August, 1926

25 Cents

AMAZING STORIES

HUGO GERNSBACK
EDITOR

Stories by
H. G. WELLS
JULES VERNE
GARRETT P. SERVISS

EXPERIMENTER PUBLISHING COMPANY, NEW YORK, PUBLISHERS OF
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JULES VERNE'S TOMBSTONE AT AMIENS PORTRAYING HIS IMMORTALITY

AMAZING STORIES

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Contents for August

*New stories.

OUR COVER

Illustrates an episode in this month's story, "The Talking Brain," by M. H. Hasta. Here we see the rash, famous scientist at his wits' end listening to the live brain, contained in the skull, by means of the Morse code.

In Our Next Issue:

THE ABYSS, by H. G. Wells. An explorer descends in a spherical shell down into depths never reached by any human being before. Here he finds fish-like human beings, and meets with a number of adventures that will keep up your breathless interest for the entire length of the story. You must not miss it.

THE PURCHASE OF THE NORTH POLE, by Jules Verne, in which some enterprising mathematicians and scientists attempt to bring the North Pole to a temperate zone—or bring the temperate zone to the North Pole. A stroke of lightning sets things flying in the mathematician's room and an error gets into the calculation. Of course, that upsets their plans considerably.

A COLUMBUS OF SPACE, by Garrett P. Serviss (2nd instalment) in which our adventurers continue their marvelous experiences with the Venustians on the light side of the planet Venus.

STATION X, by G. McLeod Winsor (Conclusion) in which the Venerian aids in a terrific battle against the Martians and Professor Rudge, at least, returns to tell the tale.

THE MOON HOAX, by Richard Adams Locke, is a classic scientifiction story containing excellent science along with some obvious mistakes, which were not detected even by a scientific audience. It is probably the greatest scientific hoax that was ever perpetrated upon a credulous public. This was crowded out of the August issue.

BLASPHEMERS' PLATEAU, by Alexander Snyder, wherein some eminent scientists successfully experiment with infinite secrets, until they become drunk with their power. Then another scientist arrives on a friendly visit. It is a powerful and gripping story which is sure to hold your interest. This, also, was crowded out of the August issue.

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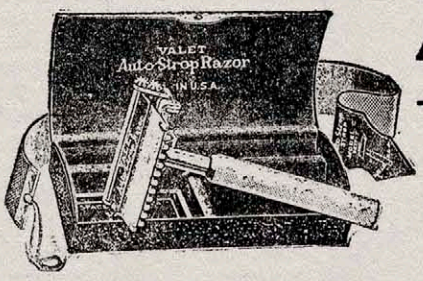

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VOLUME 1

AMAZING STORIES

THE MAGAZINE OF SCIENTIFICTION

AUGUST, 1926
NO. 5

HUGO GERNSBACK, *Editor*
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Editorial and General Offices: 53 Park Place, New York, N. Y.

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

"IMPOSSIBLE" FACTS

By HUGO GERNSBACK

OFTEN, while reading one of our modern scientifiction tales, we are wont to explode at some highly "impossible" plot concocted by some ingenious author. And often we receive a letter from some reader who vents his opinion in no uncertain terms that such and such a thing "cannot be within the realms of possibility."

As we mentioned several times, it is difficult to ascertain today just what is possible and what impossible, for the most "impossible" things have become commonplaces.

Before condemning anything as "impossible," therefore, we should be most careful and a lot more tolerant than we are. Some of the most recently improbable things are now facts. For instance, if some one should come along and tell you a wild tale about ice, boiling hot, you would probably laugh at him. Nevertheless, Professor P. W. Bridgman, of the Carnegie Institute, in Washington, while subjecting water to a pressure of 300,000 pounds to the square inch, found that under such tremendous pressure water first becomes solid, turning into ice, although it is nearly boiling hot. Not only is this "impossibility" a fact, but we all "know," and have been taught, that water can not be compressed very much. Just the same, Dr. Bridgman has compressed water to 80 per cent. of its original volume!

When you stand in the hot sun, you are pretty sure that our luminary is sending down a goodly quantity of heat, which makes it so uncomfortable for you on a hot summer day. Tell the man on the street that the sun sends absolutely no heat to the earth, and he will be ready to entrust you to an alienist. Nevertheless, the "impossible" fact remains that the earth receives no heat whatsoever from the sun because the earth and sun are both immersed in a vacuum. If you have ever seen a vacuum bottle, you know that no heat can be transmitted through a vaccum. If you do not believe this statement, go to the top of a snow-capped mountain, where you are nearer the sun than at sea level, and you will find that, instead of the air being much hotter there, it is much cooler. That is so because the sun sends us, not heat rays, but light rays, which light rays are transformed into heat when they strike a physical body, such as our atmosphere, which then retains the heat. But five miles above the surface of the earth, on the hottest summer day, the temperature is below freezing.

It is "impossible" for a living being to live for any length of time without food. How long can a living being go without food? Four years. "Impossible!" you say. Nevertheless, a number of bugs can live nearly four years without taking any food whatsoever—an "impossible" fact, but true. Even a snake can live two years without food, which brings us to an inquiry from one of our authors, who wishes to know if it is possible for life to go on without atmosphere.

Our answer to that question is "Yes." Just because a human being, or any other living creature on earth, can not live without air—that is, without oxygen diluted with nitrogen—it does not mean that life on some other planet, or even on our earth, is impossible without air. We know that nature has the peculiar trick of adapting living organisms to practically any conditions. It is possible to freeze fish and keep them frozen for months, after which they can be thawed out and revived. It would seem to us therefore that some form of life is certainly possible without air. What this form of life would be, we have no way of knowing. Such a creature would in all probability have neither flesh nor blood, but that does not preclude the possibility of its existence. Most insects have no flesh or blood for that matter, but they manage to get along very well.

Indeed, recent observations on our satellite, the moon, have given indications that although it is devoid of practically all atmosphere, signs of life have appeared here and there. If there is life on the moon, and I for one really believe there is, then whatever life there is must go on with practically no air.

Furthermore, to aggravate the case, that particular form of life must pass through a rather uncomfortable cycle every few weeks. In the first cycle, the moon is subject to a generous amount of heat wherever the sun's rays strike the surface of the moon—only to be plunged into the most terrific cold imaginable when the sun sinks below the horizon. Because the moon has no atmosphere, the little heat which is absorbed by the rocks or the ground vanishes almost immediately after the sun stops shining, and the cold of interstellar space sets in. We do not know what form of life can survive such a terrific and sudden change of "climate," but it is quite likely that there are creatures evolved for such an existence also. If there are such beings the possibility of any circulatory system in their bodies is remote, because such liquids surging through their bodies would, of necessity, be frozen during the cold period. But perhaps we are wrong here, too. Maybe there are such liquids and such a circulatory system. If the creature freezes during one cycle, perhaps it is thawed out in the hot period, and life goes on the same as it does on earth. If it is possible for living creatures to live at the bottom of the ocean, under a tremendous pressure of as high as 8,831 pounds to the square inch, then it is very likely possible for life to exist under worse circumstances.

Mr. Hugo Gernsback speaks every Monday at 9 P. M. from WRNY on various scientific and radio subjects.

A COLUMBUS of SPACE

By Garrett P. Serviss

Author of "The Moon Metal", "The Second Deluge", etc.

We watched the meteors out of the windows while Edmund kept guard at the peep-hole. We must have come almost within striking distance of a thousand in the course of an hour, but Edmund decided not to diminish his speed. . .

CHAPTER I

A Marvelous Invention

EDMUND STONEWALL was the most ingenious man that ever lived.

In my private opinion he was the greatest human being that has ever appeared on this earth. I say this, despite the fact that against my will, and without my knowledge at the start, he took me and two of our friends in common on the wildest, craziest, most impossible and incredible adventure that ever imagination conceived.

I ought to hate Edmund Stonewall for what he did to me and to my friends; but, in fact, I reverence his memory.

Let me tell you the story, and then you will see the reason that underlies my feeling toward him.

In the first place, he made the most wonderful invention that ever the world heard of. In fact, until now the world never has heard all about it, and I shudder yet when I think of it.

It was, of course, based on electricity, for everybody knows now that electricity is at the bottom of everything. It came out of that discovery which made so much excitement at the beginning of the twentieth century—"radioactivity."

What is radioactivity?

Heaven only knows. But it came near being the death of me; it has robbed me of my dearest friends; and I don't know but that, if Stonewall had kept on, it might have put a finish to this old earth of ours!

Stonewall was always bothering himself about "power" and "energy" and what not. He knew machinery and engines as a boy knows craps and marbles. But he was dissatisfied with everything.

"Men are fools," he said. "They might be like gods. They ought to run the globe, and steer it where they like."

You remember the old "Keeley motor?" Well, Edmund believed in it, but said Keeley had got hold of the wrong end, and would never make it go that way.

All the while he was experimenting himself. He had money from a rich uncle, I guess, and he built himself a laboratory, and once in a while he would invite Jack Ashton, Henry Darton, Will Church, and me to come and watch some of his experiments. It was all Greek to us, but it never failed to make us stare. We saw some wonderful things there, that people knew nothing about. Edmund took up Tesla, too, with his communication with Mars idea, but after a while he dropped that, and then came "radioactivity."

THIS story is a classic by the well-known scientist and writer, Professor Serviss. It is one of the first real scientific space-flying stories ever written, and remains one of the best. The story was originally published in 1909, and caused a small sensation at that time. About that time radium and atomic energy theories came into public vogue, and this gave a great impetus to the imagination. Even today, seventeen years after the story was first published, it remains a scientific masterpiece, it being unnecessary to make any corrections whatsoever to bring it up to date. With true prophetic vision, Professor Serviss has penned a masterpiece that will remain so for generations to come. There is not a paragraph which is not packed full of interest. This story will keep you in constant suspense.

Radium and Thorium and Atomic Energy

WHEN the discovery of radium in uranium ore, and other things came out, the rest of us would never have known anything about it but for Edmund. We used to skip that part in the papers, and I can't say that his explanation made it much clearer; but, anyhow, he made the thing very inspiring to our imagination.

"Listen to this, boys," he said to us. "Here's Professor Thomson declaring that a single grain of hydrogen contains in its padlocked atoms enough energy to lift a million tons three hundred yards high. But Professor Thomson doesn't know how to get at the energy, and neither does Professor Rutherford, nor Lord Kelvin. *But somebody has got to get at it, and I guess it will have to be me.*"

"But what would you do with it if you got it, Edmund?" asked Jack in his good-natured, drawling manner.

Edmund's eyes shone strangely, but he replied only:

"I would do what Archimedes dreamed of."

None of us knew anything about the dreams of Archimedes, and we dropped the subject.

But Edmund Stonewall did not drop it. He simply went to work at it. He used to be at our club every evening, but after he got this new idea we would not see him for weeks on end. And when we did see him he was as mum as an oyster. But what a look he had in those deep eyes! Somehow, with all his eccentricity, we never connected the idea of craziness with Stonewall. He was different from other human beings, that was all.

One evening, after a long absence, Edmund suddenly turned up at the club, and mighty glad we were to see him. We couldn't understand his talk half the time, but it charmed us just the same. We never laughed at his extraordinary ideas. There was a depth in him that awed us. This time he showed an animation that we had never noticed before.

"Well, boys," he said, shaking hands all round, "I've got it."

"Got what?" drawled Jack.

"The interatomic energy under control. I've arrived where a certain Professor Duncan dreamed of being when he wrote that, 'when man knows that every breath of air he draws has contained within itself power enough to drive the workshops of the world, he will find out some day, somehow, some way of tapping that energy.' I've tapped it."

"Indeed!" said Jack. "Well, as I asked you once before, what are you going to do with it?"

I have just been telling you that we never thought of making fun of any of Stonewall's ideas, but there was something so extravagant in his words and manner that we all fell into Jack's half-bantering mood, and united in demanding:

"Yes, Edmund, tell us what you are going to do with it?"

Unintentionally we nettled him and, without knowing it, we probably laid the foundation for the astounding thing that happened to us. He did not

reply for a moment, while his eyes flashed and his face darkened. Then he said slowly:

"If you will come over to the laboratory I'll show you what I am going to do with it."

A Talk at the Club

NOTHING could have suited us better. Ever since Edmund had shut himself away we had been curious to know what he was up to. We all got our hats and walked over to the laboratory. He led us directly into the back yard, which we were surprised to find walled and roofed, so as to form a huge shanty. Edmund opened the door and ushered us inside.

I tell you, we were startled by what we saw. In the center of the place was the queerest-looking thing you can imagine. It was not anything that I can well describe. I will call it a car, for that is what it most resembled. It was about eighteen feet long and ten feet high and broad, round like a boiler, with bulging ends. It seemed to be made of polished steel.

Edmund opened a door in the end.

"Step in," he said, and unhesitatingly we obeyed him, all except Church, who was always a skeptical fellow, and who, for some reason, remained outside.

Edmund turned on an electric light, and we found ourselves in an oblong chamber, beautifully fitted up with fancy wood and with leather-cushioned seats all round the sides. The walls shone with polished knobs and handles.

"Sit down," said Edmund, "and I'll tell you what I've got here."

Then, missing Church, he called out to him to come in, but there was no answer. We concluded that Church, thinking the thing would be too deep to be interesting, had gone back to the club. Edmund presently resumed:

"As I told you a little while ago, I've solved the mystery of the atoms. I've power illimitable at my command. If I chose to build the right sort of apparatus, I could drive this old planet of ours against the moon and wreck it! But I'm not going to damage anybody or anything. I'm simply going to try a little experiment. Excuse me a moment."

