we never were able to get it off the ground. It was finally wrecked in a gust of wind. The world was not yet ready for aviation. In those days the idea looked as crazy as a trip to the moon does now.

During the Civil War, inspired by some "fool story" by a wildly imaginative fiction writer, several of us in the Union Army wanted to drift over beleaguered Vicksburg in a "fire balloon," as they were called in those days, for the purpose of drawing maps of the fortifications. Although we offered to stand all the expense ourselves, permission was not given. The Union generals feared that the attempt would set the army up for ridicule before the nation.

Having lived through a period of tremendous development of the sciences, I am impatient with those short-sighted individuals who object to a scientific story because it is a little ahead of present-day knowledge. These things will all come, in some form or other, and even I may live to see them. I should like to wander from star to star, drinking in the beauty and the awful solitude of the airless spaces. I've had a lot of fun in my 97 years of life, and when I have to shuffle off, if I've been as decent to my fellowmen as I've tried to be, I'm going to have a lot more fun.

As far as I'm concerned, you don't have to print any more of Jules Verne's writings. They were far advanced in his time, but science has caught up with so much of what was only fantastic fiction in Verne's time, that it is always a disappointment to read Verne's stuff again, after all these years. But as to H. G. Wells, although I have read all his published works, his style is so lucid—his plots are so delightful—and his imagination is so penetrating, that it is a constant delight to read his works over and over again.

In the February issue I got a lot of enjoyment out of Baron Münchhausen's scientific adventures. I was surprised that you had not published anything before by Mr. Gernsback. He is an able and finished author and you ought to contract with him to become a regular contributor before some other magazine grabs him. There is more plausible science in this story than in most. The illustration on page 1060 was very well

done. What tickled me is the rheostat on the barrel head. It sure reminds me of the old-time hay-wire amateur station. My grandson had one back in 1910 or '11 and he and I had a lot of fun making the nights hideous. He has boys of his own now and seems to be getting old, because he says he hasn't time to read AMAZING STORIES. But his boys are coming along and seem to have the right stuff in them. They can identify transformers and condensers and things like that by their pictures already. In a few more years they'll be regular readers of yours.

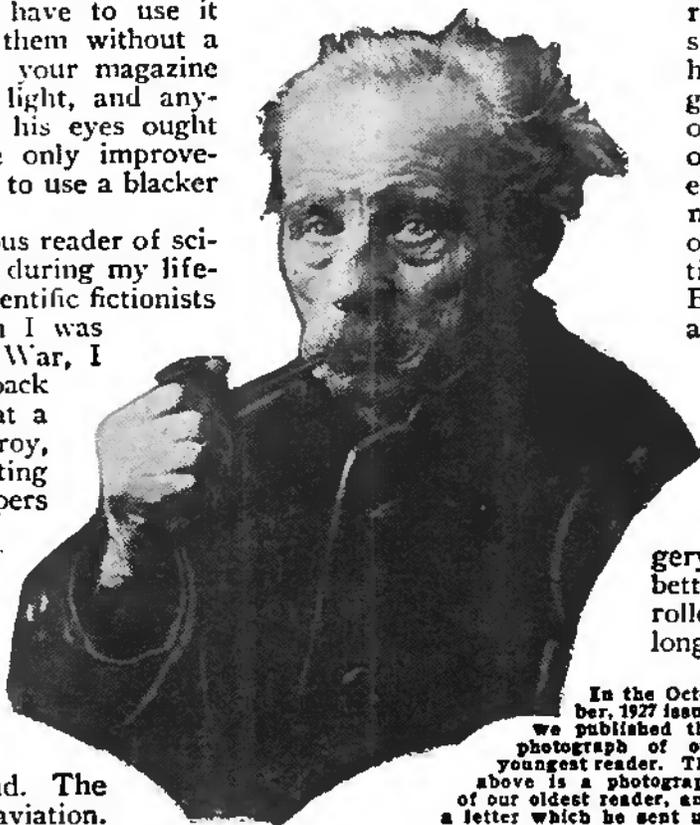
"Four Dimensional Surgery" by Bob Olson is a much better story than the one about the roller press which you printed not long ago. Not only is it so plausible as to be almost convincing, but it is as tense and thrilling as any wild west blood and thunder yarn. It actually had me hanging on to the chair to resist the ether drift.

"The Fighting Heart" is a whimsical and entertaining yarn. Not only that, but it ought to satisfy those who yearn for the literal truth, because it is not only possible but practicable. Back in the stone age men used to eat their enemies' hearts in order to acquire their courage. Their imagination did the trick then. If now men can acquire a fighting heart by surgery, even if the surgery is imaginary, then it will be just as effective now as it was in the stone age.

"Smoke Rings" is another very convincing story. Everyone knows that whirling rings will travel much further than ordinary puffs of gases or air. Why doesn't somebody experiment along the lines suggested by Mr. McLociard?

I am a very religious man. I know that in a few more years I will have to turn in this old worn-out chassis for a new celestial chariot. Without being flippant about it, I expect that some living entity of me will keep on going and cannot die.

E. E. TWIGGENS,  
Box 344, LeMars, Iowa.



In the October, 1927 issue, we published the photograph of our youngest reader. The above is a photograph of our oldest reader, and a letter which he sent us.

# AN AMERICAN JULES VERNE

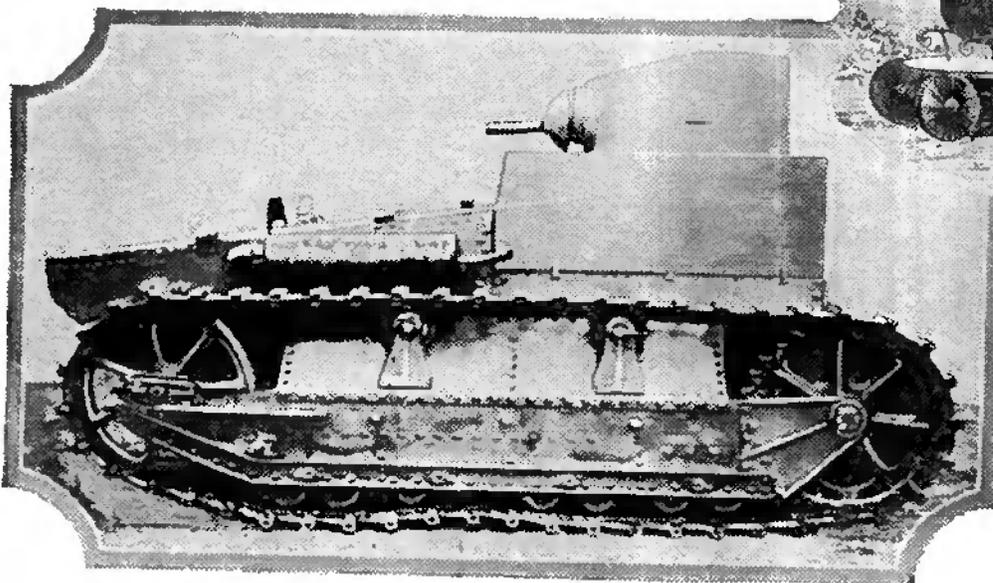
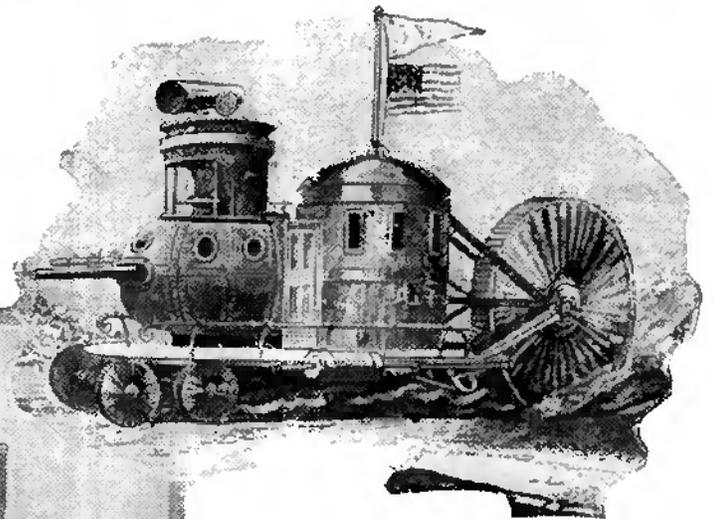
**S**OME of our readers probably remember the exhibition of the Dr. Frank O'Brien collection of Beadles dime novels at the New York Public Library a year ago. These had a great circulation in their time. They were largely of the adventurous type, and were by no means to be considered as unworthy of attention, because many of them showed genuine merit. A publisher, Frank Tousey by name, started a sort of rivalry or following up of the Beadle novels by a series of publications of stories, also of adventure, and designed for boy readers, which, under various names, were sold for the price of five cents each. Such titles as the Five-Cent Library or the Nickel Library



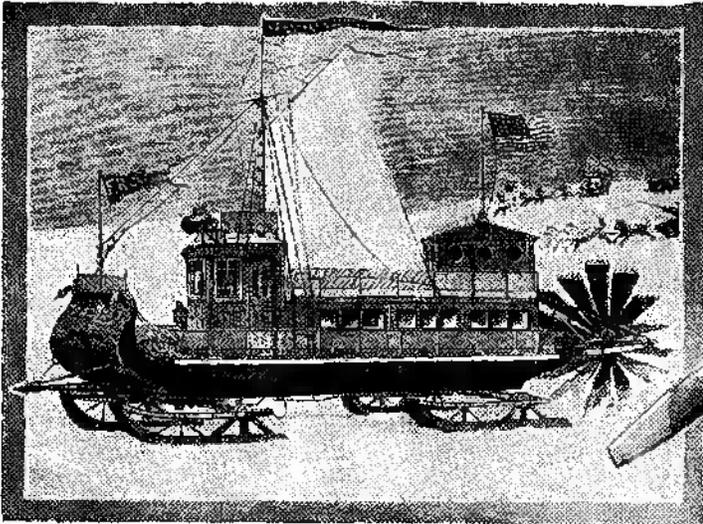
This is a portrait of Lu Senarens, who was a man of once of great industry and vivid imagination. Illustrations given are intended to contrast the author's imaginary structures of what's been done seven decades after these old engravings were published.

was given to them by the publisher. They came out once a week, and each one had a picture—wood engravings were used in the olden days—of an episode or of some object from the story. A number of these stories were written by a prolific author by name of Lu Senarens, who wrote under the pen name "Noname." Each story ran perhaps 25,000 to 45,000 words and the author at first wrote them in long hand, and saw them through the press, each one in the allotted seven days. It would be hard to find a record of how many he wrote.

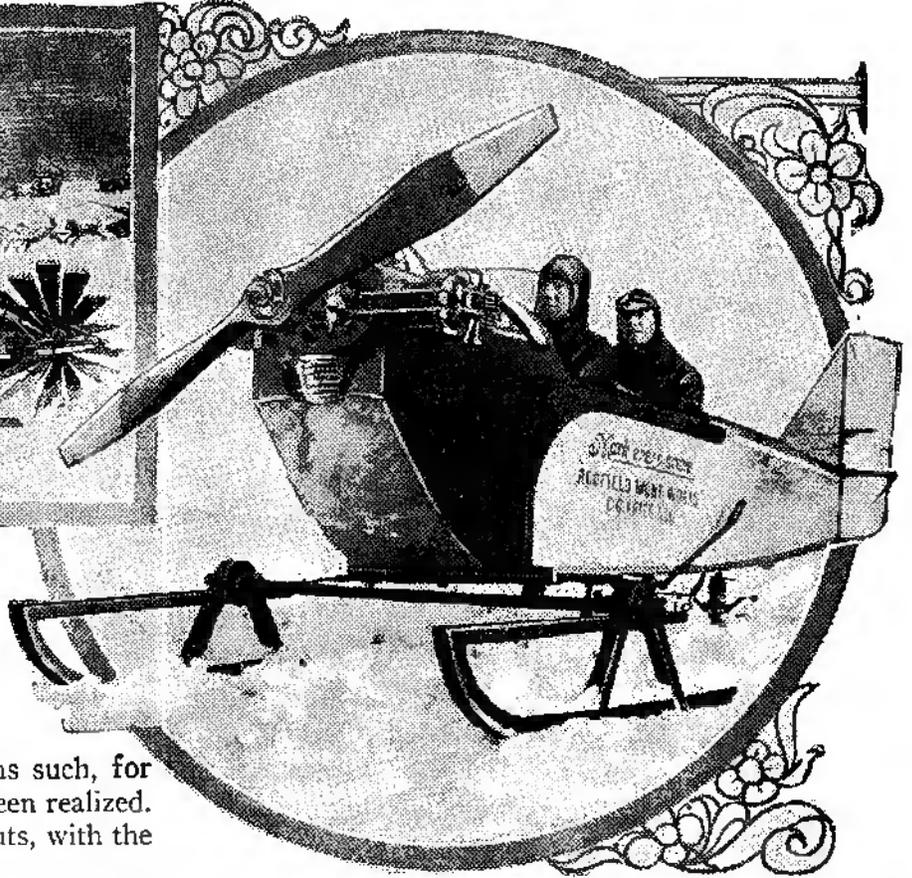
What interests us in the stories is the fact that he drew on his vivid imagination and described many things which were reckoned as absurd and impossible in his



In the above is shown Mr. Senarens' idea of an armored car used for attack or defense. It will be seen how closely it comes to the caterpillar tank used in modern warfare. It is a matter of surmise how many of our readers will notice the wrong position of the flag.



Our author shows above a very interesting motor sled, driven by a propeller wheel at the stern. At the right is shown a more modern version of the self-propelled sled, in which the aerial propeller does the work. It is a question really whether Mr. Senarens' idea is not better.

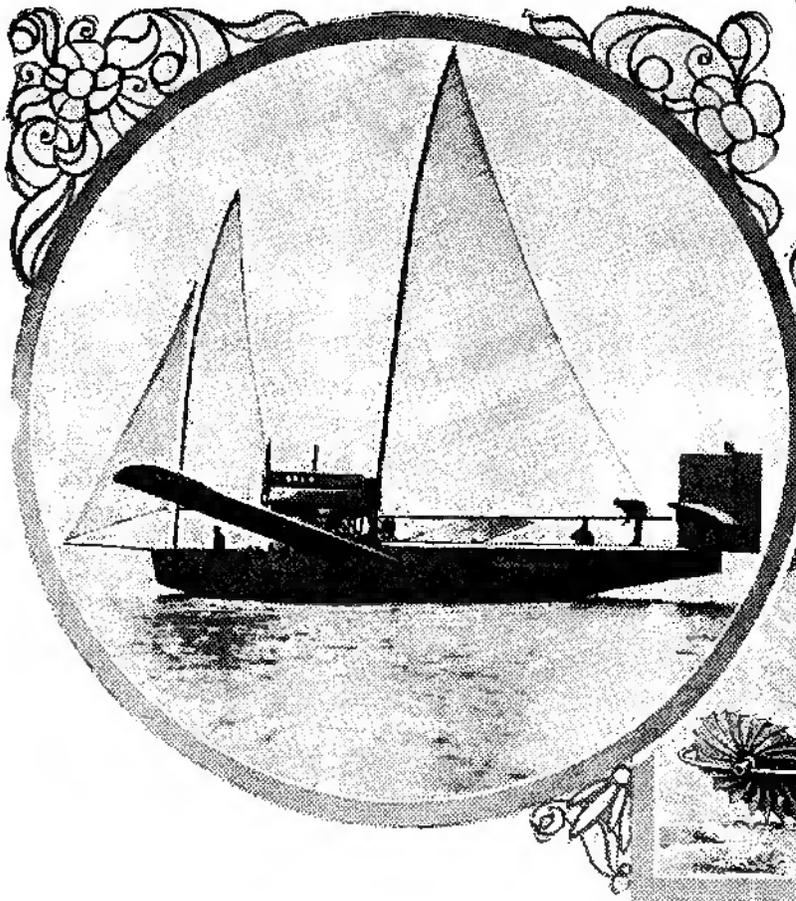


days, but which we can no longer regard as such, for the simple reason that many of them have been realized. We give a few examples of the old wood cuts, with the modern successors or realizations.

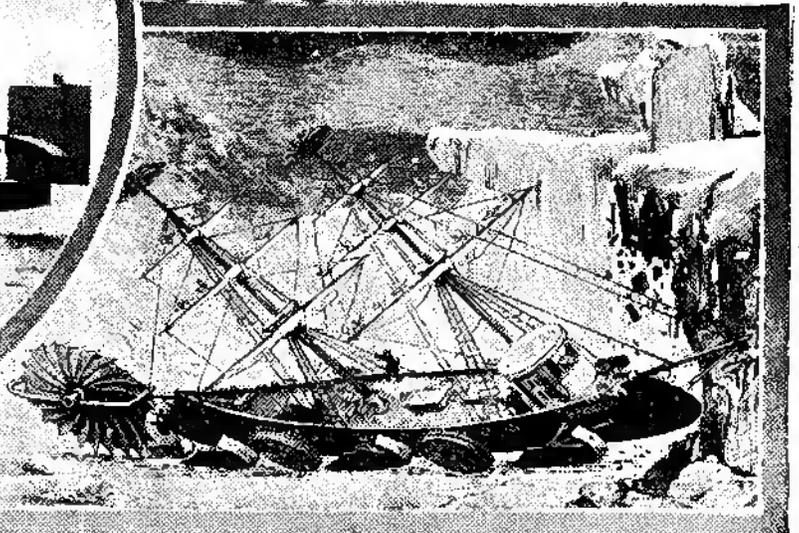
He was born about 65 years ago and died recently. Mail robberies seem to have been in order in the nineties of the last century, so one of his characters, who figured in a number of stories, appears as the inventor of an armored and armed magnetic carriage, which was to be used for transporting mail. Here we have a steam-propelled vehicle with an armored turret with guns protruding to protect the mail from robbery.

Again we have an armored steam automobile, also suggestive of the steel-clad cars of the present day which are used for transporting money. This was conceived by the author some 35 years ago. So we find Frank Reade, Jr., one of his stock characters, protecting the United States mail. Another of his characters, Jack Wright, figures as having a sort of *letters of marque* and goes off to the Western Prairies to fight the stage coach robbers, "road agents" as they were termed. Both of these affairs bring us very close to the caterpillar tanks of the World War, with turret and guns.

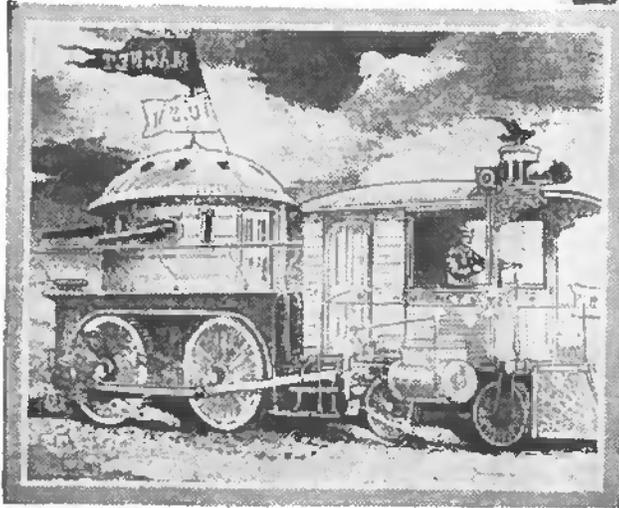
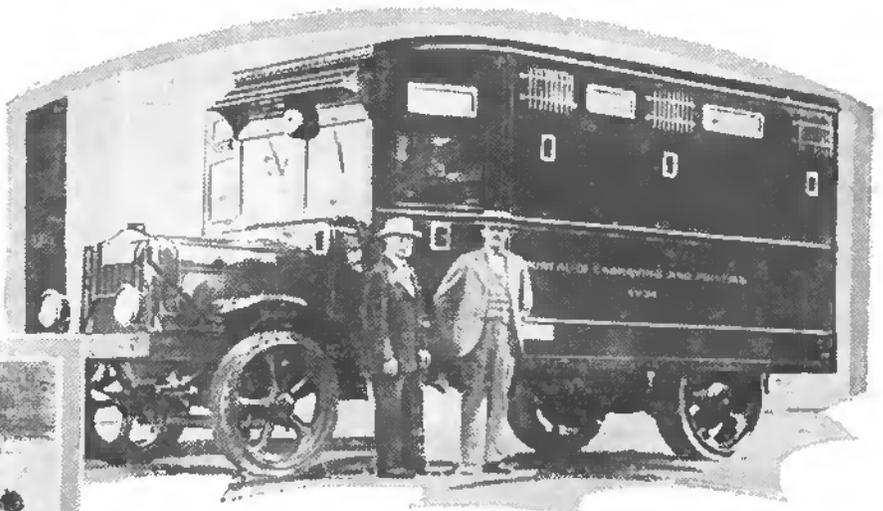
Many of us have seen ice sleds driven by power. A spiked wheel is revolved at high speed and in contact with the ice biting into it, drives the sled along at high speed, but our young friend, Frank Reade, Jr., comes



Below is shown one of Mr. Senarens' ships capable of traversing ice or water, contrasted with a very modern idea, where we find a "shoulder of mutton" or Marconi rig vessel embodying more modern ideas.



Below is shown an armored turret car which might manage to transport bonds, money and negotiable securities even through the streets of such cities as New York and Chicago. It really looks more secure and more efficient than the modern one shown on the right in direct comparison with it.



out with what he calls an "Electric Snow Cutter," a sled propelled by a rotating spiked wheel. Exactly where the electricity comes in is not clear, but the picture of Reade, Jr.'s vehicle suggests that it is going at high speed, and racing with Eskimo dog teams. These are only a part of Senarens' very wonderful efforts, the fruits of what may be called a mechanical imagination. He described the Deep Sea Diving Bell of almost modern construction, a Flying Boat, an airplane, or rather several airplanes, a steam man that pulled wagons, a steam horse that did the same, and submarines.

In looking over the pictures of these conceptions, the

industrious author appears as a true predictor of mechanical progress. In *SCIENCE AND INVENTION*, of October, 1920, a number of Senarens' "inventions" were reproduced.

It is in order to ask what has made them possible in the present day, why were they not carried out in the early nineties when they were published? It is fair to say, that it was the invention and perfection of the internal combustion engine that brought so much of our author's ideas into life and realization. Ulysses, to conceal his identity from the cyclops whom he had blinded, called himself "Outis," meaning "no one." The American Jules Verne concealed his name under the title, "Noname."

The centennial of the birth of Jules Verne is but a few weeks back of us, and it seems fitting to show at this time that we too had a Jules Verne, a man whose industry in turning out reams of copy was as remarkable, as was his ingenuity in evolving the strange machines, prototypes of so much of the present, out of his imagination, though he died unheralded and practically unknown.



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.

#### HOW SCIENCE STORIES SHOULD BE WRITTEN—THE NEW FIELD OPEN TO AUTHORS

Editor, *AMAZING STORIES*:

Since you are good enough to invite discussion from your readers, I accept the implicit invitation in the spirit of the Irishman who watched a brawl: "Is this a private light or can anyone get in?"

First of all, I wish to congratulate you on opening up what is almost an unexplored and unexploited field of fiction. I believe that the defects in your material are due not to any faulty editorship but almost wholly to the fact that very few novelists and short story writers have as yet turned to the marvelous possibilities opened up by modern science. Any editor would be forced to lean very heavily on the support of a mere handful of writers, H. G. Wells and Jules Verne being of course the leaders, in editing such a periodical. May your venture stimulate scores of young scientists to try their hands at fiction! At present very few men of science can write fiction and very few writers of fiction know anything about science.