Thereat he stepped outside, and we looked at one another, wondering, but still having too much confidence in Edmund to really set him down in our minds as unbalanced. We rather thought that he was going to show us some wonderful thing, as he used to do in the laboratory; something we couldn't understand, but that would be interesting to look at. We were not prepared for what followed.

We heard Edmund outside in the shanty, making a noise that sounded like the opening of a barn door. Then he reappeared, entered the car, and closed its door.

We watched him with growing curiosity. There was an odd smile on his face as he reached at and touched a polished knob.

Instantly we felt that the car was rising. It rocked a little, like a boat in wavy water. We were startled, but not frightened.

A Visit to Edmund Stonewall's Laboratory

"WELL, Edmund, what kind of a balloon is this?" Jack asked in his careless way.

"It's considerable more than a balloon," was the short reply.

We saw him touch another knob, and felt that the car had come to rest though it still rocked gently. Then Edmund unlocked a shutter at one side, and disclosed a many-paned window of thick glass. We all sprang to our feet and looked out. Below us were roofs and the tops of trees.

"We're about two hundred feet up," said Edmund. "What do you think of it?"

"Wonderful! Wonderful!" we all exclaimed.

"But," persisted Jack, "what are you going to do with it?"

Again Edmund's eyes flashed, and he said:

"You'll see!"

The scene out of the window was beautiful. The city lights were nearly all below our level, and away off over the New Jersey horizon I noticed the planet Venus, near to setting, and as brilliant as a diamond. I am something of a star-gazer, and I called Edmund's attention to the planet, as he happened to be standing beside me.

"Fine, isn't she?" he said. "Finest world in the solar system. And Schiaparelli says she's got two sides to her, one side always daylight and the other always night."

I was surprised at his exhibition of astronomic lore, for I had never known that he had given any attention to the subject. But a moment later all this was forgotten, for Edmund suddenly pushed us back from the window and closed the shutter.

"Going down again so soon?" asked Jack, a little banteringly as before.

Edmund smiled. "Going," he said simply, and put his hand on one of the knobs, pressing it gently. We felt ourselves moving very slowly.

"That's right, Edmund," Jack put in again. "Let us down easy; I don't like bumps."

Annihilating Gravity

WE all expected at every instant to feel the car touch the cradle from which it had started. But we were mistaken. What really did happen can better be described in the words of Will Church, who, you will remember, had been left outside in the shanty. I got the account from him long afterward. He had written it out and put it in a safe as a sort of historic document.

Here is Church's narrative, omitting the introduction, which read like a lawyer's brief:

"When we went over from the club to Stonewall's laboratory, I dropped behind the others because the four of them took up the full width of the sidewalk. Stonewall was talking to them, and my attention was attracted by something uncommon in his manner. I can't describe it very well, but there was an indefinable carriage of the head which suggested to me the thought that everything was not exactly as it should be.

"I don't mean that I thought him crazy, or anything of that kind, but I was convinced that he had some scheme in his mind to fool us. I bitterly repented, when things turned out as they did, that I had not whispered a word in the ears of the others. But that would have been difficult, and, besides, I didn't think that the

matter was anything serious. Nevertheless, I determined to stay out of it, so that the laugh should not be on me, at any rate. Accordingly, when the others entered the car I kept away, and when Stonewall called me I did not answer.

"As he closed the door of the car, for the first time the impression came to me that it might be something serious, but it was then too late to interfere. I was greatly astonished when, without the slightest apparent reason, the car began to rise in the air. I hadn't taken it for anything in the nature of a balloon, and this wasn't the kind of practical joke I was looking for, though if I had not been so stupid I might have guessed it when I saw Stonewall open the roof of the shanty.

"It was with much trepidation that I saw the thing, which really looked diabolical with its polished sides glinting in the electric light, rise silently through the roof, and float mysteriously upward. I felt relieved when it stopped at a height of a couple of hundred feet, and I said to myself that they would soon drop down again, and perhaps, after all, they would turn the laugh against me for being afraid.

A Narrative of One of the Participators

"BUT in a little while the car began to move again, slowly rising, and shining like some mail-clad monster in the light of the arc-lamps below. An indefinable terror commenced to creep over me, and I shivered as I watched the thing.

"It moved very deliberately, and in five minutes had not risen more than five hundred feet. Suddenly it made a dart, and seemed to shoot skyward. Then it circled, like a strange bird taking its bearings, and rushed off westward, until I lost sight of it behind some tall buildings. I ran out into the street, but could not catch sight of it again.

"They were gone! I almost sank upon the pavement in my helpless excitement. A policeman was passing:

"'Officer! Officer!' I said. 'Have you seen it?'

"'Seen what?' asked the bluecoat, twirling his club.

"'The car—the balloon,' I stammered.

"'I ain't seen no balloon. I guess yer drunk. Ye'd better git along home.'

"There was no use trying to explain matters to him, so I entered the shanty again, and sat down on the supports on which the car had rested. I remained a long time staring up through the opening in the roof, and hoping against hope to see them come back. It must have been midnight before I finally went home, sorely puzzled in mind, bitterly blaming myself for having kept my suspicions unuttered. I got to sleep, but I had horrible dreams.

"The next day I was up early, looking through all the papers in the hope of finding something about the mysterious car. But there was not a word. I watched for several days with the same result.

"I cannot describe my feelings. My friends seemed to have been snatched away by some mystic agency, and the horror of the thing almost drove me crazy. Then members of their families—luckily none of them were married—began to come to me with inquiries. What could I say? Still believing that they would come back, I invented a story that they had gone off on a hunting expedition.

"But when a week had passed, and then two weeks, without any news, I was in despair. I had to give them up. Remembering how near we were to the coast, I concluded that they had drifted over the ocean and gone down. It was hard for me, after the lie I had told, to let the truth out at last.

"The authorities took the matter up and ransacked Stonewall's laboratory, and the shanty, without finding anything to throw light on the mystery. After a while the sensation died out, the papers ceased to talk about it, and I was left to my loneliness and my regrets.

"A year has now passed with no news. I write this on the anniversary of their departure. My friends I know are dead—somewhere. What an experience it has been! When your friends die and you see them buried it is hard enough, but when they disappear in a flash, and leave no token behind, it is almost beyond endurance."

CHAPTER II

A Trip of Terror

I TAKE up the story from the point where I dropped it.

As minute after minute elapsed, and we continued to move, we changed our minds and concluded that the inventor was going to give us a longer ride than we had anticipated. We weren't alarmed, for the car traveled so easily that it gave one a feeling of confidence. But we were a little indignant to think that Edmund should treat us like a lot of boys, without minds or wills of our own.

"See here," said Jack at length. "I'd be obliged if you'd tell us just what you're about. I've no objection to making a little trip in your car, which is certainly mighty comfortable, but I'd at least like to be asked whether I want to go or not."

Edmund made no reply, but busied himself with his knobs. First he pressed one and then another. Suddenly we were all jerked off our feet as if we had been in a trolley with a green motorman at the handle.

We felt ourselves spinning through space at a fearful rate. Still Edmund said not a word; but while we staggered to our feet, and steadied ourselves with hands and knees on the leather-cushioned benches, like so many drunken men, he clung to his knobs and pushed and twisted. The car slowed down then, and the motion became more regular.

The Beginning of a Lecture

"EXCUSE me," said Edmund, quite in his natural manner. "The thing is a little new yet, and I've got to learn the stops by experience. But there's no occasion for alarm."

"Maybe there isn't," replied Jack. "But will you

be kind enough to answer my question, and tell us what you're about and where we're going? I'd rather like to know."

Henry and I felt our indignation rising, and Henry broke out:

"See here! I've had enough of this! If you can't tell us what it all means, just go down and let me out. I decidedly object to being carried off in this manner against my will and knowledge."

By this time Edmund seemed to have got things in the shape he wanted, and he turned to face us. He always had a magnetism that was inexplicable, and we felt it then as never before. His features were perfectly calm, but there was a light in his eyes that seemed electric.

"It was my first intention," he said, "to make this expedition alone, in case I couldn't persuade you to go along. But you provoked me a while ago, and I made up my mind that I'd take you anyway. I'm not going to do you any harm, and you'll thank me for it before we're through."

"But where do you propose to take us?" asked Jack, who had rather more self-command than the rest of us.

"I'll show you," replied Edmund. And that, for the time being, was all that we could get out of him.

There was manifestly no use in making a fuss. We knew nothing about the management of the car, and couldn't even understand what the power was that moved it. Edmund's talk about interatomic energy was to us like calculus to schoolboys. We were in his hands, and depended absolutely upon him. He could do what he liked with us. If we had overpowered him, what should we have done next?

I saw that the only possible thing was to humor him. Besides, knowing him as we did, I couldn't feel that he meant to bring us to any harm. As I have told you, we never thought him crazy, and we didn't think so then. He evidently knew exactly what he was about, and we had to trust to him whether we wished to or not.

As I turned the thing over in my mind I became calmer. I thought that we could get something out of Edmund by quietly showing some interest and questioning him about the machine.

"What are all these knobs, Edmund?" I asked.

"They control the driving power," he replied in perfect good humor, but like a schoolmaster addressing pupils who, he knows, cannot entirely follow him. "I push or turn one way, and we go; I I push or turn another way, and we stop or go back. So I concentrate the atomic power just as I choose. It makes us go, or it holds us motionless, or it carries us back to earth, according to the way I apply it.

"The earth is what I kick against, and what I hold fast by. Any other body in space would serve the same purpose. As to the machinery, you'd need an education in such things to understand it. You'd have to study the whole subject from the bottom up, and go over the experiments that I have made. I confess that there are some things the fundamental reason for which I don't know the real reason for myself. But I know that I have this power in control; and if I had Professor Thomson and Professor Rutherford here, I'd make them open their eyes!

"I sure wish I had been able to kidnap them."

"So you admit that you've kidnaped us," said Jack; but he said it, I was glad to see, with a smile.

"If you want to put it that way—yes," Edmund responded, also smiling.

"Well, boys," said Jack, turning to Henry and me, "we may as well make the best of it, so far as I can see. Edmund has got us in his aerial craft, and we'll have to complete the voyage, whatever it may be. Perhaps you'll treat us to a trip to Paris, Edmund. I'd like that immensely."

"Better than that," said Edmund. "Paris is small potatoes compared with what you are going to see."

And so, indeed, it turned out!

A Comfortable Beginning of the Trip

FINALLY we all got our pipes and tobacco, and began to make ourselves at home. We dropped the subject that had been uppermost in our minds and talked of other things. Jack, always full of reminiscences, entertained us with stories. So hours glided by, till most of us began to feel sleepy.

"I'll have to keep the first watch," said Edmund; "and all the others, too, this night."

"So, then, we're not going to land to-night?" asked Henry.

"No, not to-night," Edmund replied. "You may as well turn in. You see, I've prepared good bunks."

He lifted the tops of some of the benches along the walls, and, turning them outward, showed us beds already made up.

"I believe I've not forgotten anything that can make us comfortable," he added. "Arms, instruments, clothing, furs, and lots of good things to eat."

We looked at one another in surprise, but nobody spoke, though the same thought probably occurred to each—that this promised to be a pretty long trip, judging from the preparations.

Arms! Edmund had said. What in the world should we need of arms? Was he going to take us off to the Rocky Mountains for a bear hunt? And clothing and furs!

But we were really sleepy. Perhaps the motion had something to do with that, although now it had become almost imperceptible. At any rate, it was not long before all three of us had taken Edmund at his word, and, leaving him to manipulate his knobs as he saw fit, we turned in. He considerately drew a shade over the electric light, and then noiselessly opened the shutter covering the window. When I saw him doing that, I was strongly tempted to rise and look out, but I didn't do it. Instead, I fell asleep.

The Earth Spread Out Like a Map

WHEN I woke, windows were open on both sides of the car, and sunlight was streaming in through one of them. Henry was still asleep, Jack was yawning in his bunk, just preparing to rise, and Edmund stood at one of the windows, staring out. I quickly made my toilet, and then went to Edmund's side.

"Good morning," he said, taking my hand. "Look

out here and tell me what you think of the prospect."

I put my face close to the glass, and my heart jumped into my mouth!

"Where are we?" I cried out.

Jack, hearing my agitated exclamation, jumped up and ran to my side.

It was truly enough to take away one's breath!

We seemed to be at an infinite height, and the sky was as black as ink and ablaze with stars, although the sunlight was streaming into the window behind us! I could see nothing of the earth. Evidently we were too high for that. It must lie away down under our feet, I thought, so that even the horizon had sunk out of sight. I had that queer, uncontrollable qualm that comes to every one who stands on the verge of an abyss.

Straight before us, so I presently became aware, was a most singular appearance in the sky. I thought at first glance that it was a round cloud, curiously mottled. But it was strangely changeless for a cloud, and it had, moreover, a certain solidity of aspect that could not consist with vapor.

"Good Heaven!" cried Jack, catching sight of it. "What's that?"

"That's the earth!"

It was Edmund who had spoken, and now he looked at us with a quizzical smile.

Breakfast on Board, Far Up Above the Eastern Hemisphere

A THRILL shot through me. My mind went into a whirl. I saw that it was the truth he had told; for, as sure as I sit here, at the moment that Edmund spoke, the great cloud rounded out before my eyes, the deception vanished, and I recognized the outlines of Asia and the Pacific Ocean, as clearly as ever I saw them on a school-globe!

In another minute I had become too weak to stand, and I sank, trembling, upon a seat. Jack, whose eyes had not accommodated themselves to the gigantic perspective as rapidly as mine, remained at the window, declaring:

"Fiddlesticks! What are you trying to give us? The earth is down below, I reckon."

But in a little while he, too, saw the thing as it really was, and then his excitement equaled mine. In the meantime Henry, awakened by the noise, had run to the window, and had gone through the same experience. Our astonishment and dismay were too great to recover from, but after some minutes we gained a little self-control.

"In Heaven's name, Edmund," Jack at last exclaimed, "what have you been doing?"

"Nothing very extraordinary," Edmund replied coolly. "At least, nothing that ought to seem extraordinary. If men had not been fools for so many ages they might have done this long ago. They've been wasting their time with steam and coal and a hundred other petty sources of power, when all the while they had the limitless energy of the atoms under their thumbs and didn't know it. It's the interatomic energy that has brought us out here and that is going to carry us a good deal farther before we are through."

We simply listened in silence; for what could we say? There was not the shadow of a doubt about it; we were out in the middle of space, and there was the earth hanging on nothing, like a summer cloud. Heaven knows how far away! It might have been a million miles, for all we could tell.

A Speed of 20 Miles a Second

"WE'VE made a pretty good run during the night," said Edmund, finding that we were speechless. "You must be hungry by this time, for you've slept late. Let's have breakfast."

So saying, he opened a locker, took out a folding table, covered it with a white cloth, turned on a little electric range, and in a few minutes had ready as appetizing a breakfast of eggs and as good a cup of coffee as I ever tasted. It is one of the compensations of human nature that it is able to adjust itself to the most unheard-of conditions provided that the inner man does not find itself neglected. The smell of breakfast would almost reconcile a man to purgatory; anyhow, it reconciled us, for the moment, to our situation, and we ate and drank and fell into as cheerful good comradeship as a fishing-party after a big morning's catch.

When the breakfast things had been cleared away, we began to smoke and chat, frequently interrupting the talk, however, to take a turn at the window, staring at the spectacle of the world we were leaving behind us. Edmund got out some binoculars, and with them we could recognize many geographical features.

We could see Japan and the Philippines, spots near the shore of the Pacific; we recognized the crinkling line of the snowy Himalaya Mountains; and a great white smudge over the ocean showed where a storm was raging, and where good ships were, no doubt, battling with the waves beneath.

I noticed that Edmund was continually going from one window to the other, as if watching for something; and there was, at times, a look almost of apprehension in his eyes. He had a peep-hole in the forward end of the car, covered with thick glass, and he frequently visited it. Even while we were at breakfast, I had observed that he was not easy, but kept jumping up and running to look out. At last I asked him:

"What are you looking for, Edmund?"

"Meteors," he replied shortly.

"Meteors out here?"

"Of course. You're something of an astronomer. Don't you know that they hang round all the planets? They didn't let me sleep last night. They kept me on tenter-hooks all the time. I was half inclined to get one of you up to help me. We passed some pretty ugly looking fellows during the night. You know, this is an unknown sea that we are navigating, and I don't want to run on a rock and wreck the ship."

"But we seem to be pretty far from the earth now," I said; "and there ought not to be much danger."

"It's not so dangerous as it was, but there may be some round yet. I'll feel easier when I've put a few more million miles behind us."

Millions of miles!

When we had imagined that the earth looked as though it might be a million miles away, it was merely a passing thought which didn't impress us with its real immensity; but now, when we heard

Edmund say that we actually had traveled such a distance, the idea struck us with overwhelming force.

Meteors on All Sides

"IN Heaven's name, Edmund," Jack called out, "at what rate are we traveling, then?"

"Just at present," Edmund replied, glancing at an indicator on the wall, "we're making twenty miles a second."

Twenty miles a second!

"Why," I exclaimed, "that's faster than the earth goes in its orbit!"

"Yes, just a trifle faster," Edmund replied, smiling. "But I'll probably have to work her up to a little better speed, in order to get where I want to go before our goal begins to run away from us."

"Ah! that's it," put in Jack. "That's what I wanted to know. What is our goal, Edmund? Where are we going?"

Before Edmund could reply we all sprang to our feet affrighted.

A loud grating noise had broken upon our ears. At the same instant the car gave a lurch, and a blaze like a flash of the most vicious lightning streamed through one of the windows.

"Blank the things!" shouted Edmund, springing to the window, and then darting at one of the knobs, and beginning to twist it with all his force.

In a second we were sprawling on the floor, except Edmund, who kept his hold. Our course had been changed with amazing quickness, and our startled eyes beheld huge misshapen objects darting past the window.

"Here comes another!" cried Edmund, seizing the knob again.

I had managed to get my face at the window, and I certainly thought that we were lost. Only a few rods away, rushing straight at us, was a vast black mass, shaped something like a dumb-bell, with ends as big as houses, tumbling over and over itself, and threatening us, as it came, with annihilation. If it hit us, as it seemed sure to do, I knew that we should never return to the earth, unles it might be in the form of pulverized cinders.

CHAPTER III

The Planetary Limited

BUT Edmund had seen the meteor and, quicker than thought, with a turn of the knob, he swerved the car, and threw us all off our feet again! But we would have been thankful to him even if he had broken our heads, for he had saved us from instant destruction.

The danger was not yet gone, however. Scarcely had the huge dumb-bell (which Edmund assured us afterward must have been composed of solid iron, from its effect on his magnetic needles) passed before there came from outside a blaze of lightning so fierce and penetrating that it closed our eyes as if the lids had been slapped shut!

"A collision!" exclaimed Edmund. "The thing has struck another big meteor, and they are exchanging red-hot compliments."

He threw himself flat on the floor, and stared out of the forward peep-hole. Then, immediately, he jumped to his feet, and gave us another tumble. He had changed the course once more.

"They're all about us," he said. "We're like a boat in a raging spring freshet, with rocks, tree-trunks, and tossing cakes of ice threatening it on every hand. But we'll get out of it. The car obeys its helm as if charmed. Why, I got away from that last fellow by setting up an atomic reaction against it, as a boatman pushes his pole against an ice-floe."

A Trip to Venus

IN the midst of our terror we could not but admire our leader.

His resources seemed boundless, and our confidence grew with every escape. We watched the meteors out of the windows while Edmund kept guard at the peep-hole. We must have come almost within striking distance of a thousand in the course of an hour, but Edmund decided not to diminish his speed, for he said that he found he could control the car quicker when it was under full headway.

So on we rushed, dodging the things like a crow in a flock of pestering jays, and after a while we began to enjoy the excitement. It was better sport than shooting rapids in an open skiff, and we got so confident at last in the powers of our car and its commander that we were rather sorry when the last meteor was passed, and we found ourselves once more in clear open space.

After that the time passed quietly. We ate our meals and slept as regularly as if we had been at home.

There was no night for us, because the sun shone in at one window or the other all the time; yet, as I have said, the sky was jet black, and the stars glittered everywhere round us. When we wanted to sleep we put up the shutters, keeping watch only through the peep-hole, which, as it did not face the sun, admitted little light. We kept count of the days by the aid of a calendar clock. There seemed to be nothing that Edmund had forgotten.

Once the idea suddenly came to me that it was a wonderful thing that we had not all been smothered with bad air, breathing the atmosphere of the car over and over again as we were doing, and I asked Edmund about it. He laughed.

"That's the easiest problem of all," he said. "Look here."

And he threw open a little grating in the side of the car.

"In there," he explained, "there's an apparatus which absorbs the carbonic acid and renews the air. It is good to work for at least a month, which will be more time than we need for this expedition."

"There you are again," broke in Jack. "I was asking you about that when we ran into those pesky meteors. What is this expedition? Where are we going?"

Taking Rifles to Venus

"WELL, since you have become pretty good shipmates," replied Edmund, "I don't see any objection to telling you. We are going to Venus!"

"Going to Venus?" we all cried in a breath.

"To be sure. Why not? We've got the proper sort of a conveyance, haven't we?"

There was no denying that. As we knew that we had left the earth far behind, and had already traveled some millions of miles, it didn't, after all, seem to be a very crazy idea that we might actually go to Venus.

"But how far is it?" asked Jack.

"When we quit the earth," Edmund replied, "Venus was rapidly approaching inferior conjunction. You know what that is, Albert," addressing me. "It's when Venus comes between the sun and the earth. The distance between the two is not always the same at such a conjunction, but I figured out that on this occasion, allowing for the circuit that we should have to make, there would be just twenty-seven million miles to travel. At the average speed of twenty miles a second, we could do that distance in fifteen days, fourteen and one-half hours.

"But, of course, I had to lose some time going slow through the earth's atmosphere, for otherwise the car would have caught fire by friction, like a meteor, and I shall have to slow up again when we enter Venus's atmosphere, so that I don't count on landing on Venus in less than sixteen days from the time of our departure.

"We've already been out five days, so eleven remain before I hope to introduce you to the inhabitants of another world."

The inhabitants of another world! This idea took us all aback.

"Do you believe there are any such inhabitants?" asked Henry.

"I know there are," said Edmund. "Otherwise I wouldn't have taken the trouble to come."

"Of course," said Jack, stretching out his legs and pulling at his pipe. "Who'd go twenty-seven million miles if he didn't expect to see somebody?"

"Then that's what you put the arms aboard for?" I remarked.

"Yes, but I hope we shall not have to use them."

"Strikes me this is a sort of a pirate ship," said Jack. "But what kind of arms have you got?"

For answer Edmund threw open a locker, and showed us an array of automatic guns, pistols, and some cutlases.

Getting Close to Venus

"DECIDEDLY piratical!" cried Jack. "But, see here, Edmund. With all this interatomic energy that you've got under control, why in the world didn't you construct something new—something that would just knock the Venustians silly, and blow their old planet up, if it became necessary? It seems to me that automatic arms, though pretty good at home, are rather small pumpkins for invading a foreign world with."

"I didn't prepare anything else," said Edmund. "In the first place, because I hadn't time; and, in the second place, because I didn't really anticipate any fighting. I hope that we can get along without that."

"You mean to try moral suasion, I suppose," drawled Jack. "Well, anyhow, I hope they'll be glad to see us, and since it's Venus we're going to visit, I expect that the ladies will be perfect houris for beauty. I'm glad you made it Venus instead of Mars, Edmund, for from all I've heard about Mars, with its fourteen-foot giants, I don't think I should care to go there."

We all laughed at Jack's fancies, but there was something thrilling in the idea, too; for here we were (unless we were dreaming) actually on the way to Venus! I tried every way I could think of to test whether it was a dream or no, but do what I would I came always to the conclusion that I had never been more wideawake in my life. Both Jack and I were sufficiently romantic to find a great charm in the thought of visiting another world, but Henry was different. He always looked at the money in a thing.

"Edmund," he said, "I think you have made a fool of yourself. What good will it do you, or us, to go to Venus? Here you have got an invention that will revolutionize mechanics. You might, if you had exploited it as you ought, have made the greatest millionaire look like the smallest kind of an atom. But instead of developing the thing in a businesslike way, you rush off into space on harebrained adventure."

"That depends upon the point of view and the mental make-up," Edmund replied calmly. "To me Venus is infinitely more interesting than all the wealth that you could pile up between the north pole and the equator. Am I not the Columbus of space—and you my lieutenants?" he added smiling. "Besides, just wait until we return to the earth. I don't promise to give my attention to money-getting then, but I may revolutionize a good deal more than mechanics."

"Yes, if we ever do return," said Jack, a little lugubriously.

Poor Jack! None of us knew, then, what was in store.

The time ran on, and we watched the day hand on the calendar clock. Soon it had marked a week; then ten days; then a fortnight. We were getting pretty close, but up to this time we had not yet seen Venus. Edmund had seen it, he said, but to do so he had been obliged to alter the course, because the planet was almost in the eye of the sun, and the light of the latter, streaming into the peep-hole, blinded him.

A Mysterious Display of Flames

IN consequence of the change of course, he told us, we were now approaching Venus from the east—flanking her, in fact—and she appeared in the form of an enormous shining crescent. I shall never forget my first view of her.

We had got within half a million miles, and Edmund was very nervous about meteors again. He said they were probably thicker round Venus than around the earth, because the former is nearer to the sun, and everything crowds up as you approach the center of the solar system. Consequently he would only allow us each a brief peep at the planet, because he wanted to be all the time at the lookout. The peep that I got was sufficient.

That vast gleaming sickle, hanging in the black

sky, was the most tremendous thing I ever looked upon!

Soon afterward Edmund changed the course again. We had not come upon the expected meteors in any great numbers, and Edmund said he felt safe now in running into the planet's shadow, and making a landing on her night hemisphere.

You see, Venus, as Schiaparelli had found out, doesn't turn on her axis once every twenty-four hours like the earth, but keeps always the same face to the sun. The consequence is that she has perpetual day on that side, and perpetual night on the other. I asked why we didn't land on the daylight side, but Edmund said his plan was safer. We could easily go from one hemisphere to the other, he declared.

But it didn't turn out to be as easy as he thought.

"I hardly expect to find any inhabitants on the dark hemisphere," he said. "It must be fearfully cold there—too cold for life to exist, perhaps. But one can never tell. Anyhow, I am going to find out. We'll just stop for a look at things, and then the car will carry us round to the other side. We can thus approach the inhabitants, who, I am sure, exist on that side, from behind, as it were, and that will give us a chance to reconnoiter them a little, and plan our arrival safely."