That being so, many writers who strive to astound their readers are lamentably weak in their facts. They deal vaguely with unknown "rays" and "substances" and "fourth dimensions" in a way that betrays much ignorance of physics. Compare, for example, Mr. Wells'

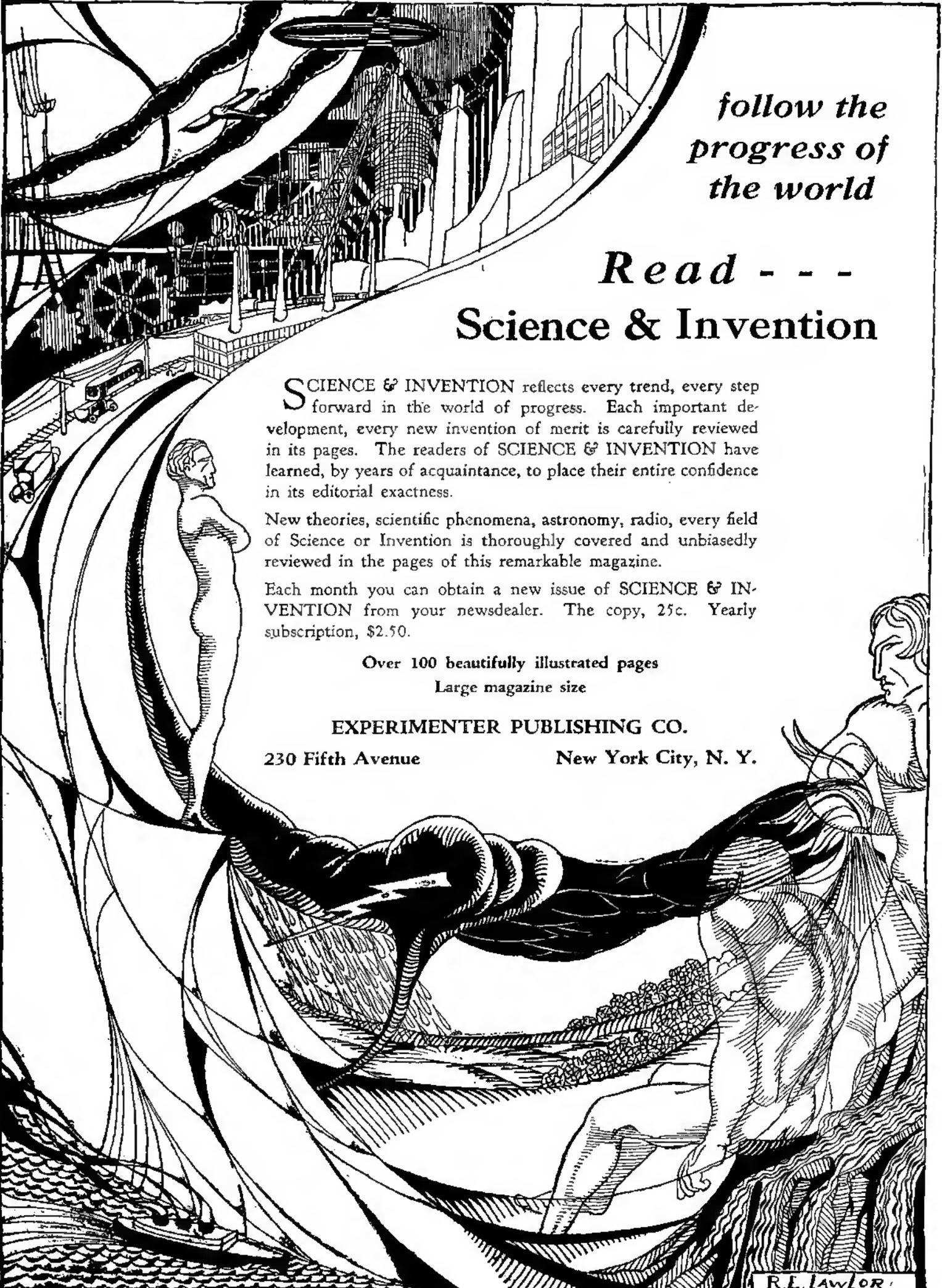
Martians with the Martians of almost any other imaginative writer. Mr. Wells knows his astronomy and creates creatures fitted to the arid, cold and bleak planet, light of air and of gravity; where others invent human beings or animals totally unfitted to Martian conditions. His Lunar plants and animals are such as might actually exist in caverns of the moon. Scientific fiction does not have to come within the range of possibility, but it should be plausible and not contrary to any known facts or natural laws. Purely fanciful stories might better be ranked as romances or "weird tales" (all very well in their place) than as "scientific fiction."

The best formula for scientific fiction would be "An imaginary hypothesis carried out with rigorous adherence to probable consequences." Thus Wells assumes the indefinite concentration of capital in his "When the Sleeper Wakes;" a new growth-food (possibly a glandular extract?) in "The Food of the Gods;" the disintegration of the atom in "The World Set Free;" but once his hypothesis is acknowledged, that which happens is what might happen under such circumstances. The same may be said of Conan Doyle's "Lost World"—granted an isolated tropical plateau, forms of reptilian life elsewhere extinct might well be preserved. Such

of your stories as "The Red Dust," "The Green Splotches" and "The Second Deluge" show a similar scientific feeling for cause and effect.

Preston Slosson, Ph.D.  
University of Michigan, Ann Arbor.

(With regard to the opening suggestions in your letter, we think *AMAZING STORIES* is doing its part in developing new authors. There certainly is enough in science to inspire any amount of good fiction. Whatever one may think of the ignorance of science on the part of authors, the demand for stories of the type we aim to give, should inspire them with the desire to study natural science for the purposes of their work. The much discussed Mr. Wells keeps very straight on his science and combines with it, an atmosphere of reality, so that even in the wildest flights of fancy, a feeling of the truthfulness of the story is evoked. "The Red Dust" and "The Green Splotches" were quite impressive, and the thing to be observed in them is that in both of them, there was character drawing. The characters of the Indians and of the contrasting scientists are particularly well portrayed and in "The Red Dust," an imaginary character in an imaginary world, is portrayed as if he really existed.—EDITOR.)



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## A CRITICISM OF "THE DISINTEGRATING RAY" AND OF "BARON MUNCHHAUSEN"

Editor, AMAZING STORIES:

I have just finished the February issue of AMAZING STORIES and have a few remarks concerning certain stories appearing therein.

In *The Disintegrating Ray* by David M. Speaker, the author remarks that the atomic weight of an element depends upon the number of electrons per atom. As a matter of fact, although it is true that the greater the number of electrons the greater the atomic weight, this is merely incidental, since the greater portion of the mass of the atom is concentrated in the proton. The ratio of the mass of the electrons to the entire mass of the atom is one to eighteen hundred and therefore negligible. Furthermore he states that the atomic number is equal to the number of electrons per atom. However, the number of electrons per atom is twice the atomic number. He quotes silver as having forty-seven electrons when, as a matter of fact, silver has forty-seven atmospheric or valence electrons and an equal number of nuclear electrons, or a total of ninety-four. Naturally there are an equal number of protons. Another thing: removal of an electron from a mercury atom would not produce a gold atom; it would result in a Hg+ ion. I would suggest that Mr. Speaker read the chapter on atomic structure in Getman's *Outlines of Theoretical Chemistry* before attempting another story on atomic structure.

In the *Baron Münchhausen* I notice you say that an object placed above the gravity screen and, losing its weight, remained suspended in the air. You should, and probably do, know better than that. The column of air above the screen would lose its weight, and the pressure of the air on all sides would be sufficient to send it hurtling into space. For that matter, the centrifugal force of the earth would produce the same result, and any object placed above the screen would follow the same procedure as the column of air.

One more knock: Although I am an ardent admirer of H. G. Wells, I must say that *Pollock and the Porroh Man* has nothing scientific or even pseudo-scientific in it and therefore has no place in your magazine. It is a good story, but it is decidedly out of place.

In conclusion, let me say that I should like very much to see this letter or an acknowledgement of it published in your discussion column.

John A. Thomkins,  
Stillwater, Oklahoma.

## THE ANSWER OF THE AUTHOR OF THE "DISINTEGRATING RAY" TO JOHN A. THOMKINS

Editor, AMAZING STORIES:

I have read Mr. Thomkins' letter with great interest and admit that he is correct in many of his statements. But my story is not intended to be used as a text book on atomic structure. Its purpose was merely to suggest the possibility of eventual atomic disintegration. Therefore, the stressed point was not the atom itself, but the means (epsilon ray) of causing its disintegration and the transmutation of one element into another. For this reason, using a story teller's license, I took the liberty of simplifying the actual atomic structure in order to clarify the explanation of the ray's action. This is the main point which is responsible for Mr. Thomkins' criticism and which he has not mentioned in his letter. Of course, the atom does not merely consist of a proton with several electrons whirling around it (as I assumed in "The Disintegrating Ray" for simplicity's sake), but of a nucleus consisting of many protons and electrons with an excess of the former which is neutralized by an equal number of planetary electrons which revolve around it (the nucleus). But so far as the action of the ray is concerned, the neutralized protons and electrons in the nucleus are not considered. Consequently, in the story, I just assumed that the atom consists of a protonic nucleus with several planetary electrons.

As regards the relation of the atomic weight to the number of electrons, I did not say that the atomic weight actually depends on the number of electrons, but that the greater the number the greater the atomic weight. This stands to reason, for since the atomic weight depends on the protons, an element having a greater number of electrons than another one will necessarily have a higher atomic weight as there will be more protons in its nucleus.

I believe that Mr. Thomkins is in error when he states that "the number of electrons per atom is twice the atomic number." For an answer I refer him to the element uranium. This substance has an atomic weight of about 238.2 and an atomic number of 92. Since according to some of the latest theories regarding atomic structure it has been conceded that the atomic number roughly represents the number of positive charges or protons, then if Mr. Thomkins is correct the atomic weight of uranium should be 184 instead of 238.2 as the number of electrons is the same as the number of protons. In the same way the element silver does not as he says have an atom of 94 electrons altogether, but one of about 103, as he can readily observe by referring to its atomic weight. There are a few elements in which the total number of electrons is twice that of the planetary electrons, but they are very few and not enough to make it a general rule. The best



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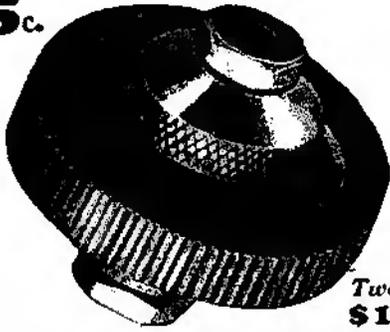
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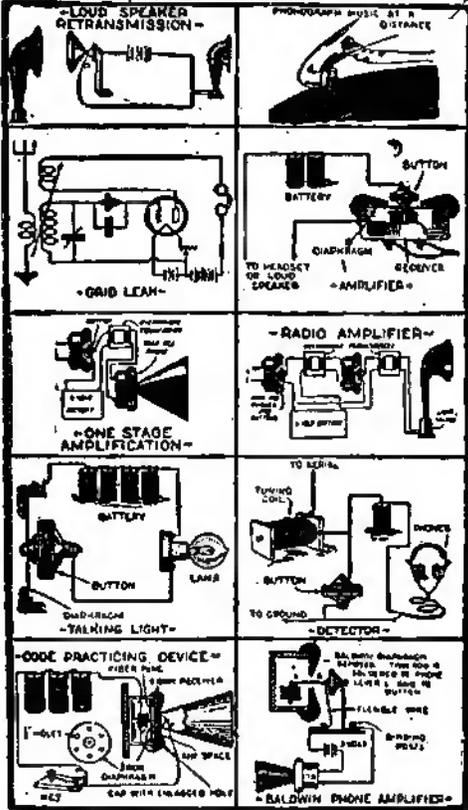
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examples are to be found fairly low in the scale of atomic numbers and are represented by helium and oxygen. Helium has an atomic number of two and an atomic weight of four; the atomic number of oxygen is eight and its atomic weight is 16. But the higher one ascends the atomic number scale, the greater becomes the difference between the atomic weight and twice the atomic number. As an example I may quote the element thorium which has an atomic number of 90 and an atomic weight of approximately 232.

Mr. Thomkins may be right when he states that "the removal of an electron from a mercury atom would result in an Hg plus ion" but I am not quite convinced. I have yet to see the metal which can remain in an ionized state out of a solution. While such a thing may be possible from a theoretical viewpoint, it is extremely doubtful if an element so placed could long retain an extra proton without either losing it or else having it neutralized by electrons in the air. While I admit the latter is very probable, yet I see no reason why the proton should not leave the atom with the removed electron, as the ray is constantly removing any other electrons which might neutralize it. Certainly, whichever happened, the mercury would either definitely change to gold or else return to its original state, but it would not be an Hg plus ion. However, this point is rather doubtful, but I would like to point out that it is just such doubtful points as this that constitute the difference between a Scientifiction Story and an accomplished fact.

I may add that I have inspected the reference suggested in Mr. Thomkins' letter and find that the chapter named, touching only very briefly on the subject of atomic structure, is rather inadequate. In addition to this the book was printed in 1913 (at least the copy I saw was) and I certainly would not recommend it as a source of information on a subject about which new facts are being discovered yearly. A more recent and most interesting book on the subject is by Benjamin Harrow and is, I believe, called *The Romance of the Atom*.

However, as present day knowledge of atomic structure is still rather vague, *The Disintegrating Ray* should not be taken too seriously. It is possible that within the next ten or fifteen years new discoveries will prove our present conceptions of the atom to be inaccurate.

I wish to thank Mr. John A. Thomkins for the interest he has taken in my story.

Sincerely yours,  
David M. Speaker,  
3852 N. Smedley Street,  
Philadelphia, Pa.

[We give the comments of a distinguished chemist below.

"After reading Mr. Speaker's reply to his critics, Mr. Thomkins and Mr. Wait, we are inclined to agree with the former in most particulars. The cases where the atomic weight is double the atomic number are few, and are confined to the elements of low atomic weight. His assumption of a simpler atomic structure than the actual seems justifiable for fiction purposes. On the other hand, Mr. Thomkins is right in saying that the removal of a planetary electron from the mercury atom would leave a positive mercury ion. As to Mr. Speaker's statement that ions are not known to exist outside of solutions, why not refer him to the experiments where a trace of gas is introduced into an evacuated tube and is then truly ionized by the discharge across a pair of plates at high potential difference. Air in fact can be easily ionized through contact with any radioactive substance.

"The understanding is that protons are virtually impossible to remove singly from the nucleus of an atom, owing to their presence in the nucleus, where they are much more firmly bound together than are the electrons circulating in the outer orbits."

As far as our friend the Baron is concerned you have made rather a good point about the gravity screen. But whether the air lost its weight or not it would be acted on by the surrounding atmosphere. We might imagine that the gravity screen only affected solids.—EDITOR.]

### NULLIFYING GRAVITY

Editor, AMAZING STORIES:

I am sending in this clipping which I took from the *Cleveland Plain Dealer*, thinking it would be of interest to some of your readers.

"NEWARK, N. J., Dec. 10—(AP)—The invention of a machine by which the force of gravity is neutralized, was announced today by Bernays Johnson, a radio engineer, who claims that if the machine can be developed to a commercial stage, air flights from New York to Paris can be achieved in five or six hours.

"At his laboratory on Broad Street, Johnson said he had actually suspended a miniature plane in the air by neutralizing gravity, and also that he could suspend a 50-pound weight in the air."

In the November issue the *Astounding Discoveries of Dr. Mentiroso* was very good. This clipping brings out the fact that gravity can be neutralized as was done in this story. I would be glad to see more stories by Jules Verne. I have read *AMAZING STORIES* since it came out and can find no fault with the magazine.

J. W. Hackny.

[All we can tell you about the clipping which you have sent us from the *Cleveland Plain Dealer*, is to advise you not to believe a word of it. We do not say that no way of affecting gravity will ever be discovered, but any such prospect is extremely remote.—EDITOR.]

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THE HORIZON LINE ON MARS—"TEN MILLION MILES SUNWARD"

Editor, AMAZING STORIES:

I have been reading your remarkable magazine for over a year and feel I must send you this letter out of appreciation of what I think of your publication. I do not intend to start any criticism of any kind of your stories. I am not scientific enough to do that, although I do some genuine thinking as I read the scientific stories you feature. Some are possibly far-fetched, however, they are all written in the light of prophecy and hundreds of years from now in perhaps varied ways will be facts. A hundred years ago even, what would people have thought of an author writing a story of music and speech being sent hundreds and thousands of miles with the ether as the sending medium? Easy to answer that question, "Stone crazy!"

The purpose of this letter is different to most of the ones sent you. You are to act as arbiter in a dispute I have had with my friend.

In discussing existence upon another planet to be specific, Mars, we disagree on one point. My friend argues that the horizon line there would seem no farther away than on the earth because the difference in the planet's size would be relative, therefore no difference could be noted. I maintain, however, that as Mars is almost half the size of the earth the horizon line in that planet would appear to be almost twice as close as in our earth. Distance toward the sky line in any direction would be reduced almost half of what we would observe on earth. Am I right or not?

On another question we seem to agree. Mars being almost half the size of the earth, gravitation is almost twice reduced or a person's weight would be nearly half that on earth. My friend argues, and I agree, that nature is nature no matter what planet you may be on. You cannot live contrary to natural laws. However, being on Mars from another planet, the earth, one would find nature not the same. Natural laws on Mars and natural laws on earth are not identically the same, although nature exists there as it does here, the difference being in the construction of the two worlds.

Therefore, Mars would be outside of the natural laws of Mars because he is not subject to them but to those of his planet. For that reason nature on Mars would proceed to adapt him to her conditions. His body would soon change in shape until he would be conformed to gravitational pull there. The molecules and atoms of the body would become more widely separated due to gravity being less. In due time he would not look like a terrestrial being, but would be made over to the laws of nature existing on Mars. If he continued to be an earth man in all respects he would be living out of nature, or contrary to it rather as it is found on Mars; he could not possibly do it is my contention as well as my friend's. What say you?

With regard to the story *Ten Million Miles Sunward* in the March issue, in which you said something was wrong, I have an idea of my own in that regard.

The rotation of the earth was slowed up from 365 rotations in a year to 314 by displacement of weight in the Caspian sea, to escape the comet. If the rotary speed of the earth was slowed up to that extent it would circle gradually nearer and nearer the sun at each revolution until it would be drawn into the sun instead of establishing a new orbit it seems to me. The earth and other planets revolve at certain regular speeds around the Solar center. If this speed were increased very much the various planets would tend to fly off into space at a tangent and circle farther and farther from the sun. Therefore why is it not true of the contrary? Centrifugal force must be balanced to the right point to keep the planets in their respective orbits. If it is unbalanced from some cause they would fly off farther from the sun or closer as the case might be.

It seems to me that a terrific jolt would be necessary to slow the earth's rate of rotation instead of added weight at a certain point. However, I may have missed the point entirely in this discussion.

Ross L. Bralley,  
617 W. Washington St.,  
Oklahoma City, Okla.

P.S. I am hoping you will print this letter in your "Discussions Column" as some might be interested in my remarks, and I wish to see who is right or wrong in my argument about Mars.

The horizon distance is given by the point of tangency of a straight line, starting at the observer's eye and tangent to the earth's circle. The great circle of a sphere is the one with its radius as the radius of the circle. In other words, it is the largest circle that the section of a sphere will give. The plane passing through the center of a sphere determines the great circle and it follows from the above, that the smaller the radius of a sphere is, the nearer will the horizon be to the observer. The horizon of Mars will be very much nearer to an observer on that planet than would the horizon of the earth be to one on our sphere. Gravitation would certainly be less on Mars than on the earth, as it would be very much greater on a planet many times larger than the earth. He would not carry his weight on earth or with him, as a present to Mars, but his weight on that planet would be due to its action and have nothing to do with the earth, except in an absolutely infinitesimal degree. As regards the flooding of the Caspian Sea, we have nothing to add to Professor Luyten's interesting explanatory note.—EDITOR.]

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**A KIND LETTER FROM A LADY FRIEND AND READER**

Editor, AMAZING STORIES:  
I have just completed reading your March issue. I am not competent to criticize the scientific aspect of any story, having learned all I know of science from those same stories. However, it strikes me that W. F. Hammond's story *Lakh-Dal, Destroyer of Souls*, while very entertaining is certainly just a little absurd.

It is truly said of Mr. Wells that one of his greatest arts in writing is to make his story seem so realistic. But Mr. Hammond would have us believe that it is logical for every little thing to work out so highly "coincidentally"!

So, just at the moment he is being discussed, Lakh-Dal sends his first warning. Then Errell almost at once becomes almost omnipotent—takes charge of his father-in-law's business, and immediately displays several hitherto unheard of talents, among them the not inconsiderable one of speaking fluent Chinese; and also we find he has even spent a year in the same Temple that Lakh-Dal had served in!

And all he had to do was to go to the telephone, in order to learn instantly where the "friend incarnate" (yes, that's the way it was printed! But we all know typographical (is that correct?) errors occur in the best regulated publications) was installed.

Now, I ask you—isn't that rather hard to swallow? Even fictionally?

But I will frankly admit I enjoyed the story, and such things as I found to object to are such things that Mr. Hammond will no doubt soon overcome, as I think you said he was a new writer.

I am one more of Mr. Wells' admirers. There has already been said so much, both for and against him, that I will say no more beyond the mere statement, "I like his work."

The only fault I find with *Hicks' Inventions* is that they smack a little strongly of "slap stick" comedy, which is rather out-dated.

I did not care at all for *Robur the Conqueror*, but am very much interested in *The Master of the World*. I am not foolish enough to suggest any criticism of Jules Verne. It is just that I, personally, did not care for the first of these two stories.

There are few of your stories that I do not care for. One of them was about the now famous Dr. Mentiroso. And that was because I was not able to understand more than a dozen words of the entire story! All I can say is, I got the "drift" of it. The details entirely escaped me. But I do not wonder at it now, since reading the innumerable discussions it brought forth!

I, too, hope some day to be able to see the AMAZING STORIES issued at least semi-monthly, as I read it so quickly, and it is the only magazine that I have ever found that satisfies my craving to learn, and does it in a way that keeps one always interested.

Each month I write your "Questions" in a note book, together with the answer to each question, as I find it in your pages, and each set of them is my monthly "lesson." Who can say that after a time I will not be "scientifically educated"?

I am strongly in favor of calling your magazine "Scientification," for is that not what it is? And certainly a publication that advocates and teaches progress and advancement far beyond what we have now, should not hesitate at the mere coining of a new word, especially one so apt as that one. It would take our loved periodical out of the spectacular-seeming class and give it a more suitable title and dignity. You would be surprised at the number of people that turn up their more or less ignorant noses at it, merely because of the name, and call it "trash" when some of them I know are not mentally capable of understanding one of the simplest stories between its covers. As you can see, this is rather a sore point with me, as I do not read trash, either in books or magazines, and I'm willing to scrap with any misguided person who calls my favorite magazine trash, merely because of its name and the undeniable "passionate" colors of its cover!

Well, I've written Mr. Wastebasket a rather lengthy letter this time, but I do not really expect you to clutter up your columns with it. I am only a comparatively uneducated young (is twenty-six young? Thank you!) wife and mother of two babies, so about the only chance I get to travel beyond the four walls of my home is when I pick up your magazine.

Ah, but then I travel indeed! For I journey to Mars and Venus, with side trips to the Moon, and down to the heart of the earth, yea, even into the fourth Dimension! And who could do more?