"If Venus is rightly named," said Jack, "I'm for getting where the inhabitants are as soon as possible."

When we swung round into the shadow of the planet we got her between the sun and us. Then she completely hid the sun, and appeared like an immense black circle, blacker than the sky itself. But all round this black circle appeared a most beautiful ring of light.

"That's her atmosphere," said Edmund, lighted up by the sun from behind. But, for the life of me, I can't tell what those great flames mean."

Descending Into the Cavern of Venus

HE referred to a vast circle of many-colored flames that blazed and flickered with all the hues of the rainbow at the inner edge of the ring of light. It was the most awful, and at the same time beautiful, sight that I ever gazed at.

"That's something altogether outside my calculations," Edmund averred. "I can't account for it at all."

"Perhaps they are already celebrating our arrival with fireworks," said Jack, always ready to take the humorous view of everything.

"That's not fire," Edmund responded. "What it is I cannot say. But we'll find out. I haven't come all this distance to be scared off."

Our approach was so rapid that the immense black circle grew, hour after hour, with portentous swiftness. Soon it was so large that we could no longer see its boundaries through the peep-hole.

"We're within a thousand miles," said Edmund finally. "We must be close to the upper limits of the atmosphere. The atmosphere of Venus is denser and more extensive than that of the earth, and if we rush into it we shall be burnt up by the effects of friction. I'll have to slow down."

He slowed down a little more rapidly than was comfortable. It was jerk after jerk, as he dropped off the power, but at last we got down to the speed of an ordinary express-train. Being out of the sunshine now, we had to use the electric-lamp to illuminate the car.

At length we got so close that the surface of the planet became dimly visible. We were settling very slowly by this time, and as we drew gradually nearer we began to notice singular shafts of light, that seemed to issue from the ground beneath us, as if it had been covered with so many iron foundries.

"By Jove!" cried Edmund; "I believe there are inhabitants on this side after all. I certainly don't believe that those lights come from volcanoes. I'm going to make for the nearest one, and will soon know what they are."

Accordingly, he steered the car for one of the gleaming shafts. It grew brighter as we approached, and threw a faint illumination upon the ground around it. Everything seemed to be very flat and level, as if we were dropping down upon a prairie. But no features could be clearly made out in the gloom.

Edmund boldly approached within a hundred feet of the light and, with the slightest perceptible bump, we touched the soil of Venus.

"It's probably frightfully cold outside," said Edmund; "and we'll put on these things by way of precaution."

He dragged out of one of his innumerable receptacles a lot of thick fur garments and gloves, as if we were going among the Eskimos, and made us put them on, while he dressed himself in similar fashion. Then he handed to each of us a pair of big automatic pistols, telling us to put them in our side-pockets. These preparations having been made, he cautiously opened the door, after having, as he said, electrically anchored the car to the ground.

The air that rushed into the car as the door was opened almost hardened us into icicles. It was colder than ten thousand icebergs!

"It won't hurt you," Edmund exclaimed. "It can't be down to absolute zero, on account of the atmosphere. I've kept it so warm inside the car that you've become pot-boiled. You'll soon be used to this. Come on!"

And he led the way out.

After glancing round us for a moment we cautiously approached the shaft of light.

It issued from an irregular round hole.

As we drew near the edge we saw that there were rough steps at one side of the pit, leading downward.

In another instant we were frozen stiff. Not with cold, but with amazement. My heart for a moment stopped beating.

Standing on the steps, watching us, with eyes as big and luminous as moons, was a creature shaped like a man, but more savage-looking than a gorilla!

CHAPTER IV

The Caverns of Venus—An Inhabitant

FOR two or three minutes the creature continued to stare at us, motionless, and we to stare at him. It was so dramatic that it makes my nerves tingle now when I think of it.

His eyes alone were enough to scare a man out of his senses. As I have said, they looked like full moons, they were so big, so round, and so luminously yellow. It was the phosphorescent yellow, shot with green, that you sometimes see in the eyes of a cat or a wild beast. Its great hairy head was black, but its short stocky body was as white as that of a polar bear. Its arms were long, like an ape's, and it had a look of immense strength and activity.

Edmund was the first to recover from the surprise, and then he did a thing that seems absurd when I recall it.

"Well, hallo you!" he called out, in a voice that made us jump as if it had been a thunder-clap. In that heavy atmosphere the sounds struck the eardrums like trip-hammers.

The effect on the creature was electric. A film shot across his big eyes, he made a sudden movement, uttered a queer squeak that seemed ridiculous coming from an animal of such size, and, in an instant more, he had disappeared, stumbling and tumbling down the steps.

"Hurrah!" shouted Edmund. "We've conquered a hemisphere!"

In fact, the evident terror of the creature immediately heartened us all. Our fear vanished, and, following Edmund, we rushed for the hole, and began a hurried chase down the steps.

We noticed that the air was decidedly warmer round the mouth of the pit, and as we descended the temperature rose. After a while we pulled off our Arctic togs, and left them on a shelf of rock, but we didn't leave the automatic pistols. Then we proceeded downward. It was an awful hole for depth. The steps, rudely cut, wound round and round the sides like those in a cathedral tower, except that the shape of the pit was not regular. It looked like a natural formation. Perhaps, I thought, the throat of an extinct volcano; though, there being no mountain, that didn't seem probable either. But the steps were certainly of artificial origin.

The Awful Tenants of the Cave

WHEN we had descended several hundred feet we emerged suddenly into a broad cavern. The temperature had been rising all the time, and here it was as warm as in an ordinary room. The cavern was, I should say, about twenty yards broad and eight or ten feet in height, with a flat roof. Over in a corner I saw a hole down which the steps continued. There was not a living thing visible, but there was light coming from what looked like a heap of coal, burning with great brilliance, in the center of the floor.

A strange but not unpleasant odor filled the place, and as we paused to consult we all spoke of the curious exhilaration which we had experienced, almost from the moment of setting foot on the planet. Edmund said it was due to the dense atmosphere, which undoubtedly was heavy with oxygen. It certainly had a good deal to do with our rising courage, and our insensibility to fatigue. Notwithstanding the precipitancy of our long descent, we did not draw an extra breath. As we looked about us, seeing no one, Edmund declared that it was necessary to go on.

"We can't give it up," he said. "We've got to find the inhabitants, and now that we have seen one of them, we know pretty well what to expect. Come along."

He led the way down the steps in the corner. They wound round just like the others, and again we descended a long distance, perhaps as much as three hundred feet. Then we reached a second cavern, larger and loftier than the first. And there we found them!

There never was such a sight! It made our blood run cold again, notwithstanding our initial triumph, which had been so cheaply won.

Ranged along the farther side of the cavern, visible by the light of another heap of bright coal, were twenty or thirty of those creatures, standing shoulder to shoulder, with their great eyes glaring like bull's-eye lanterns. But the most frightful of all were their motions.

The Venustians Terrified by One Pistol Shot

YOU have read how a huge cobra, rearing on his coils, sways his terrible head from side to side before striking. Well, all those black heads before us, with their lantern eyes, were swaying in unison, only the motion was circular. Three times by the right, and then three times by the left, those heads circled, in rhythmic cadence, while the luminous eyes made phosphorescent rings in the air, intersecting one another in consequence of the rapid movement.

It was such a spectacle as no man ever beheld in the wildest dream. It was baleful! It was the charm of the serpent paralyzing its terrified prey. We felt it in an instant, and our brains began to whirl. I found myself staggering in spite of all my efforts to stand firm, and a kind of paralysis ran through my limbs. Presently, all moving together and uttering a hissing, whistling sound, they began slowly to approach us, keeping in line, each shaggy leg lifted high at the same moment, like so many soldiers on parade, while the heads continued to swing, and the glowing eyes to cut linked circles in the air. But for Edmund we should have been lost. He spoke to us over his shoulder, in a whisper:

"Boys, take your pistols and kill as many as you can, but don't shoot unless they make a rush. I'll knock over the leader, in the center, and I think that'll be enough."

So saying, he raised his pistol; but, as for the rest of us, we could no more have stirred our arms than if we had been marble statues.

As the creatures approached another step, Edmund blazed away! The report was like an earthquake! It shocked us into our senses, and almost out of them again. The weight of the atmosphere,

and the confinement of the cavern, magnified and concentrated the sound until it was awful. The fellow in the center, that Edmund had aimed at, was hurled to the ground as if shot from a catapult. The others fell as flat as he, and all lay groveling, the big eyes filming and swaying wildly, but no longer in unison.

The charm was broken, and, as we saw our enemies prostrate, our courage and nerve returned.

"I thought so," said Edmund coolly. "It's the sound that they can't stand. I'm sorry I killed that fellow, for the report alone would have been sufficient. This atmosphere acts like a microphone. You have heard the voices of these creatures, which are hardly louder than whispers. Their ears are evidently not made for sounds of any magnitude. I shouldn't wonder if I had burst every ear-drum in the lot."

"After all," he continued, after a moment's thought, "it is perhaps as well that I took one life. Probably it would have had to come eventually, and now we have them thoroughly cowed. If they had ever reached us, they would have torn us asunder in a moment with those muscular arms."

The Food of the Natives and Their Cooking

AS he spoke, Edmund boldly approached the groveling row, and pushed with his foot the huge, white, furry body of the one he had shot. The bullet had gone through his head. At Edmund's approach the creatures sank even lower on the rocky floor, and those nearest to him turned up their moon eyes, with an expression of submissive terror and supplication that was grotesque, though unmistakable. He motioned us to approach, and, imitating him, we began to pat and soothe the shrinking bodies until, understanding that we would not harm them, they gradually acquired some confidence in us. In short, after a while a relation like that of masters with the most submissive slaves was established.

In the meantime the crowd in the cavern increased; others of the creatures, attracted perhaps by the noise, coming in continually through side passages. Those who had been present at our arrival explained the situation to the newcomers, as we could see, and it was evident that our prestige was thoroughly established.

As we became better acquainted with these creatures we found that they were not as savage as they looked. Their heads, and the larger part of their faces, were covered with black hair, but on their bodies was a white silky fur. Why the difference of color existed I could never imagine. The reason for the great size of their eyes appeared evident. It was the prevailing darkness of the side of the planet on which they dwelt. With those eyes they could see in the gloom like cats. They were surprisingly intelligent, too, in their way. Their construction of the hundreds of steps leading down into the caverns, and their employment of a kind of coal for heat and light, showed that. But this was not all.

We found that, in some of the caverns, which were connected with one another by winding passages, they cultivated their food, which consisted entirely of vegetables of various sorts, all unlike any that I had ever met with on the earth. Water dripped from the roofs of these caverns, but there was no light except that derived from the burning coal, yet the vegetation, though almost colorless, seemed to thrive astonishingly.

A Necessary Killing

THEY had many ways of cooking their food, and although there yet remained a good supply of stores in the car, Edmund thought it advisable for us to accustom ourselves to the diet of the inhabitants. We found it decidedly agreeable, and without ill effects of any kind.

The only brute animals, of any size, that we could discover in the caverns were some dog-like creatures, about as large as terriers, but very furry.

The burial-ground of the community we discovered when they came to dispose of the fellow that Edmund had shot. It was a large, lone cavern, situated at a long distance from the one which we had first entered. We thought we saw indications of some kind of religious ceremony when they put their slain comrade in the ground; and then, for the first time, we recognized the women. We were astonished by the evidence of a monogamous relation among the sexes, which was furnished by the fact that one of these women manifested by her sorrow a special grief, which we thought could only be accounted for upon the supposition that she was the wife of the dead person.

She held two or three little ones by the hands, and we were fairly moved to tears by the spectacle, Edmund being particularly affected.

"I almost wish I had never come here," he said bitterly; "since the first thing I have done is to kill an inoffensive intelligent creature."

"Not so inoffensive, either," put in Jack. "If you hadn't killed him, where should we be now?"

"But it wasn't necessary," Edmund insisted. "The noise alone would have sufficed."

"Don't borrow trouble," said Jack sympathetically. "You did the best you knew, and Heaven knows what we should have done without you."

But I noticed that Edmund was afterwards very gentle with the poor creatures, who seemed to bear us no ill-will, feeling, probably, that we were superior beings, who could do as we liked.

I have spoken of them as a community, and I may say here that we afterward discovered that all this part of Venus was sprinkled over with similar communities, somewhat resembling separate tribes. Each tribe occupied a group of caverns by itself, and there seemed to be but little intercourse among them. They seldom went out of the caverns, except to perform a very remarkable ceremony, which led us into a danger that put streaks of silver on my head, where no gray hair was due for many years yet. But of that later.

The most surprising discovery that we made in the cavern was a big smithy! It was really nothing else. Edmund had foretold us that we should find something of that kind. He based his propnecy on the fact that there were rude tools and utensils of metal in the caverns. He examined the metal, and pronounced it iron.

"All the planets are largely composed of iron," he said. "These people here, primitive as they seem in many ways, have found out how to smelt and

make various articles of it. They must have a blacksmith shop, and I'm going to find it."

It wasn't long—perhaps two days' time after our arrival—when we came upon the place. It was in one of the side caverns, and we actually found several of the savage smiths at work, with furs fastened over their ears to ward off the sound. They were turning out long, sharp-pointed tools, the purpose of which Edmund divined in a moment.

"They're to dig coal with," he said.

And he was right. The strata of rock were filled with seams of a very hard coal, and these people dug it out to keep their fires going. It was the best coal that I have ever seen, infinitely better even than anthracite.

"But where did they get their fire to begin with?" asked Jack.