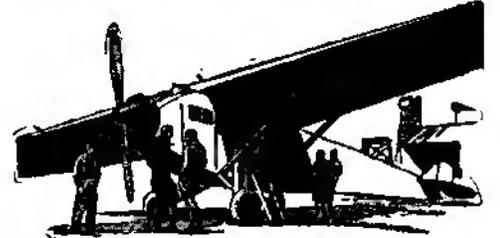
I have no doubt that when time and greater resources allow AMAZING STORIES to be improved, it will be done. Until then, I will be perfectly content with its present condition.

Mrs. H. O. De Hart,  
Anderson, Ind.

[This very interesting letter is from a member of the fair sex and she gives an interesting lot of criticism. As regards the "friend incarnate," we can only accede to your point of view about errors occurring. Only those engaged in actual production of works of literature realize fully the impossibility of avoiding typographical errors.

We rather enjoy your admission that you had to enjoy Lakh-Dal. Of course, the story was improbable, but it was extremely good in the telling, and it is based on what rays may do in the future. It is precisely rays which have worked some of

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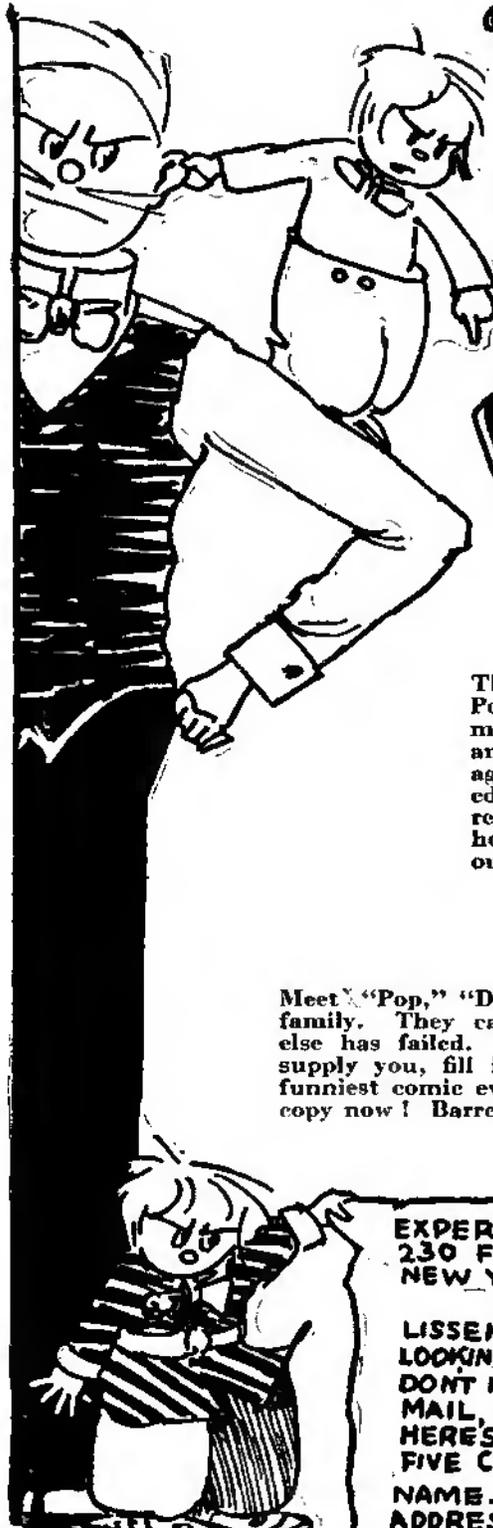
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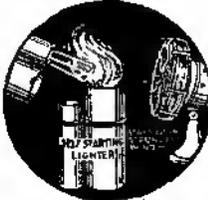
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## FALLACIES IN "RICE'S RAY"

Editor, AMAZING STORIES:

Even student engineers enjoy AMAZING STORIES! Yes, sir, they are worth reading!

I just finished reading *Rice's Ray*, by Harry Martin, in the current issue of the magazine. I enjoyed the story a lot, but there were what I believe to be several fallacies in the science contained therein:

First, when the ray pointed in the direction of the sun, it immediately hopped out of the window. O.K. But it should have waited either eight or sixteen minutes; eight if the gravitational force traveled at infinite velocity, and sixteen if it traveled with the speed of electromagnetic vibrations, i.e. 300,000,000 meters per second.

Second, the reflector, when hooked to the spring dynamometer, pulled in the direction of the sun until the "ropes were as taut as fiddle strings." If that were so, I think the reflector would have been a lot heavier on earth than it was assumed to be, according to the description of it. But, on the other hand, if the ray was shot out towards the sun, why did not the gravitational force of the sun, when once given an avenue, come right down and show itself on the earth itself? The earth's orbit should have been decidedly abandoned, to say the least.

Third, there were glass windows on the ship. What allowance, if any, was made for contraction, when the ship met up with absolute zero of temperature? (If we assume that it did meet with absolute zero, and not a high degree of heat, as one present theory claims . . . in which case the whole ship would not only have expanded, but probably melted).

Fourth, on the ship's first trip with the author, who figures as the teller of the story, the ship crossed the Colorado River at a height of 50 miles. Later, mention is made of the time when they entered the earth's atmosphere. But the atmosphere extends a few hundred miles up, doesn't it?

Fifth, the travelers ate twice, talked a bit and thus passed twenty-four hours. That was rather a quick day, wasn't it? Didn't they sleep?

Sixth, don't range finders of the present time work with the inverted prism method? Military ones do, anyhow, and I think that's the type with which Captain Rice would have been familiar.

Seventh, mention is made of "as soon as daylight appeared" (on Venus) . . . wasn't I led to understand, from the story *A Columbus of Space*, by the astronomer Garrett P. Serviss, that on Venus one side is always daylight, and the other side night? I even recall mention in that story that the people on Venus slept in dark rooms.

Eighth, while in space, a cup of coffee that was placed on the table too quickly gave rise to the situation that the coffee left the cup, and settled as a globule, slowly. Very good! But why were no peculiar effects noted when the men ate, or when they drank that coffee? Why didn't the coffee travel down the oesophagus just as slowly?

Ninth, with reference to the radio, wouldn't it have been THE opportunity, if ever, of finding out whether any messages were being sent from one of the other planets?

Tenth, and last, they started the propeller at the upper limit of the atmosphere, because they could make good speed on account of the slight resistance of the thin air. This is a sad neglecting of the law of action and reaction.

Now, with this off my chest, let me congratulate the author on the strikingly new and original idea of having gravitational force travel on a conductor of zero electrical resistance.

The above items are slight, even if numerous, and did not in any way detract from the value of the story as a worth while piece of scientific fiction. But it does go to show that a scientific author must be extremely careful with his science.

Philip M. Zimmerman, I.E. '29,  
464 Montclair Ave.,  
Bethlehem, Pa.

[In the first "fallacy" pointed out by you, you probably failed to recall that the original demonstration of the power of the ray, does not tell how long the ray was pointed to the sun. Inasmuch as the sun's gravitational influence upon this earth is constant, the very moment that the ray is turned in the direction of our solar body, the effect would be felt. This effect would increase as the ray approached the sun, until having reached the sun, the force is at its maximum.

In the second "fallacy," so indicated by you, no information is given concerning the weight of the reflector, nor can one presume that the reflector would have had to be much heavier. Perhaps the earth's orbit was changed slightly when the effect of the ray became apparent. The earth's orbit is likewise changed when a baseball is thrown into

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the air. Both bodies attract each other, but the difference in pull is so great that the effect on the earth is infinitely small.

Answering your third "fallacy," there is no reason for making allowances for the contraction or expansion of glass windows. While it is true that the ship was in an atmosphere of absolute zero, it was likewise in a vacuum space, and a vacuum does not conduct heat. The radiant heat of the sun (if we hold the wave theory) would then affect one side of the ship and would heat that vessel. The metal of the vessel would conduct the heat. Here, then, we have a rare combination, a non-conducting space, a source of radiant energy, absolute zero, and a body affected on one side by the heat and on the opposite or shady side by the absolute zero. What happens when these forces meet remains for our scientific fiction writers.

Referring to your fourth claimed "fallacy," we believe that the writer was recapitulating because just before that he mentioned an altitude of 800 miles.

The fifth is not a "fallacy," the occupants of the ship probably did a great many other things besides eat and sleep. These, however, are common everyday occurrences and do not necessarily have to be mentioned.

In the sixth "fallacy," it is advised that the author does not claim the use of the range finder. If you will refer to his article again, you will note that he calls the instrument a range finding field glass.

Seventh, it is purely a difference of opinion. Venus may or may not have daylight on one side and night on the other. The planet is so cloudy, that our observations do not permit of a definite assertion to the effect that it does or does not rotate on its axis.

Eighth, there is an error here, but not on the part of the author. You will find it quite easy to swallow a cup of coffee or eat a piece of candy even while standing on your head. In this event, you are deliberately defying gravity. You must remember that the food is moved through the oesophagus greatly by muscular action.

Ninth, yes—the space flyers missed their greatest opportunity by not trying to intercept messages from other planets. The ray was even pointed to Jupiter, but no attempt was made to use the radio.

Tenth, while there is no mention made of a feathering propeller, they might have used one of this type, which would give a greater thrust in rarefied atmosphere.

We appreciate such interesting criticisms, as they prove that stories in this magazine do stimulate thought and make readers compare known facts with fiction.—EDITOR.]

**ASSOCIATES WANTED IN LABORATORY WORK**

Editor, AMAZING STORIES:

The Stranger! When he speaks of your faults you shrug your shoulders and say: "He is no friend of ours."

The Stranger! When he praises your ways you look at one another and say: "He flatters us, he is no friend of ours."

The above is not original, I quote it merely to show that I am fully aware of the fact that you can only, with an effort, prevent suspecting me of trying to "wheedle" something out of you, though, in a way, that is just what I want to do. I'm frank about it.

To begin with, I will try to give you a word painting, not of my exterior, but of the complex array of motives, mental habits, and in a word, my so-called "intellectual" life. (I feel tempted to add, "if any.")

My father's name was Dietrick, my mother's name Hess, and from this I take it for granted that I am of German-English descent: It is certain that I combine stubborn determination, with practicalness.

Most of my movements are governed by instinct (not impulsiveness) for I am a slow poke at reasoning, though I do plan things far in advance, but such plans are never fixed ones, they are always subject to change for the better. Neither do I deliberately plan to use certain materials for particular purposes, I "throw my mind in neutral" and wander around till something "registers", then it is easily fitted into its most useful place, though it in turn may be almost instantly discarded should better material "register" afterwards. To sum it up, I am an instinctive mechanic.

I am a book lover, naturally prefer fiction for major part of my reading, the author is of no importance whatever to me, the characters, "plot" and "continuity" of the story, in other words, the story alone counts. True, some authors write "good ones" all of the time. My list of them in the order of their importance (to me) is as follows: "Adventure," H. Bedford-Jones, Robert Morganson, Morgan Robertson, Rex Beach, J. London, Henry Oyen, Zane Grey, Harold Bindloss, H. H. Wright, and many whom I have either forgotten or never noticed. In humor, George Fitch stands out above them all, Mark Twain, Booth Tarkington, and many more I can't recall, now. "Mystery," I'll never forget S. E. White's book of that name, Conan Doyle, Sax Rohmer, A. B. Reeve, A. E. Apple, and many more whom space will not permit. "Scientific Fiction," my great delight! Edgar Rice Burroughs, George Allen England, Jules Verne, Garrett P. Serviss, and all too few others. But outstanding from all others though many of the other stories are the best of their type, stands the story whose author I have forgotten, but the



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story whose title, *Blasphemer's Plateau*, I hope the world will remember as long and longer than I. It is a masterpiece among decidedly unusual stories, it was technically correct, absorbing, and the fiction content was as small as possible, considering the topic, which is the most baffling in the world, and no doubt always will be, the human element, of a fanatical archeologist destroying what he could not assimilate in his own mind, rather than let other people alone to make their own destiny, was only too tragically true.

(1) Which brings me to the point of this letter, I am 23 years of age, marriage biologically impossible, have a large but well controlled imagination, a 5 acre farm, with one acre in cultivation, a good microscope, balance, and quite a quantity of chemical apparatus, some chemicals, International Library of Technology, set of text books on chemistry, and three other odd volumes on same subject, and have only started to absorb knowledge. I am well enough educated to understand how utterly insignificant my present store of knowledge is, and that strive as I may, I can never learn all there is to learn, but I must and will be satisfied with the "playing a poor hand well" to quote from a popular advertisement.

(2) What I want, is to get in touch with from one to three (1 to 3) men or boys, who are interested in science for science sake, who are misfits working for an employer, who spend their spare time and money experimenting for the pleasure of the thing, not with the hope that they will accidentally make a fortune to reward their labors. I want chaps who would consider being free lance experimenters in the real sense of the word, who will throw in with me to raise our own living, sell as much as possible to raise funds for further experiment material, and will agree before they come here to do just that. It will be a case of "one for all, all for one", each fellow to follow his own line of inquiry undisturbed by the others, sociability being the only characteristic that we must all possess if we are to get along with each other.

(3) In other words, I want to organize a small research station, where any imaginable line of work may be followed out to the best of the investigator's ability, equipment, etc.

(4) My motive in doing this is purely selfish. I will thus have help growing my own living, help occasionally with my own experiments, and what is most valuable, an interested listener for a new born idea, who will be able to help tabulate the points for and against the idea, and perhaps be of considerable aid in supplying information that would otherwise be costly in time or money, or both.

Where do you come in? Well, I am struggling to make a "go" of it, on this farm, in which every cent I possessed, is tied up. You come in (providing you decide to) in bringing myself and these others together! How? Well, I leave that to you. You publish three magazines that I know of, *Radio News*, *Amazing Stories*, and *Science and Invention*.

When I lived in the city, I kept pretty good track of things through these magazines, and *Popular Science*, *Popular Mechanics*, *Scientific American*, *Radio World*, *Radio Broadcast*, *Popular Radio*, and other sources.

I remember when you used to have an experimental chemical supply department in your E. I. Company catalog. I have bought radio parts from your Rasco house, and know that you allow quite a bit of space in your magazines to the printing of readers' letters. Hence, is it asking too much of you to ask you to devote a few lines in the readers column of *AMAZING STORIES*, to bringing me and the others together?

To sum it up then, my plea is for help in getting together an independent experimental station, your part to be the putting into the public view of my desire to get in touch with chaps who are of my caliber, who want the opportunity to follow their own inclinations undisturbed, and live healthily and well while doing so.

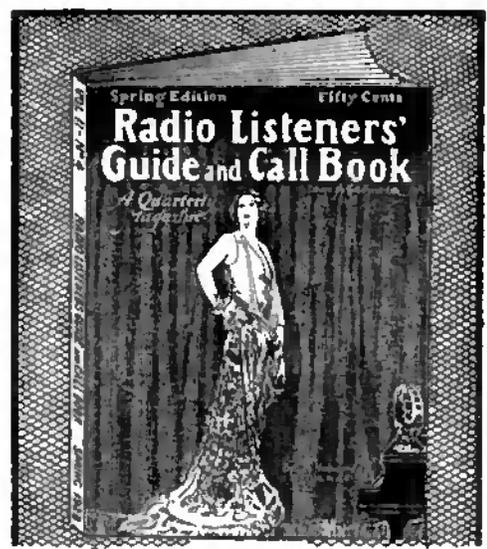
I leave it to you how to best do this; you know your own game far better than I; what I write is merely a suggestion, I have marked the three paragraphs in this letter. Whether you use them, or any part of them, entirely rewrite a special article, or just refuse to consider this letter at all, is for you to decide.

A final word, flattery not intended. I have really enjoyed what few of your editorials I have read, your viewpoint is a welcome change from the usual serious technical manner in which the majority of editorials are written; some folks seem to have lost or at least suppressed their sense of humor.

I am enclosing a self addressed envelope. Please drop me a line, letting me know whether or not you are interested. I in turn will be only too glad to answer any and all questions you consider necessary, personal or otherwise.

Yours for the better serving of, the Genus Homo.  
Earl Hess,  
McIntyre, Fla.

[This letter tells its own story. The writer could get in touch with some of our correspondents, who write us about the Science Club. Our Discussion Columns will help him to find others interested as he is.—EDITOR.]



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**HOW TO JUDGE SCIENTIFIC STORIES—  
CRITICISM OF "THE DIS-  
INTEGRATING RAY"**

*Editor, of AMAZING STORIES and its readers:*  
A year ago I bought my first AMAZING STORIES. Ever since then I have been trying to decide whether the magazine was plain trash, or whether it was really a solid type of literature, with a few poorly written pieces in it every few issues, which made it appear cheap.

I am still at a loss to know just what standard I should set to judge the book by. Frankly, I think the cover designs, while they do attract some people, give the magazine an extremely large handicap among the better monthly publications. My greatest trouble has been to convince my family that just because they could not get much from the stories was no sign that they were all trash. Very naturally, one trained in science and the like will be able to understand ten fold what the average non-scientific person could get. Most of us care little for stories written in Greek. We don't understand Greek, and so it all means very little to us. To me, that is the trouble with the average person who tries to read AMAZING STORIES without ever having had any science. It is all Greek to them—no sense at all, and so they say, punk, senseless, not worth the time. Frankly, some of it is not worth the time. On the other hand, when such authors as Wells, Verne, and men of similar literary rank are found among the authors, it looks as though there was reason to believe that the stories were at least well balanced with stable stuff.

I am in favor of the effort to establish this type of literature. By careful selection of stories, a large amount of real science may be subconsciously instilled into the public mind.

Personal criticisms of stories I believe to be a rather useless waste of time. Every one has an opinion, and if the opinion among men did not differ, we certainly would get no progress. The tirade of abuse handed out to this or that author by parties, who have never tried to equal the thought put into the story they try to tear up, is not only silly, but is in no way constructive, as a rule. It is simply this or that opinion that this or that was not exactly right, when the name of the magazine gives license for a large stretch of imagination.

There is only one just criticism. I believe, for a story. If there is in the story anything that leaves a scientifically wrong impression, I believe that it should be criticized in order to correct the wrong impression. I have in mind a story in the February, 1928, issue of AMAZING STORIES. A certain story concerning a professor who had invented a machine for transmuting one element into another, mercury to gold. This story gave the impression that the only thing that had to be done to change one element into another was to knock off electrons from the atom. Mercury does have an atomic number of 80, and gold is 79, but that does not mean that the only difference between gold and mercury is one electron. Gold weighs 197, and mercury weighs 200, which indicates that there are three more protons, and three more electrons in mercury than in gold. To form the reagent metal from the only liquid metal one would have to not only knock off one planetary electron, but he would have to remove two binding electrons and three protons from the nucleus. The story was good enough, but the impression of the structure of the atom was not what has been pretty well proved to be true. Atomic numbers do represent the differences between different atoms as far as excess positive charge on the nucleus goes, and therefore the number represents the planetary electrons, since the atom is electrically neutral. Sincerely,

Robert A. Wait,  
Decatur, Illinois.

[Refer to page 274 for reply.—EDITOR.]

**A QUESTION ABOUT THE EARTH'S ATMOSPHERIC FRINGE—WAS THE BARON CORRECT?—NOTES ON OTHER STORIES?**

*Editor, AMAZING STORIES:*

After reading some of the things in the discussion column of AMAZING STORIES, I thought I might say something, though I doubt if this will be printed.

In the last two issues you have published Baron Münchhausen's Scientific Adventures, which I think is going to be about the most delightful series that you have ever published. Personally I like the humor of it, and I do not consider that its humor detracts from its interest at all. Please keep it up.

However, there is one thing that I would like explained: In the second of the series the Baron tells Alier about the sight of the earth from the moon. He speaks of the fringe of light that the sun throws through the earth's atmosphere. He says: "This pink fringe is not exactly uniform in thickness; it is thickest near the earth's poles, thinnest near the equator." Then he goes on: "The explanation is that the terrestrial atmosphere, due to the centrifugal force produced by the earth's rapid rotation, tends to throw the air outwards from the equator. It is therefore 'thicker' there."

Isn't this contradictory? Isn't the fringe thicker near the equator, anyway? I may be wrong, but this is the only way I can see it. Am I right or wrong?

In the February issue I liked especially *Four Dimensional Surgery*. It was a very clever story. *The Disintegrating Ray* was very good, too, but it

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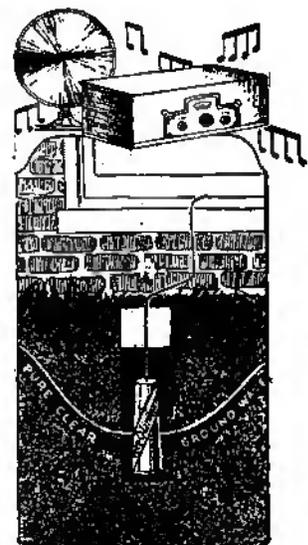
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was too short. The idea around which it was constructed, however, was very good. *The Fourteenth Earth* was good, but I can't for the life of me see how the mere grasping, in the hand, a disc could change a human from one sphere to another. *Below the Infra Red* in the December issue was much more logical. That was a fine story. *The Fighting Heart* was a fairly good story, but I don't quite understand why it should be in *AMAZING STORIES*. It was not amazing, surely. It was entirely too obvious to be that. *Smoke Rings* I think is a fine example of a very short story of scientific fiction. It was clever and well written. *The Revolt of the Pedestrians* was constructed around a good idea, but it was too much drawn out. I found it most interesting, however. *The Master of The World* I have not read yet; I have been waiting for its conclusion in the February issue, but I am quite sure I shall like it. And now I come to *Pollock and the Porroh Man* by H. G. Wells. I like Wells very much, but I do not see how this story is scientific in any way. It narrates merely how superstition may work on your mind. I thought the latter part of the last paragraph especially well written. But that story is surely not scientific.

March issue: In the first place I think the cover is absolutely monstrous. It is hideous, absolutely unworthy of the magazine.

I liked the editorial on thinking, very much; indeed I find all your editorials interesting. *Ten Million Miles Steward* was most engrossing. It was extremely well written. *Lakh-Dal, Destroyer of Souls*, was gripping. It had me going from beginning to end. *Sub-Satellite* was interesting, too, but I don't think Javis' will should have been brought in. Of course this is only a matter of story telling, but I thought the suspense brought about by the readers' anxiety on that score was rather superfluous. Jack Javis was entirely misplaced. His father was the hero, so why bring in the sub-plot? Don't you think it rather over-balanced the main story? And it certainly didn't make the reader wish for Javis to return, in any greater degree, for the simple reason that Javis, Jr. was misplaced. Aside from that I liked the story. *The Flowering of The Strange Orchid* was very good, and well written. But I didn't like the drawing at the top of the page, because it made the story entirely too obvious. Any intelligent reader could tell at a glance what the story was about, and when he read the lines under it (and the temptation was too great to conquer) he could quite calmly turn over and skip the story.

In your Annual you published a story called *The Face in the Abyss* and you promised a sequel. Where in the world is it? I've been waiting, and I imagine others have too. When will it appear? Hurry up.

James Whiting Saunders,  
104 Cedar St., Rosemont,  
Alexandria, Va.

[The effect of centrifugal force on the atmosphere of the earth would tend to make it thinner at the equator than at the poles. The denser air will presumably have more effect on the transmission of light than would air rarefied by centrifugal force. The terms thick and thin must be taken as referring to density rather than to space occupied. There is a lot of science in *Pollock and the Porroh Man*. It is an interesting study of psychology and is a truly scientific story. *The Face in the Abyss* is to have a sequel, and Mr. Merritt promises it at an early date.—EDITOR.]

## A YOUTHFUL ADMIRER OF OUR EFFORTS

Editor, AMAZING STORIES:

Because I am only nine years old is no sign that I can not read and understand *AMAZING STORIES*. I have almost counted the days until the next issue of *AMAZING STORIES* would come out ever since I got my first issue.