"Perhaps by friction, like our savages on the earth," Edmund replied.

"Perhaps they got it down below," I added.

"What do you mean by that?" asked Jack.

"I know what he means," interposed Edmund, "better than he does himself, perhaps. Venus, there is reason to believe, is not as old a planet as the earth. Consequently its crust is not as thick. It may be that the internal fires do not lie so deep. I shouldn't be surprised if that accounts, in part, for the comfortable temperature down here, when the surface above us is so terribly cold, owing to the absence of the sun."

Our discovery of the smithy seemed to have set Edmund to thinking. After musing a while, he said:

"This is a most fortunate thing for us. We'll have occasion to employ the skill of these fellows, and to teach them something new, for our own benefit."

"How's that?" I asked.

The Strange Sledge Trip Proposed

"IT'S this way: I want to take some of these fellows along when we start for the daylight ride of the planet. I can find my way well enough with the aid of the stars, but these creatures may be useful to us in other ways. But we can't take them in the car, which is full enough already. Luckily, the power of the car is practically unlimited, and it could draw a whole train, if necessary. Now, I'm going to carry them along in sleds, dragged after the car, and I'll make the sleds of iron, since there's no wood to be had. It's another lucky thing that this part of Venus is almost a dead level, a sort of rolling prairie, as you have observed, covered with a kind of icy shingle, which is just suited for runners. Trees can't grow here; and if there were ever any rivers, they became frozen solid ages ago."

"But why not make the fellows walk?" asked Jack. "They've got good legs."

"Walk!" said Edmund. "Why, man, we've got at least five thousand miles to go before we reach the edge of the sunlit hemisphere, and I don't propose to spend several months on the way. With the sleds drawn after the car, we can make the journey at the rate of a hundred miles an hour."

"All right," said Jack. "The sooner you start the better, as far as I'm concerned. I want to find the good-looking people of Venus. These don't suit my taste."

Henry, after his manner, said nothing; but as I saw him looking about, I got the impression that he was calculating the millions that might be made out of these iron-mines on Venus. Edmund never reached a decision without starting immediately to put it into practise. He now began his preparations for the journey to the other side. But they were quickly interrupted in a most dramatic fashion.

While we were occupied in the smithy, as I call it, showing the native smiths how to fashion the runners and upper parts of the proposed sleds, we were interrupted by some one coming in and calling our assistants away from us. They all ran out, and we after them. On arriving in the principal cavern, we found a singular scene.

The Earth Seen from Venus

TWO natives, whom we did not recognize as having made their appearance before, were evidently in charge of some kind of ceremony. They wore tall, conical caps of polished metal, covered with curious hieroglyphics, and had staves of iron in their hands. They marshaled all the others, numbering several hundreds, into a long column, and then began a slow, solemn march up the steps. The two leaders produced a squeaking music by blowing into the ends of their staves. Women were mingled with men, and even the children were not excluded. We followed at the tail of the procession, our curiosity at the highest pitch.

At the rate we went it must have taken nearly an hour to mount the steps. As we emerged into the open air, the cold struck to our marrow. The natives, covered with fur, didn't seem to mind it, but we ran back to the shelf where he had left our Arctic outfits, and put them on. Then we ascended again and emerged into the night, finding the crowd assembled not far from the entrance to the cavern. The frosty sky was ablaze with stars, and directly overhead shone a huge brilliant planet of amazing beauty, and close beside it a smaller one.

"The earth," said Edmund, pointing upward, "and the moon."

It was indeed our planet and her satellite. I can't describe the feeling that came over me at the sight. But in a moment Edmund interrupted my meditation.

A Ceremonious Procession of the Venustians

"LOOK at that!" he said.

The natives had formed themselves in a great circle under the starlight, with the two leaders standing in the center. All the others dropped on their knees, and the leaders raised their long arms toward the sky and gazed up at the zenith, at the same time uttering a kind of chant in their queer, subdued voices.

"By Jove, they're worshiping the earth!" exclaimed Edmund.

Indeed, she looked worth worshiping! Never have I seen so amazingly splendid an object. She

was twenty times as brilliant as the brightest planet that any terrestrial astronomer ever beheld. And the moon, glowing beside her like a great attendant star, redoubled the beauty of the sight.

"It's just the time of the conjunction," said Edmund. "This is their religion. Those fellows are their priests. The earth is their goddess. I understand it all now. I wouldn't have missed this for a world."

Suddenly the two priests began to pirouette. As they whirled more and more rapidly, their huge glowing eyes made phosphorescent circles in the gloom, like those that had alarmed and fascinated us when we first met the creatures in the cavern. They gyrated round the ring of worshipers with astonishing speed, and all those creatures fell under the fascination and drooped to the ground, with eyes fixed in evident helplessness upon the two performers.

An Impending Sacrifice of One of the Travelers from the Earth

NOW, for the first time, I caught sight of a square object, that seemed to be a stone, rising a couple of feet above the ground, in the center of the circle.

At this instant the spinning priests, having drawn close to the ring of fascinated worshipers, made a dive, and each caught a native in his arms and ran with him toward the square object that I have described.

"It's a sacrificial stone!" cried Edmund. "They're going to kill them as an offering to the earth and the moon."

The truth flashed into my mind, and froze me with horror. But just as the second priest reached the altar, where the other had already pinned his victim with a stroke of the sharp point of his staff, his captive, suddenly recovering his senses and terrified by the awful fate that confronted him, uttered a cry, wrenched himself loose, and, running like the wind, leaped over the circle and disappeared in the darkness. The fugitive passed close to us, and Jack shouted, as he darted by:

"Good boy!"

The enraged priest was after him like lightning. As he came near us his awful eyes seemed to emit actual flames. But the runner had already vanished.

Without an instant's hesitation, the priest shot out his long arm and caught me by the throat. In another second I felt myself carried, in a bound, as if a tiger had seized me, over the drooping heads of the worshipers, and toward the horrible altar.

CHAPTER V

Off for the Sunlands

DREADFUL as the moment was, I didn't lose my senses. On the contrary, my mind was fearfully clear and active. There was not a horror that I missed!

The strength and agility of my captor were astounding. I could no more have struggled with him than with a lion.

Only one thing flashed upon me to do. I yelled with all the strength of my lungs. But they had become accustomed to our voices now, and the maddened creature was so intent upon his fell purpose that a cannon-shot would not have diverted him from it.

He got me to the altar, where the preceding victim already lay with his heart torn out, and, pressing me against it with all his bestial force, raised his pointed staff to transfix me. With my dying eyes I saw the earth gleaming down upon me, and (will you believe it?) my heart gave a glad bound at the sight!

She was my mother planet, and the thought that she might help me in my extremity raced across my brain. But the dreadful spear had already begun to descend. I could see the sweeping muscles under the lithe fur, and I pressed my eyes tight shut.

Bang!

Something grazed my shoulder, and I felt the warm blood gush out. Then I knew no more.

A Recovery from a Swoon

IN the midst of a dream of boyhood scenes, a murmur of familiar voices awoke me. I opened my eyes, and couldn't make out where I was.

"I must still be dreaming," I said to myself, and closed my eyes once more.

Then I heard Edmund saying:

"He's coming out all right."

I opened my eyes again, but still the scene puzzled me. I saw Edmund's face, however; and behind him Jack and Henry, standing with anxious looks. But this was not my room! It seemed to be a cave, with faint firelight on the walls.

"Where am I?" I asked.

"Back in the cavern, and coming along all right," Edmund answered, smiling.

Back in the cavern! What could that mean? Then, suddenly, the whole thing flashed back into my mind.

"So he didn't sacrifice me?" I said, shivering at the thought.

"Not on your life!" Jack's hearty voice broke in. "Edmund was too quick for that."

"But only by the fraction of a second," said Edmund, still smiling.

"What happened then?" I asked, my recollections coming back stronger every moment.

"A good long shot happened," said Jack. "The best I ever saw."

I looked at Edmund. He saw that I wanted the story, and could bear it; and, his countenance becoming serious, he began:

"When that fellow snatched you and leaped into the circle, I had my fur coat wrapped so closely around me, not anticipating any danger, that for quite ten seconds I was unable to get out my pistol.

"I tore the garment open just in time, for already he was pressing you against the accursed stone with his spear poised. I'm used to quick shooting, and I didn't waste any time finding my aim.

"Even as it was, the iron point had touched you when the bullet crashed through his head. The shock swerved the weapon a little, and you got only a scratch on the shoulder, which might have been

more serious but for the thickness of your Arctic coat.

The Dead Priests and a Life Saved

"THE fellow fell dead beside you, and under the circumstances I felt compelled to shoot the other one also; for they were both insane with the delirium of their bloody rites, and I knew that our lives would never be safe as long as they remained fit for mischief.

"I'm sorry to have had to start killing right and left like this, but I reckon that's the lot of all invaders, wherever they go. It's our second lesson, and I think it will prove final.

"When their priests were dead, the rest had no fight in them. In fact, they never intended to harm us; but nobody knows what those two chaps might have led them into. My conscience is easy about them, anyhow."

"How long have I been here?" I asked.

"Two days by the calendar clock," said Jack.

"Yes," Edmund assented; "two days. I never saw a man so knocked out by a little shock, for your wound wasn't much. I fixed that up in five minutes. You must have been scared to the very bottom of your soul—not that I blame you, however. But look at yourself."

He held a pocket-mirror before me, and then I saw that my hair was streaked with gray.

"But we haven't been idle in the mean time," Edmund went on. "I've got two sleds nearly completed, and tomorrow—earth time—I mean to set out."

My wound was very slight, and the effects of the shock had all passed off during my long spell of insensibility. In an hour or two I was aroused, busy with the others.

I found that Edmund had already picked out the natives that he meant to take with us. They were a dozen huge fellows, who, he had discovered, possessed more than average intelligence. Among them was one of the smiths, the best of the lot, and for convenience Edmund had given him a name, something resembling that by which his comrades called him—Juba.

Starting the Sled Trip

AMONG his other apparently infinite stores of useful things in the car Edmund had a roll of small, strong steel cable, and this now came admirably into play. The two sleds were pitched one behind another with a piece of the cable, and a line about a hundred feet long connected them with the car. The latter could thus rise to a considerable height without lifting the sleds from the ground.

The sleds were provisioned from the stores of the natives, and we took some of their food in the car also, not merely to eke out our own, but because we had come to like it.

The fellows selected to join our expedition made no objection. On the contrary, they seemed proud to accompany us, and were evidently envied by their comrades.

The scene at starting was a strange one. About five hundred natives, the entire population of the group of caverns belonging to their tribe, which were distributed over about a square mile, assembled at the entrance to our cavern to see us off. As we started, the natives on the sleds, being unused to the motion, clung together like so many awkward white bears taking a ride in a circus.

Their friends stood about the ill-omened sacrificial-stone, waving their long arms, while their huge eyes goggled in the starlight.

Jack in a burst of enthusiasm, fired four or five shots from his pistol. As the reports crashed through the heavy air, you should have seen the crowd vanish down the hole! The sight made me wince when I thought that they must have gone down like a cataract, all heaped together.

But they were tough, and I trust that no heads were broken. The effect on our twelve fellows on the sleds came near being disastrous. I thought that they would leap off and run, and no doubt they would have done so but for the fact that Edmund put on so much speed that a new terror instantly took the place of the old one.

Instinct taught them not to jump, when the ground was spinning away under them at the rate of sixty miles an hour. Edmund brought Jack sharply to book for his thoughtlessness.

"Give me your pistol," he said, in his old masterful way, which nobody that I ever saw could stand against.

Jack was almost twice his size, but he handed over the pistol like a rebuked schoolboy.

"When you learn how to use it, I'll give it back to you," said Edmund, and that closed the incident.

The plan of the sleds worked like magic.

A Hundred Mile an Hour Sleigh Ride

AFTER their first fear had vanished, the natives began immensely to enjoy the new sensation. Edmund worked up the speed, as he had promised, to a hundred miles an hour, and even for us in the car it was a glorious spin.

But there was one danger that had to be guarded against—the mouths of the cavern.

As I have told you, the natives were divided into tribes, each tribe being in possession of a group of caverns. These caverns were undoubtedly of natural origin, but why they were not more uniformly distributed over the surface I cannot say.

Anyhow, the fact was that perhaps forty or fifty pits would be found, scattered over a mile or two of ground, and many of them connected by underground passages; and then there would be a long distance without any caverns. All seemed to be inhabited; and to that fact we owed, in a great measure, the safety of the sleds.

The shafts of light issuing from the caverns were so many beacons in the endless night, telling us where the underground settlements lay; and so we avoided running the sleds into the holes, although we had one or two narrow escapes as it was.

Twice Edmund insisted on stopping at a group of caverns to make the acquaintance of their inhabitants. On both occasions we descended into the caves, and found the creatures at home. Whether they would have received us so civilly if we had not taken Juba along I can't say.

Juba, the Venustian Intercessor

INVARIABLY he acted as intercessor and interpreter, and I guess our reputation suffered no belittlement from his accounts of our prowess. It was evident, Edmund said, that there were differences of dialect in the language of the various tribes, which puzzled Juba somewhat; but he also said that he was now convinced that there existed among these people an unexplained power of communicating thought which had no connection with the utterance of sounds.

It wasn't a sign-language like that of deaf mutes, either. The mystery was not solved until we got round on the daylight side of Venus, but it turned out to be one of the most incredible of all our discoveries in that strange world. You'll hear about it when I come to it.

We continued to guide our course by the stars—and they were certainly magnificent, with the earth for a very queen of gems set in the midst of them—until we had traveled some four thousand miles, all the time, of course, approaching the edge of the sunward hemisphere.

And now a new phenomenon struck us. For some time, along the horizon ahead, had stretched a faint streak, like the first light of dawn.

"Look," said Edmund, "there lie the sunlands of Venus. Although the sun never rises on this part of the planet, it will rise for us because we are approaching it."

There was nothing to surprise us in all this; but as we drew nearer, and the arc of dawn rose higher in the sky and glowed more softly beautiful, there appeared at its base those same many colored flames which had astonished us on our approach to the planet, after we had got into its shadow and begun to see its atmosphere as a great ring of light around it, the sun being behind. The reappearance of these flames startled us.

"They've got something to do with the sunrise!" Edmund declared; "but I can't make out what it is."

"Don't run us into a conflagration," said Jack. "We've had enough to do to stand the cold here, and to put up with the company of these furry beasts, but I object to being rushed next into a land of salamanders. They probably are fire-eaters on the other side. If you can show us some temperate or not too torrid land, where the people are as beautiful and attractive as they ought to be on a world called Venus, I'm with you with all my heart."

"That's not fire," replied Edmund.

"Why not inquire of Juba?" I asked.

"A very good idea. I'll try," and Edmund stopped the car. Juba, as he had already been taught to do whenever we stopped, immediately jumped off his sled and came running to us. Edmund took his match-box from his pocket, struck a match, and, while attracting Juba's attention, pointed alternately to match flame and the fiery objects on the horizon.

Juba understood at once, and vigorously shook his head, while his big, luminous eyes almost seemed to speak, if we could have understood their meaning. Phosphorescent waves appeared to chase one another in their depths, and Edmund asserted that it certainly was a language, expressed without sounds.

If it was a language, I positively think that Edmund had begun to understand it, for after a few minutes, during which he and Juba gesticulated and motioned and stared in each other's faces, Edmund turned to us and said:

"I ought to have foreseen this, and I am ashamed of myself because I didn't. Those seeming flames on the horizon are due to—what do you think? Mountains of crystal!"

"Mountains of crystal!" we all exclaimed.

The Mountains of Crystal the Cause of the "Flames"

"YES, just that. It's all plain enough when you think about it. Venus, being a world half day and half night, is necessarily as hot on one side as it is cold on the other. All the clouds and most of the moisture are on the day side of the planet, where the sunbeams act.

"The hot air, charged with moisture, rises over the middle of the sunward hemisphere and flows off above, on all sides, toward the night hemisphere, while from the latter cold air flows in underneath to take its place. Along the junction between the two hemispheres the clouds and moisture are condensed by the increasing cold, and fall in ceaseless storms of snow.

"This snow, descending uninterruptedly for ages, has piled up in vast mountainous masses. The moisture cannot pass very far into the night hemisphere without being condensed, and so it is all arrested within a great ring, or band, completely encircling the planet and marking the division between perpetual day and perpetual night.

"What look like gigantic flames to us are the sunbeams striking those mountains of solidified snow and ice from behind and breaking into prismatic fire."

The thing seemed simple enough after Edmund had explained it, but the effects were splendid and awful beyond description.

"I foresee now considerable trouble for us," Edmund continued. "There's been a warning of that, too, if I had but heeded it. I've noticed for some time that a wind, gradually getting stronger, has been following us, sometimes dying away and then coming up again. It is likely that this wind gets to be a terrible tempest in the neighborhood of those ice mountains.

"It is the back suction, caused—as I have already told you—by the rising of the heated air in the sunny side of the planet. It may play the deuce with us when we get into the midst of it."

"But did you learn all this from Juba?" I asked.

"Oh, no! Of course not. I only managed to make out from him that his people knew of the existence of these icy barriers. But the explanation flashed upon me as soon as I got hold of the main fact. Now, we've got to be a little cautious in our approach."

Danger of An Irresistible Wind

WE slowed down accordingly, and as soon as we did so we began to notice the wind that Edmund had spoken of. It came in great gusts

from behind, gradually increasing in frequency and in fury. Soon it was strong enough to drive the sleds without any pulling from the car, and sometimes they were forced close under us, and even ahead of us, the natives hanging on in wild alarm.

Edmund managed to govern the motion of the car for a while, holding it back against the storm; but, as he confessed to us, this was a thing he had made no provision for, and eventually we became almost as helpless as a ship in a typhoon.

"I could easily cut loose from these fellows and run right out of this," said Edmund, "but I'm not going to do it. I've taken them into my service, and I'm bound to look out for them. If there was room for them in the car it would be all right.

"By Jove! I've got it," he added, a moment later. "I'll fetch up the sleds, attach them under the car like the basket of a balloon, and carry them all! There's plenty of power. It's only room that's wanting."

It was no sooner said than done with Edmund.

By this time we were getting into the ice. Great hummocks of it surrounded us, although there was nothing yet resembling the mountains that Edmund had spoken of, and we dropped the car down in the lee of an icy hill, where the force of the wind was broken. The sky overhead was still free from clouds, but ahead we could see them whirling and tumbling in mighty masses of vapor.

Lashing the two sleds together, we attached them about ten feet below the car with wire ropes. Then the natives were assembled, and Edmund made them fasten themselves securely. When everything was ready, we four entered the car and the power was turned on.

"We'll rise straight up," said Edmund, "until we are out of the wind, and then we'll sail over the mountains and come down as nice as you please on the other side."

It was a beautiful program, and we had complete confidence in our leader; but it didn't work as we expected. Even his genius had met its match this time.

The Wind at Last Strikes Them

NO sooner had we risen out of the protection of the ice hummock than the wind caught us. It was a blast of such power and ferocity as we had not yet encountered. In an instant the car was spinning like a top; and there away we rushed before the tempest, the sleds being banged against the car, like tassels whipping in a storm. It was a wonder of wonders that the creatures on them were not flung off, or killed, by the frequent impacts.

But, fortunately, Edmund had seen that they were securely fastened, and, as you know already, they could stand knocks like so many bears. In the course of twenty minutes we must have traveled twice as many miles, perfectly helpless to arrest our mad rush or to divert our course, pitched hither and thither, and sprawling on the floor half the time. The noise was awful, and nobody even tried to speak.

The shutters were open, and suddenly I saw through one of the windows a sight that I thought was surely my last.

The car seemed to be sweeping through a dense cloud of boiling vapors, when they split asunder before my eyes; and there, almost right against us, was a glittering precipice of pure ice, gleaming wickedly with blue flashes, and we were rushing at it as if we had been shot from a cannon!

There was a terrific shock, which I thought for a moment must have crushed the car like an eggshell, and then down we fell—down and down!

CHAPTER VI

Lost in the Crystal Mountains

IF we had seen the danger earlier, and had not been so tumbled topsy-turvy by the pitching of the car in the wind, I suppose that Edmund would have prevented the collision, just as he had steered us away from some of the meteors, by setting up an "atomic reaction," serving for a push. But there was no chance for that. The blow against the precipice was not, however, as severe as it had seemed to me, and the car was not smashed.

But the fall was terrible.

There was only one thing which saved us from destruction. At the base of the great cliff of solid ice, against which the wind had hurled the car, an immense deposit of snow had collected, and into this we fell. We were all tumbled in a heap, the car and the sleds being inextricably entangled with the wire ropes.

Fortunately, however, the stout windows were not broken; and after we had struggled to our feet, as the car lay on its side, Edmund managed to open the door. He made us put on our furs, but even with them we found the cold almost intolerable.

But the natives paid no attention to it. Not one of them was seriously hurt; and they were still attached to the sled, so firmly had they been bound under Edmund's direction before we started from the hummock. We unloosed them, and then began to examine the situation.

Above us towered the icy precipice, disappearing in whirling clouds high overhead, and the wind drove square against it with the roar of Niagara. The air was filled with snow and ice-dust, and at times we could not see objects ten feet away. Our poor furry companions huddled together as soon as we got them upon their feet, and were of no use to themselves or to us.

Danger of Destruction Among the Ice Mountains

"WELL, we've got to get out of this mighty quick," said Edmund. "Come, hustle now, and we'll repair the ship."

We got to work, Juba alone aiding us, and soon had the sleds out of the tangle and again properly attached to the car. Then we entered the latter, and Edmund fumbled a while with his machinery.

In the course of ten or fifteen minutes, he said that it was damaged, but would still work, and that we'd start as soon as we could replace the natives on the sleds. We got them together with a good deal of trouble, for they were frightened out of their wits; and would have run away, had they known where to go. But they had sense enough to understand that their safety depended entirely

upon us. When they were once more safely attached, we entered the car and prepared to ascend.

"You notice," said Edmund, "that this wind is variable, and there's our chance."

We hadn't noticed it, but he had, and that was sufficient.

"When the blasts weaken," he continued, "the air springs back from the face of the precipice, and then whirls round to the left. I've no doubt that there's a passage there, through which the wind finds its way back behind this icy mountain, and if we can get there we shall probably find some sort of shelter.

"Then, I hope, it'll be comparatively an easy thing to make our way into a calmer region of the atmosphere. I'm going to take advantage of the first lull."

It worked out just as he had predicted. As the wind surged back, after a particularly vicious rush against the mighty blue cliff, we cut loose and sailed up into it, and away we went. We rushed past the glittering wall so swiftly that it made our heads swim. In two or three minutes we rounded a corner, and then found ourselves in a kind of atmospheric eddy, where the car simply spun round and round, with the two united sleds hanging below it.

"Now for it!" said Edmund, and touched a knob.

One Crisis Is Passed Without Accident

INSTANTLY we rose rapidly. We must have shot up a couple of thousand feet, when the wind caught us again, coming apparently over the top of the icy barrier that we had flanked. It swept us off with terrific speed. Suddenly the air cleared all about.

The spectacle that opened around and below was—well, I wish I could describe it! But a hundred languages rolled into one couldn't do it.

We were in the midst of the crystal mountains! They towered around us on every side and stretched away in ranges of shining pinnacles. And such shapes! Such colors! Such flashing and blazing of gigantic rainbows and prisms!

There were mountains that looked to my amazed eyesight as lofty and massive as Mont Blanc, composed all of crystalline ice, refracting and reflecting the sunbeams with iridescent splendor! For now we could begin to see the orb of the sun itself, poised on the edge of the jagged, gem-glittering horizon. The jeweled summit split its beams into a million bright halos.

There was one mighty peak, still ahead of us, but toward which we were rushed sidewise with terrific speed, that will haunt my dreams forever. It towered high above our level, and was simply one awful coruscating *Alp of light*, darting out on every side blinding rays of a thousand splendid hues, as if a whole worldful of emeralds, rubies, sapphires, and diamonds had been heaped together in one stupendous pile and set on fire by the sun!

We were speechless, even Edmund. But presently he spoke, very calmly; but what he said instantly changed our amazement to terror.

"Boys," he said, "there's something serious the matter with the apparatus! I can't make the car rise higher. I can no longer cause it to react against an obstacle. We are at the mercy of the wind. If it carries us against that glittering devil, no power under heaven can help us!"

If my hair had not whitened before, it certainly would have whitened now.

When we were swept against the first icy precipice, the danger had come upon us suddenly, unexpectedly, out of a concealing cloud. But now we had to bear the fearful strain of expectation, to see ourselves hurried to destruction with our eyes wide open to the terrible truth.

I thought that even Edmund's iron face paled a little. On we rushed, still borne sidewise, so that the spectacle was straight before us in all its awfulness, as, with fascinated eyes, we stared through the window. We were almost upon the mountain-peak, when Edmund shouted with a glad voice:

"We're safe! Look!" he continued. "See how those particles of ice, swept from the face by the tempest, leap hitherward, and then whirl round the peak. We may touch it; but the air, having a free vent on each side, will carry us one way or the other before a serious shock occurs."

Castaways in a Valley of Ice

HE had hardly finished speaking when the crisis arrived. We did just touch the front of a cliff; but it was narrow and sloping, and the wind, howling past it, carried us in an instant round the obstruction.

"Scared ourselves for nothing," said Edmund. "We were really as safe as a boat in a rapid. The velocity of the current sheered us off."

But there was a worse danger, which he hadn't yet had time to think about. We began to think of it, however, when, after the scintillant peak was left behind, we saw Edmund again working away at his machinery, while at the same time the car commenced to sink.

"What's the matter now?" I asked. "We seem to be going down."

"So we are," Edmund replied, "and I'm afraid we'll not go up again right away. The power is failing all the while. It will be pretty hard on us to have it stop in this frightful place, but it looks as though that were our fate."

Lost and helpless in these mountains of ice! The thought was too terrible to be entertained. For the first time since this adventure began, I heard connected words from Henry's lips. Their emphasis was terrible.

"Edmund Stonewall," he said hoarsely, "if you are the cause of my death with your infernal invention, may you be condemned to—"

But he never finished the sentence. His face turned as white as a sheet, and he sank upon the floor.

"Poor fellow!" said Edmund. "He's fainted."

In a few minutes Jack and I had Henry in his senses again, but as weak as a child, and lying on one of the cushioned benches. In the mean time the car had descended upon the snow in a deep valley, where we were protected from the wind.

In the profound depression where we now found ourselves a kind of twilight prevailed. We got out of the car, unloosed our companions from the sleds, and then began to look around.

All about us towered the crystal mountains, their bases—where they were not buried in snow and broken ice—reflecting deep hues of purple and ultramarine; while their upper parts, where the sunlight touched them, sparkled with amazing brilliance. Henry was now able to join us, but not a word was said concerning his outbreak.