A friend of mine and an encyclopedia of mine are the ones that started me on *AMAZING STORIES*; it happened thus.

One day I was reading an article about Mars when I came upon the following sentence:

"Indeed, the novelist, H. G. Wells, in his book, 'The War of the Worlds', imagines the Martians in the form of very intelligent cuttlefish."

You may indeed imagine how much I wanted to read "The War of the Worlds" after reading this as I was greatly interested in astronomy.

A few days later I was up at a friend's house and we were talking about good stories when he suddenly pulled out the August issue of *AMAZING STORIES* and said: "You ought to read *AMAZING STORIES*, they're keen."

The stories I like in the August and since are *The War of the Worlds*, *Around the Universe*, *A Story of the Stone Age*, *Below the Infra Red*, *The Country of the Blind*, *The Comet Doom*, *Rice's Ray*, *The Master of the World*, *The Revolt of the Pedestrians*, *The Fourteenth Earth*, and *Smoke Rings*.

I have just finished the February number, so I will sign off.

Stark Y. Robertson,  
214 Rosewood Ave.,  
San Antonio, Texas.

[Nearly a century intervenes between the birthday of this correspondent and that of our oldest reader, whose portrait we give elsewhere. We are getting so many kind letters from our younger readers that we could open a special section for their communications.—EDITOR.]



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Editor, AMAZING STORIES:

Concerning AMAZING STORIES, it is your opportunity to make it the first and outstanding journal of scientification. It must be remembered that scientification is, primarily, an art, and an artist's license must be allowed its creators. But what is scientification? To my mind it consists of the postulation of some new circumstance or situation in our physical environment and the working out of the implications for humanity contained in the postulated change. And the art of scientification consists in the skill with which these implications are worked out. The weakness with most of your stories is that they accomplish little more than the first of these undertakings, simply the mapping out of a new situation, without bothering to work out the implication. Originality in scientification is impossible any more, so far as the major theme is concerned. G. Peyton Wertemberger's two stories, *The Man From the Atom* (AMAZING STORIES I, 1926, p. 62-66, 140-147) and *The Coming of the Ice* (ibid, p. 232-237, 288), plumb the extreme depths of possible human experience. There is left only to work out the details. I doubt, first, whether really good scientification can be produced in works of less than novel length, it being impossible to work out adequately at lesser length the implications contained in a new situation. Wells' *War of the Worlds* is a supreme example of great scientification, due to the skill and care with which the details are displayed. Murray Leinster in his stories of Buel comes about the nearest to producing adequate scientification in short story length.

My suggestions for your magazine follow:

1. Make AMAZING STORIES THE journal of scientification.
2. Where stories are reprints, give in the introductory paragraph the date, the place, and something of the circumstances surrounding their original publication.
3. Give at the end of each volume an index, by authors and titles, of the stories contained in that volume—to facilitate future reference.
4. Cut out detective and humorous stories.
5. Cut out your questionnaire. It has no place in a journal of scientification; save it for your *Science and Invention*.
6. Stop trying to tie up your stories with reality. Scientification is a self-sufficient art.
7. Don't attempt to sponsor "science clubs". They, too, have nothing to do with scientification.
8. Condense your "Discussions" column to really significant criticism and comment. Don't gratify the desire just to see one's writing in print.
9. Create a department of criticism, to contain critical, bibliographical, and historical notes on scientification. Your one journal can't hope to publish all the scientification. Therefore, help your readers to further extend their acquaintance with the field. How many, for instance, know that recently the *Saturday Evening Post* ran a first class piece of scientification by Conan Doyle. We know in a dim way that Poe, Verne, and Wells are the classical figures in scientification, but the details of the development of the art are unknown to most of us.

Melville H. Hatch,  
Assistant Professor,  
Department of Zoology,  
University of Washington,  
Seattle.

[This letter is one of the many which tell their own story so clearly that they almost demand commentary. We must say that we agree with you in the idea of the value of details in stories. Your suggestions are quite interesting, but of course our work has to be guided by the desire to please a very large and varied circle of readers. It would not do for us to be too restricted. As regards the reality in stories, you certainly cannot complain of that affecting our literature. We do like to feel however, that there's a possibility that most extraordinary things described may possibly be carried out to some extent, perhaps in the distant future.—EDITOR.]

## AMAZING STORIES IN INTERLAKEN

Editor, AMAZING STORIES:

For almost a year now I have followed your monthly issues with great delight, the sole regret being that your publication did not appear oftener than monthly.

I sailed for Europe early in June, too early to get your June number, and the missing of it was a source of regret, and a reason for anxiously searching every newsstand I encountered in London and Paris for a June copy. After looking around Brussels and Amsterdam without running across one, I gave up and it was not until the fourth of July in the little town of Interlaken, while strolling down the street I saw the desired and forgotten June copy so prominently displayed that I gladly paid the required 50 cents and retired for the rest of the day, regardless of Swiss mountain scenery et al.

Ray Whittaker,  
Kansas City, Mo.

[Switzerland is now vindicated. The combination is interesting. The town of Interlaken with the three great mountains is the background between Lake Thun and Lake Brienz, the American holiday, 4th of July, and the June number of AMAZING STORIES in Europe certainly made an interesting combination.—EDITOR.]

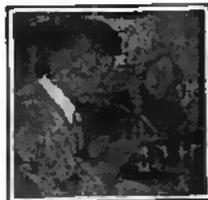
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STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS, OF AUGUST 24, 1912.

OF AMAZING STORIES, published monthly at New York, N. Y., for April 1, 1928.  
State of New York,  
County of New York, ss.

Before me, a Notary Public, in and for the State and county aforesaid, personally appeared Hugo Gernsback, who, having been duly sworn according to law, deposes and says that he is the editor of the AMAZING STORIES and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, managing editor, editor, and business managers are:

Publisher, Experimenter Publishing Co., Inc., 230 Fifth Avenue.

Editor, Hugo Gernsback, 230 Fifth Avenue.

Managing Editor, Hugo Gernsback, 230 Fifth Avenue.

Business Manager, Charles E. Rosenfelt, 230 Fifth Avenue.

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H. GERNSBACK.

(Signature of Editor, Publisher.)

Sworn to and subscribed before me this 29th day of March, 1928.

JOSEPH H. KRAUS.

Notary Public.

(My commission expires March 30, 1929.)

(SEAL)

**SOME THOUGHTFUL CRITICISMS**

Editor, AMAZING STORIES:

Being a reader of AMAZING STORIES since its first issue, although a silent one, I find it necessary to dispose of such opinions in the way of criticism as have accumulated in the past two years. Most of my remarks concern some particular point rather than any one story. As I note that some correspondents doubt the ability of others of us self appointed critics, I will follow the example of your correspondent, Mr. Middleton, and present such credentials as a scientific critic as I possess. First I am a professional radio service man and set builder. Second I have had experience in an amateur way in chemistry, physics and astronomy. Third I have worked for two years in a library in a minor capacity, and have picked up some slight knowledge of books and authors.

The first point to which I would like to call attention is the suggestion in the present issue to have a scientific story dealing with modern science from the viewpoint of a medieval mind. It seems to me that Mark Twain's *A Connecticut Yankee in the Court of King Arthur* covers this ground fairly well. The cinema of the same name is more up-to-date.

A suggestion that I would like to make is that Mr. Paul stick more closely to his facts in his illustrations. The cover illustrating *The Moon Pool* is an example of his non-observance of this point. Quoting from the story the description of the dwarfs, "The dwarf's face was as white as Olaf's . . . features clean cut and noble, almost classical . . . The gigantic shoulders were covered with a loose green tunic . . ." etc. The illustration shows red skinned and green skinned dwarfs, which make a fine picture but a poor illustration. Another point which seems to be common to all artists is the substitution of automatics for revolvers and vice versa. Also, can Mr. Paul draw a man that does not resemble "Tarrano, the Conquerer?"

I note that Mr. H. G. Wells comes in for much adverse criticism, some of which I believe is

justified. It seems to me that while he has great imagination in his writings of future scientific achievements, his machines for getting these results are crude compared to those of other writers. For instance compare his space flyer in which his hero reaches the moon with the one described in Professor Serviss' *A Columbus of Space*. I certainly would prefer to ride in the latter. I believe he has made too much of the invulnerability of the Martian fighting machine and too little of the general intelligence of man. Assuming that artillery had not been sufficiently developed to combat them, of which I am doubtful, there remain several expedients. They might be trapped in mines to be exploded when they passed over. Another would be to concentrate rifle fire, from concealed marksmen, upon the exposed working parts and through the eye-holes to the controlling brain creature. Rifles were sufficiently developed at that time to fire from ranges up to at least a mile. Telescopic sights could be used. There is a rifle here in Pittsburgh, in the Carnegie Museum, of much older vintage which had a very long range. Personally I think that Mr. Wells' best story is *When the Sleeper Wakes* despite his impractical airplanes.

Mr. Burroughs seems to be criticized for the amorous adventures of his heroes. Why object? Is this not the fate of the majority of men? Mr. Burroughs is to me one of the most interesting of writers if one disregards such points as the manufacture of air from light-rays caught in tanks and the beautiful bodies of his Martian folk who resemble earth-men although developed from eggs.

The objection to the escapes from asteroids seems to me to be uncalled for. These bodies are in their orbits and therefore must be coped with by interplanetary travelers.

I agree with you that Jules Verne's stories are classics. His main fault to me is the over development of one characteristic of his actors. Note the violence and self-assertion of Robur, the foolish argument over which the Englishman and the American fight a duel and the supreme stubbornness of the prisoners of Robur. This is similar to the over emphasized ignorance of the "Dr. Watson" or biographer type of character, which most scientific and detective story writers indulge in depicting.

As this communication grows unduly long I will sign off and let someone else go on the air (but variety).

Edward C. Johnston,  
Pittsburgh, Pa.

[This letter speaks for itself. The author expresses his opinion so freely as almost to preclude any remarks by us. We are glad to get such communications and feel that a letter coming from a man of his experience and attainments, which he so modestly presents, is a tribute to our efforts. We will certainly consider the suggestion he makes for the presentation of a supposed medieval mind contemplating and expatiating on the wonders of the present day, when truth is proving to be stranger than old time fiction ever was. In regard to Mr. Paul, we feel that he has been a very great accession to the magazine and this feeling has been expressed by many who have written to us. Yes, we all make mistakes!—EDITOR.]

**SOME APPRECIATIONS OF STORIES—A MONTHLY MAGAZINE WITH A QUARTERLY SUPPLEMENT—THE FOURTH DIMENSION**

Editor, AMAZING STORIES:

Having been an enthusiastic reader of AMAZING STORIES since the first issue, and a regular follower of the "Discussions", I would like to take part in them.

First, let me offer my strongest congratulations on *The Moon Pool*. This is, in my opinion, the best story that has appeared so far. It has all the qualifications of an "Amazing" story. It is literature. Criticisms against it have been voiced in the "Discussions" but they all concern themselves with non-essentials.

Best among the short stories stands *The Visitation*, (And I hope soon to see another contest as that which brought it to us.) Those two stories tower above everything else that I have read in AMAZING STORIES, and I have read every story of every issue, with avidity.

I approve of your present plan of leaving the magazine a monthly, with the quarterly supplement. This is undoubtedly the best that could be done, in view of the many and varying demands from readers, and shows good judgment.

I appreciate highly the Editorial section. This page is often more of a feature to me than some of the stories. This also applies to *Science and Invention* and *Radio News*.

The illustrators work is very praiseworthy, and shows considerable imaginative effort; although there are occasions when he slips up badly on details. An instance: *The Visitation* described women's dress as back to the Victorian "street-sweeper" style, but an illustration showed the heroine entering the airship in garments of the vintage of, say, 1922 or 1923. But that is a small matter; ordinarily the pictures are very good.

Now, this much-discussed theme, the fourth dimension. I am inclined to agree with those who claim that time is the fourth dimension. For instance, this magazine has to have four dimensions. Besides the well-known three which are apparent to the eye, it must also have time, or duration, as it were, or it wouldn't exist at all! That is fairly obvious. But here's a further slant

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in that direction for some of your thinkers: I propose that if it is possible to have so many as three or four of anything we can name; it should then be possible to have an indefinite number of the same. And since we know as many dimensions as three (or four?) why should we not eventually extend that number far beyond our present experience? Now I expect to be roasted to a cinder for that, if this letter ever sees print, but no matter, I shall have "started something," and also "extravagant fiction today—cold fact tomorrow" is our motto.

Something along this "multi-dimensional" line is to be found in H. G. Wells' book *Men Like Gods*, which I believe would be welcomed by readers of *AMAZING STORIES*, as also would *The Blind Spot*, by Austin Hall and H. E. Flint.

I suggest that you make two subscription rates for the magazine, the extra one to include the quarterly; I believe many readers would take advantage of such an arrangement.

I strongly approve of an occasional humorous story, and each issue is not too much. *Hicks' Inventions* are excellent examples of their kind.

W. Ivy Parks,  
Glenella, Man.,  
Canada.

[We were impressed very much, as you were by *The Moon Pool*. It is no objection that the author yields to his imagination in giving such beautiful descriptions and the psychology in the picturing of the different characters is most interesting. If it is read with adequate attention and full realization, it will be recognized as a very valuable piece of literature. It's hard to say when the everyday reader will get much satisfaction out of the Fourth Dimension. So far, it is the mathematicians and cosmologists who seem to derive most enjoyment from it. Taking time as the Fourth Dimension is hardly to be admitted, because the Fourth Dimension in mathematics is not to be restricted to so concrete an object. It is rather abstract.

We are glad to see Mr. Hicks commended by one of our readers.—EDITOR.]

### THE BEST STORY IN AMAZING

Editor, *AMAZING STORIES*:

I have been reading *AMAZING STORIES* since last year, and I have always kept in mind the best story that was ever published by you in this magazine. Perhaps you would be interested to know the most interesting and fascinating story that you have ever given us. I think that the one I read named *On the Martian Way* was the best that you have ever published. It just made me feel as though I was with that hero that sacrificed his life, and launched his little machine and himself towards the sun to save the big ship of space.

Other stories were interesting too, and say, you have some artist, I think his name is Paul. I noticed, especially, the remarkable picture he drew of *The Face in the Abyss*, in the *ANNUAL*. The pictures he draws of things in interesting stories sometimes have caused a person to buy the magazine to read it to see what it's all about.

I remember, once, two months ago, I was standing at a newsstand, looking at the *ANNUAL*, and a man behind me happened to see the remarkable picture on the front of it; he immediately became interested, and after looking through another one on the stand, he reached in his pocket, and gave the newsman a half dollar and took the book.

I certainly do like the stories you give such as *The Electrical Duel*, and *The Scientific Adventures of Baron Münchhausen*. I also like stories of interplanetary travel, such as the latter narrative that I mentioned. There is a critical place in that story that I must mention. You said that the atmosphere was so scarce on the moon, that if they jumped too high, they would enter the vacuum of space and be unable to live. This was quite true; but, if the atmosphere was so light, the pressure from the inside of the body without enough pressure from the outside would burst one to pieces.

I suppose, by the time you read this, I will have the new *AMAZING STORIES QUARTERLY*, and I know it will be good. I will be able to buy *AMAZING STORIES* more easily now to see if my letter is published.

I am hoping that your newest magazine, *AMAZING STORIES*, will be a great success throughout the world. I am,

Stuart James Byrne,  
2814 S. Western Ave.,  
Los Angeles, Calif.

[There was a great touch of heroism in the story *On the Martian Way* where the hero of the story sacrificed his life in reparation for a former error. As regards the effect of vacuum on a living being, the tissues of the body are not affected to any susceptible extent by variations in atmospheric pressure. A mouse, placed in the receiver of an air pump when the air is exhausted, dies quietly but does not explode. The sand hogs, as they are called, the men who work under foundation at high pressure in the caissons, do not shrink when exposed to three times the atmospheric pressure on the earth's surface, so there is no danger of the accident you describe, happening to anybody, who might ever have the luck to get to the moon.—EDITOR.]



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**65% of all Men past middle age, authorities say, have prostate gland disorder.** Now a scientific treatment. Free book. Ad-drow's Therapeutics, Steubenville, Ohio, or 303 Van Nuys Bldg., Los Angeles, Calif.

**Make extra money in your spare time.** Secret of successful agents and salesmen explained. Send 10c for next three big issues of my book containing over 500 best money-making ideas and rare opportunities. George Bernard, 22 East 12th Street, Cincinnati, Ohio.

**Agents \$240 month.** Bonus besides. Introduce finest line guaranteed hosiery you ever saw, 120 styles, colors. New sales plan a wonder. No experience needed. No license to pay. Auto furnished. Credit given. Spare time satisfactory. Samples furnished. Wilkint Hosiery Co., Dept. 1635, Greenfield, Ohio.

**Sell Dress Pants Direct.** One pair, \$3.45, 3 pairs, \$10.00, your commission, 75c per pair. Thirty beautiful patterns. Flannels, serges, worsteds, tricelms. Large Selling Samples. Free. Write Dept. A6, Adlawn Parks, 35 West 22nd St., New York.

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**Give Away Key Insurance.** Make \$10 daily. Amazing money-maker just patented. Nothing like it. Write today for Free Offer. Initial-It, Inc., 22 Quince, Chicago.

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**New! Little patented machine puts a keen, smooth edge on knives, scissors, tools in a few seconds, automatically.** Blankets whetstones, Agents, write for Free Outfit Offer. Central States Mfg. Co., G-2011, 4500 Mary Ave., St. Louis, Mo.

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**Blanket and Rummage Sales.** Make \$50 daily. We start you, furnishing everything. Permanent business. Free details. Distributors, Dept. 279, 429 W. Superior, Chicago.

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**Agents earn big money taking orders for our beautiful Dress Goods, Silks, Wash Fabrics, Hosiery, Fancy Goods, 1000 Samples furnished.** The National Importing Co., Dept. F89, 573 Broadway, New York City.

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**This Coupon Properly Filled Out** is all that's necessary. Send it today and procure one of the New Improved Inkographs on a 10-Day Free Trial, with no strings tied to it. If you prefer smaller size with ring on cap to be carried on watch chain or ladies' sash, mark X here

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Gentlemen: You may send me your Inkograph. I will pay postman \$1.50, plus postage on delivery.

Name.....

Address.....

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

Received my Inkograph. Am surprised to know how well I can write with it. The Inkograph is a wonderful little writer, it's my friend now for good penmanship. I am writing this letter with it; can you tell the difference between Inkograph and pen letters? I can in my answer. C. R. Fuller, Patterson, Mo.

I received my Inkograph with which I am writing this letter. I have purchased at least one dozen ink pencils. Yours seems to be the only one that gives perfect satisfaction. I believe you have solved the problem of the perfect writing instrument. Dr. Richard T. McLaury, Dunkirk, Ind.

The Inkograph is truly the best pen I ever had the pleasure to use barring no price or make of pen, after I take into consideration the high price. I usually paid for a Parker, or a Waterman pen. I cannot see how such a low priced pen as the Inkograph can be put on the market and give such unusual service. Harvey L. Winston, Brentwood, Calif.

In making out local regulations, it is necessary to make an original and two carbon copies on very heavy paper, and the Inkograph does this twice as well as the hardest, indelible pencil, and is much neater and the original is much more legible. Wm. L. Fortney, Placerville, Ia.

Your Inkograph is everything you state. It is just wonderful. So send me two more. Arthur Olcott, Tucker, La.

Gave pen thorough tryout. Enclosed find sample of work I have to perform. Have been using pencil. Never got entire satisfaction. Hard pencil makes original too pale and soft pencil makes poor copy. I am highly pleased. S. M. Cooper, Inquiry Division, P. O., South Bend, Ind.

I found the Inkograph all you represent it to be and I was very well satisfied with it. I made a great mistake when I bought the Inkograph, as I did not take out Loss or Theft Insurance on the pen, for the pen is gone. I am writing this to ask that you send me another Inkograph by return mail, charges C.O.D. I can recommend the Inkograph very highly to anyone who needs a pen which will stand up under very hard usage. George B. Moore, Columbia, Fla.

It sure has improved my hand writing—I never took home any medals for penmanship but I can almost read my own writing since I got this pen. M. F. Johnson, Medina, Wis.

I want to thank you for the return of my Inkograph pen, which you repaired for me. I feel rather lost without this pen in my pocket. I prefer it to any pen I ever carried principally because of the ease with which one can write with it, not having to be careful whether you slide the pen to the North, East, South or West, it flows freely in all directions. Wm. B. Brown, New York, N. Y.

Received my Inkograph and same is filling a long-felt want. Kindly send two more of the same style by parcel post collect as soon as possible. Theodore Priestley, Akron, Ohio.

I bought one of your pens a year ago. You sure had the best pen on the market in my notion. Frank R. Ellsworth, Fargo, N. D.

I wouldn't take \$5.00 for the pen I am writing this letter with. I have a good fountain pen but don't write any more with it. I am proud of the Inkograph and that I can say this to you and mean every word of it. R. H. Wilson, Deckley, W. Va.

### \$1000 REWARD

to anybody who can prove that these testimonials were solicited by us.

Inkograph has proven so satisfactory and has elicited considerable favorable comment, an enclosing money order, please send us three more. T. J. Frow, Traveling Claim Agent, Joplin, Mo.

The Inkograph fully justifies all claims you make. I own a Waterman but Inkograph is far preferable. Frank R. Sargeant, Oakland, Calif.

You have one of the best writing instruments I ever used regardless of price. I use the lowest grade stationery and there is never a blot or scratch because of its round smooth point. It is a wonderful invention. L. H. Orley, Albano, Va.

Oh boy, I am tickled skiny to have the Inkograph, it's a darling. I can now make carbon copies in taking orders and send original in ink to factory instead of a penciled sheet. It surely flows over the paper as if it was grease instead of ink. No trouble at all and a thing I could not do before to trace straight lines very fine and clean. No smear, no muss of any kind. It's just great. E. A. Simms, Jersey City, N. J.

My Inkograph is the smoothest writing instrument with which I have ever written. That is saying a lot. I am a teacher by profession. I have a \$7.00 pen and another that cost more than the Inkograph, but Inkograph is better than either. It is the greatest improvement in writing instruments since the Babylonians recorded their thoughts on clay tablets with a triangular pointed reed. John R. Atwell, Chadwick, N. C.

My Inkograph is the first and only writing utensil I ever owned that I can use with pleasure. To be without it for any time would upset my business day. It has always worked perfectly. I have never had any difficulty with it. Arthur L. Fox, Centerville, Mich.

I am a bank teller. Have used all kinds of fountain pens but can honestly say for my work I never found a pen so easy and tireless to write. You can pick it up any time in any position and write immediately and all numbers and words will be the same. Try and do it with any other pen. My buddies all agree that it is best for our work. O. R. Morley, Allentown, Pa.

Delighted! It writes bully—you have invented a pen that is perfection. It is so much more rapid than my \$9.00 fountain pen. I wish you abundant success. S. L. Carlton, Aurora, Ill.

I am very well pleased with my Inkograph. It is just what I have been looking for. I have had several ink pencils but nothing like the Inkograph; it writes like the point was greased and it makes no difference what kind of paper, it is fine for shipping tags. S. T. Jarrett, Harrisville, W. Va.

The Inkograph is all that you claim it to be. Enclosed find order for two. Robert Heller, Craigville, Pa.

The Inkograph, I am thoroughly convinced, is the best writing instrument I have ever used. It is sure, sane and clean and always ready to use. I am very well pleased with it. J. E. Rampton, Pensacola, Fla.

# AGENTS

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