Was there ever such a situation as ours?

Twenty-six Millions of Miles from Home

CAST away, in a place wild and wonderful beyond imagination, millions of miles from all human aid or sympathy; millions of miles, even, from the very world that had witnessed our birth!

I could, in bitterness of spirit, have laughed at the mere suggestion that there was any hope for us. And yet, at that very moment, not only was there hope, but there was even the certainty of deliverance. It lay in the brain of the wonderful man who had brought us thither.

I have told you that it was twilight in the valley where we were. But when, as frequently occurred, tempests of snow burst over the mountains above us and filled the air, the twilight was turned to deepest night; and then we had to illumine the electric lamps in the car.

The natives, being used to darkness, needed no artificial illumination. In fact, we found that as soon as the sunlight reached us their great eyes were almost blinded; and they suffered cruelly from an infliction so utterly beyond all their experience.

Edmund never lost his self-command. He tried to cheer us up.

"I'm going to make some hot coffee," he said, "and then I'll sit down and think it out. But first I must see to our fellows there, for we may have to stay here a while; and even with their furry skins, they'll suffer from this kind of weather."

Saving the Natives on the Sleds

UNDER his directions, we took a lot of extra furs from the car and, stretching them upon the upright stakes attached to the corners of the sleds, we made a kind of tent, under which the natives huddled for protection.

There being no wind to speak of here, this was not so difficult as it might seem. The fellows were very glad of the shelter that we had given them, for some of them were already beginning to shivver. No sooner were they housed than they fell to eating.

We then entered the car and turned on the electric range, and ten minutes later we were enjoying our coffee. When we had finished we got out our pipes and smoked, as if there had been no crystal mountains tottering over us and no howling tempest tearing through the cloud-filled sky a thousand feet or so above our heads.

We talked of our adventure, and of home—home twenty-six million miles away! In fact, it might have been nearer thirty millions by this time, for Edmund had told us that Venus, having passed conjunction, was beginning to recede from the earth.

But Edmund did not join in our conversation now. He sat apart, thinking; and we respected his isolation, knowing that our only chance of escape lay in him. At last, without saying a word, he went outside and remained a long time. Then he came back smiling.

"I've found the solution," he said. "We'll get out all right, but we shall have to wait a while."

"What is it?" we asked in concert. "What have you found?"

The Libration of Venus to Rescue the Visitants

"ALBERT," he said, turning to me, "*you* ought to know what libration means. Well, it's libration that is going to save us. As Venus travels around the sun, she turns just once on her axis in making one circuit. The consequence, as you already know, is that she has one side where the sun never rises, while the other side always faces the sun.

"But since her orbit is not a perfect circle, she travels a little faster at certain times, and a little slower at others, while her slow rotation on her axis never varies. The result is that along the border between the day and night hemispheres there is a narrow strip where the sun rises and sets once in each of her years, which are about two hundred and twenty-five of our days in length.

"On this strip the sun shines continuously for about sixteen weeks, gradually rising during eight of those weeks, and gradually sinking for eight weeks more. Then, during the following sixteen weeks, the sun is entirely absent from the strip.

"Now, we are just in that strip, and we may thank our stars for it. By good luck, after we were swept past that blazing peak of ice which nearly shipwrecked us, the wind carried us on so far before the power gave out that we descended on the sunward side of the crest of the icy range.

"The sun is at present just beginning to rise on this part of the planet, and it will continue to rise for several weeks. The result will be that a great melting of ice and snow will take place all around us here; and a river will be formed in this valley, flowing off toward the sunward hemisphere, exactly where we want to go.

"I'm going to take advantage of the torrent and float down with it. It's our only chance, for we couldn't possibly clamber over all this hummocky ice and drag the car with us."

"Why not leave the car behind, then?" asked Henry.

Edmund looked at him and smiled.

"Do you want to stay on Venus all your life?" he asked. "I can repair the mechanism, if I can find certain substances, which I am sure exist on this planet as well as on the earth.

"But there is no use of looking for them in this icy waste. No, we can never abandon the car, we must take it with us, and the only way to take it is with the aid of the river of ice and snow-water which will soon be created by the rising sun."

"But how will you manage to float?" I asked.

"The car, being air-tight, will float like a buoy."

"And how about the natives?"

"Ah! I'll have to think about that. But we'll save them, too, if possible."

Of course Edmund was right; he always was. But I'll cut short the story of our stay in that awful valley.

Every twenty-four hours, by the calendar clock,

we saw that the sun had risen higher; and as it rose, the sky cleared, and its beams, falling uninterruptedly, became hotter and hotter. Soon we had no longer any use for furs, or for the electric heat in the car.

At the same time the melting began. It was a new danger for us, yet we watched it joyously, since it offered our only chance of escape.

We were just in the bottom of the valley, near its head. It wound away before us, turning out of sight beyond a vast hill of ice. Streams began to trickle down the heights behind us, and, uniting, they formed a rivulet at our feet, flowing over smooth ice with great velocity.

A Deluge from the Melting Ice

EDMUND'S plan for saving the natives was now put into operation.

"I'll take Juba into the car," he said. "There's just room for him. For the others, we'll fasten the sleds one on each side of the car, which is buoyant enough to float them, and they'll have to take their chances outside."

We made all these arrangements, while the rivulet gradually swelled into a torrent. Before it had become too broad and deep we managed to place the car, with the sleds like outrider, across the center of its course. Then we took our places and waited.

Higher and higher rose the water, while from the slopes behind and around us avalanches of ice descended, and great cataracts began to leap and pour. It was a mercy that we were so situated that the avalanches did not reach us, although we received some pretty hard knocks from ice floes borne away in the current.

At last the stream became deep enough to float us.

Shall I ever forget that moment?

There came a sudden wave of water, forced on by a great slide of ice; we were lifted upon its crest, and away we went! The car was more buoyant than I had believed possible. The sleds, fastened on each side, served to give it a certain stability, and it did not sink as deep as the bottom of the windows. The latter, though formed of glass of great thickness, might have been broken by the tossing ice if they had not been divided into many small panes, separated by bars of steel, which projected a few inches on the outside.

"I made that arrangement for meteoric fragments," said Edmund, "but I never thought of ice when I did it."

The Dangers Lessen as the Ice Melts

THE increasing force of the current soon sent us spinning down the valley. We swept around the nearest ice peak on the left, and as we passed under its projecting buttresses a fearful roar above informed us that an avalanche was let loose.

We could not withdraw our eyes from the window on that side of the car, and presently immense masses of ice came crashing into the water, throwing it over us in floods and half drowning the poor wretches on the sleds. Still, they clung on, fastened together, and we could do nothing to help them.

The uproar continued, and the ice came down faster and faster with a deluge of water. The car pitched and rolled, until we could hardly keep our feet, hanging on to every support within reach.

Poor Juba was a picture of abject terror. He hung, moaning, to a bench, his huge eyes aglow with fright. Suddenly the car seemed to be lifted from the water. Then it fell back again and was submerged, so that we were buried in night. We rose again to the surface, and Edmund, glancing from the window, shouted:

"They're gone! Heaven have pity on them!"

In spite of their fastenings, the water and the ice had swept every living soul from the sled on the left! We rushed to the other window.

It was the same story there—the sled on that side was empty too! I saw a furry body tossed in the torrent along side, and then it disappeared in the raging water. At the same time, Edmund exclaimed:

"Heaven forgive me for bringing these poor creatures here, to lose them!"

CHAPTER VII

The Children of the Sun

BUT the situation was too exciting to permit us to think long of the poor creatures whose deaths we had undoubtedly caused. There seemed less than an even chance of our getting through ourselves.

As we went tossing and whirling on, the water rose still higher, and the blocks of ice assailed us on all sides. First, the sled on the left was torn loose; then the other disappeared. The car was left to make its own way.

But the loss of the sleds was a good thing, now that their occupants were gone. It eased off the weight and the car rose much higher in the water; and gave room more readily when pressed by ice blocks.

It rolled more than before, to be sure; but still it was well ballasted, and did not turn turtle. It took one fearful plunge, however, over a perpendicular fall of, I should say, twenty or thirty feet in height. But the water was very deep; and we came up again after the plunge like a cork, and whirled off down the rapids.

The Belt of Storms

AT last the stream became so broad that the danger from the floating ice was to an extent relieved, and we began to look about us more coolly. As in all cases of long-continued peril, we were becoming hardened by so many escapes and growing more and more confident.

We had got out of the ice mountains by this time, and the elevations about us were of no great height. But we could see the glittering peaks towering far behind, and it was a most appalling sight to watch many of the nearer hills suddenly sink, collapse, and disappear, just as—if you have ever watched the operations of the cook in the kitchen when a boy—you have seen pinnacles of soft sugar melt down in water.

Edmund said that all of the icy hills and mounds through which we were passing, no doubt, owed their existence to pressure from behind, where the

sun never rose, and where the ice was piled into actual mountains. These foot-hills were, in fact, enormous glaciers, thrust out toward the sunward hemisphere.

After a long time the river that bore us broadened out into a veritable lake. The surface around became comparatively level, and was all covered with the water. The sun rose higher and higher as we approached it, and the heat increased.

Vast fields of ice floated in the great lake, whose water was not muddy, as it would have been if it had passed over soil, but of crystal purity and wonderfully blue in the deep places. And now we began to notice the wind again.

It came fitfully, first from one direction, and then from another. At times it rose to the fury of a tempest and lifted the water into huge waves. But the car rode them beautifully.

"Therein lies our greatest danger," said Edmund. "The current still sets in the same direction, and I foresee that we shall be carried into a region where the contending winds will play perfect havoc."

The Airships of Venus

"IT is the region where the hot air from the sunward side begins to descend, and the cold air from the other side meets it. It is a belt of storms, and it may form a barrier more tremendous than the crystal mountains themselves. We shall have all we can do to escape being cast away when we approach a shore—for shore of some kind there must be."

It came out nearly as he had anticipated, except that the current gradually died away, and we found ourselves driven about by the wind. This continually increased in force, and at last the sky became choked with dense clouds, which swept down upon the face of the waters, and were whirled into black tornadoes by the circling blasts.

Frequently the car was deluged by waterspouts; and at such times, when in the center of the gyrating spouts, it would actually be lifted clear into the air. An ordinary vessel would have been unable to live five minutes in that hell of waters and of winds. But the car went through it like a giant bubble.

I do not know how long all this lasted. It might have been forty-eight hours. The thing became worse and worse. Sometimes rain mingled with hail descended in vast sheets. Half of the time one window or the other was submerged, and when we were able to look out we could see nothing but the awful clouds whipping the surface of the water.

But at length, and with amazing quickness, there came a change. The clouds broke away, brilliant sunlight streamed into the car, and, as we rocked first to one side and then to the other, we caught glimpses of a marvelous dome high overhead.

It was not a blue vault, such as we see on the earth. It was of an indescribably soft grayish color, and under it floated here and there delicate curtains of cloud, like the mackerel skies that precede a storm. They were tinted like sheets of mother-of-pearl; but, although the light was bright, no sunshine appeared.

The lake had now expanded into an apparently boundless sea, whose surface had quieted down, for the winds no longer blew with their former violence. Presently Jack, who was standing alone at one of the windows, called to us.

We went to his side of the car, and he pointed to something that glittered high up in the air.

"What's that?" he asked.

"What are those, rather?" I demanded, for I had caught sight of a dozen of the glittering objects ranged in an almost straight row, at an elevation perhaps of two thousand feet, and several miles away from us.

A New Race of Venustians

NOBODY answered for a long time, while we continued to gaze in astonishment. Even Juba noticed the things with his moon eyes, which did not suffer here quite as much as they had done in the sunshine. At last Edmund said:

"Those are air-ships."

"Air-ships!"

"Yes, nothing less. An exploring expedition, I shouldn't wonder. I anticipated something of that kind. You know already how dense the atmosphere of Venus is. It follows that balloons and air-ships can float much more easily here than over the earth. I was prepared to find the inhabitants of Venus skilled in aerial navigation, and I'm not disappointed."

"Then you think that there are people in those things up there?"

"Of course; and I reckon that they've seen us, and are going to investigate us."

It was a startling thought, and I confess that I had to screw up my courage. To be sure, we had come here expecting to find inhabitants; but I, at least, hadn't looked to meet them so soon, and certainly I was not expecting first to find them in the sky.

I felt like the hunter who goes after a grizzly, and suddenly perceives his enemy staring down from a rock just over his head.

Edmund was evidently correct in surmising that they had seen us. Some kind of signal flashed among the air-ships, and they altered their course. Still keeping in line, they began to advance in our direction, at the same time gradually descending.

As they drew nearer we could make out some of their details.

The Effect of Loud Sound in the Dense Atmosphere of the Planet

THEY were long and narrow, and bore considerable resemblance to airplanes which I had seen at home. But they were much more complete. They were evidently driven by screws, and they seemed to be steered with great ease and certainty. Their approach was rapid.

When we first saw them they were probably three miles away, but in the course of some minutes they had drawn so near that we could see their decks crowded with what certainly looked like human beings. I felt a great relief in noticing that they bore no resemblance to the creatures we had encountered on the night side of the planet.

But then came the disturbing thought—shall we be any safer because they are more like men? With increase of intelligence comes increase of the power, and often of the disposition, to do evil. However,

we had to face our fate, whatever it might be. It wasn't likely that they would begin by making an end of us. Their curiosity would first have to be satisfied.

They showed no apprehension. Why should they? All that they saw as yet was an odd-looking affair floating on the water. They might take it for some strange marine animal, but they could never imagine that it contained intelligent beings whose eyes were watching them.

At length they came to rest within a hundred yards of the car. Then one of the air-ships settled gracefully down upon the water, where it rose and fell with the swell as gently as a swan.

With some appearance of caution it began to approach us. What should we do?

Edmund answered the question in a practical manner without consulting the rest of us. He threw open a window, and stepped out upon a steel ledge running just beneath it. You should have seen the astonishment of our inquisitors when they caught sight of him.

Instantly they stopped the slow movement of their craft and gathered at its bow, staring at Edmund and making all sorts of strange gestures. Edmund repeated the same maneuvers that he had employed at the entrance of the cavern where we first landed.

"Hallo, you!" he called out.

A Beautiful Woman in Command

HIS voice sounded like a tremendous crack, and a momentary panic seized them. They were evidently as unused to loud voices as were the creatures on the other side of the planet. But they were not so easily cowed. Feeling themselves at a safe distance from the strange monster, they held their ground.

We were not prepared for their next move. If they had given no evidence of the abject fright that had overcome the creatures of the cavern when their ears were thus assailed, they had at least shown that they were greatly startled and disturbed; and we ascribed their comparative coolness to the fact that they were in a ship which they knew could take flight into the air at a moment's notice.

But we misjudged them; or, rather, one of them. To our surprise, after the momentary effect of Edmund's shout had passed, they began again to approach us.

Reading Our Souls

THEN we saw that this maneuver was due to the commands of a person standing near the bow, and our amazement may be imagined when we recognized—beyond all possibility of doubt—that this person was *a woman!*

They were now within fifteen yards of us, and every detail of the faces and figures was visible. There were, perhaps, thirty persons on the air-ship, which continued floating easily on the water; and of these, half a dozen were certainly women.

They stood in a group in front of the men, and one of them, as I have said, by her commands directed the movements of the vessel. Jack, whose irrepressible optimism had not been permanently affected by our recent terrible experiences, exclaimed, as we all crowded at the window behind Edmund:

"Amazons, upon my word! The women are in command here. I should rather have expected to see Mars leading the Venuses."

"Not Amazons in appearance," I replied. "Did you ever see any creatures more beautiful than those?"

And, indeed, as the way of the approaching craft was stopped, and it drifted very slowly nearer, our eyes were fairly dazzled by the spectacle which those women presented!

Their forms and faces were distinctly human in type, but with a suggestion of something almost superhuman. I particularly noticed their leader.

She was bewildering. She seemed a Madonna just descending from the sky. And yet she was rather an Aphrodite than a Madonna.

Her complexion was light, with a flame upon the cheeks; her hair a chestnut blond. Her eyes, of a pure sapphire-blue, seemed to radiate a light of their own. I had never seen, had never dreamed, of such eyes. They were more than eyes; they were truly what the poets had imagined—"windows of the soul."

Such expression as they had! I verily believe that they spoke. I could feel a strange influence proceeding from them.

Her dress and that of her companions was something that I cannot describe, farther than to say that it suggested the attire of a Greek statue. It was not the dress that terrestrial women would wear at the present time, except perhaps in some remote Pacific island; but it revealed and enhanced the beauty of the wearer in a manner that would have driven an artist wild with admiration.

In the presence of this vision we had no eyes for the men in the background; and yet, as a glance showed, they were no less remarkable for physical attractions.

They were of about the average human stature, and very perfectly formed, with attire as classically simple as that of their beautiful companions. We were all so lost in amazement and admiration that even Edmund seemed to have been struck dumb and motionless, not knowing what to do.

The craft drifted within four or five yards of the car, and then the woman who commanded it slowly lifted her right hand, revealing a glittering bracelet of gems upon her white wrist; and with a smile of indescribable winningness made a motion which said, as plainly as words could have done:

"Strangers, you are welcome."

CHAPTER VIII

An Adventure in the Air

I MUST hurry on to what followed that first meeting on the sea. The events were so wonderful, they so transcended all human experience, that to relate them in detail would require volumes; and among them there are things impossible to describe, because so entirely without terrestrial analogy.

It was now that we first became completely aware

of the existence of that incredible power of communicating thought without the intervention of spoken language to which I have before referred.

It might, perhaps, be described as a kind of telepathy. I have already told you that at the first glance into the eyes of the Aphrodite who commanded the air-craft, I felt that in some strange manner those eyes could speak. And so they could.

They all had a language of the eyes—or, at least, a language that seemed to radiate from them. I thought of the speculations of a German enthusiast that I had read, concerning "odic force."

And yet they spoke with their lips, also, in low, soft tones, exceedingly agreeable to the ear. But this language of sounds was only a subsidiary method of communication. The other was the tongue of nature, and we felt that our minds could comprehend it, although at first only in a dim, uncertain way. We did not know exactly how to reply, but they understood us.

A Language and No Language

THEY seemed to read our souls. We had only to *think* what we would say, and with amazing readiness they interpreted many of our thoughts. It was mind-reading carried to perfection.

So no long time had elapsed before an astonishing degree of mutual comprehension was established. Juba comprehended even quicker than we did, which was but natural, and yet these blond, clean-skinned people were as much astonished at his appearance as at ours.

It was evident that the inhabitants of the two sides of this strange world had never before encountered one another. Still, they seemed to understand instinctively that Juba, for all his extraordinary features and his baboon-like form, was more closely allied to them than to us.

Edmund, who so greatly excelled the rest of us in intellectual force, made rapid progress in the unparalleled intercourse which now began. To our surprise, it was not long before he told us the name of the beautiful commander, or one of them, for he said she seemed to have several names—one or more of which, he thought, might be titles.

"They call her Ala," he said; "at least, that is as near as I can pronounce it, and we may as well accept that for her name."

As soon as it became evident that we had nothing to fear from these people—at least, for the present—Jack's enthusiasm knew no bounds.

"Jove! Edmund," he said, "but I thank you for bringing me here. This is Venus, without a doubt."

Later, I shall tell you more about that wonderful language, which was at the same time no language and all language—for it developed into things infinitely more incredible than any that I have yet related. But enough for the present.

You can now comprehend how it was that, landing in another world, we were able so soon to establish an understanding, and even an intimacy, with its inhabitants. Believe me, on the earth nobody has yet begun to dream what mind means.

Edmund soon made Ala understand that we wished to journey into the lands lying beyond the shores of the sea. He told us afterward that his conjecture had been right, and that the air-ships were really on an exploring expedition along the borders of the world of light, because the inhabitants on that side of Venus had a great curiosity to know what lay beyond the storms and clouds in the mysterious empire of night.

Evidently, it was the violent tempests which prevailed near the crystal mountains that prevented the passage of their aerial craft. The mountains themselves they had never seen. But they felt that they had made a discovery of the first magnitude in finding us, for they took us to be inhabitants of the other side of the planet, although they were puzzled by the manifest difference between Juba and the rest.

A Magnificent Reception

I MAY say here that, although the light was more diffused and softer under the cloudlike dome than in the sunshine that prevails on the earth, Juba's huge eyes suffered so much that we contrived for him a mask to protect them. Later on he became better able to bear the light.

Feeling that their expedition had been crowned with unlooked-for success, our new friends were ready to gratify Edmund's desire by hurrying back to their home. Only one difficulty was encountered at the start. Edmund refused absolutely to abandon the car.

It was, of course, indispensable to us, and he was sure that he could repair the apparatus, once in possession of the materials that he required. Finally it was arranged that the car should be attached to one of the airships and towed after it as we had towed the sleds.

But Ala insisted that we should become her guests on her "yacht," as Jack called it, and we gladly consented.

We saw no danger, and apprehended none immediately. Nevertheless, we kept our automatic pistols in our pockets, and each also armed himself with an automatic repeating-rifle. Our hosts showed no special curiosity about these things, the nature of which they did not understand.

The airships were extremely ingenious. Edmund examined the one we were on from stem to stern, and I have no doubt that when he was through he understood it quite as well as its builders did. It was lucky that he did.

"If they had my secret," he said to us, "they would be incomparable. They are a great people."

"All the more pity that you brought nothing better than automatic arms," said Jack.

"I don't believe that they have anything as good in that line," Edmund replied. "From what I can make out, they are not much given to fighting."

We made rapid progress, and after twenty-four hours came in sight of land.

The coast was not high, but far beyond it we could see ranges of mountains; and apparently rising from the foot-hills of these mountains there were visible curious objects, the nature of which we could not make out from so great a distance.

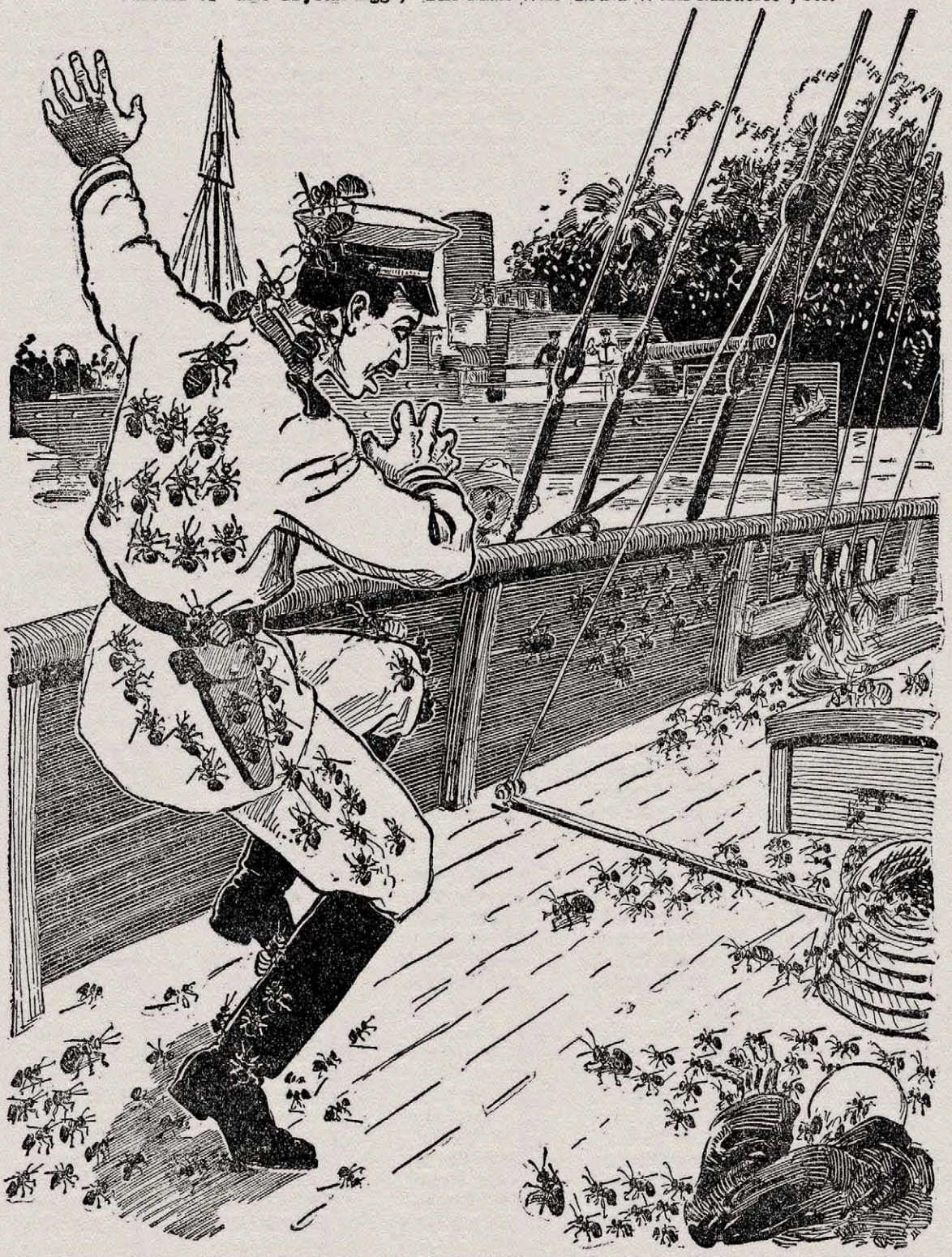
They resembled immense floating cobwebs as much as anything that I can liken them to. Edmund tried to find out from Ala what it was that

(*Continued on page* 474)

The EMPIRE of the ANTS

By H. G. Wells

Author of "The Crystal Egg", "The Man Who Could Work Miracles", etc.



He did not see them actually rush for the lieutenant . . . but he has no doubt they did make a concerted rush. Suddenly the lieutenant was shouting and cursing and beating his legs. "I'm stung!" he shouted, with a face of hate and accusation.

I

The Great River

WHEN Captain Gerilleau received instructions to take his new gunboat, the *Benjamin Constant*, to Badama on the Batemo arm of the Guaramadema and there assist the inhabitants against a plague of ants, he suspected the authorities of mockery. His promotion had been romantic and irregular, the affections of a prominent Brazilian lady and the captain's liquid eyes had played a part in the process, and the *Diario* and *O Futuro* had been lamentably disrespectful in their comments. He felt he was to give further occasion for disrespect.

He was a Creole, his conceptions of etiquette and discipline were pure-blooded Portuguese, and it was only to Holroyd, the Lancashire engineer who had come over with the boat, and as an exercise in the use of English—his "th" sounds were very uncertain—that he opened his heart.

"It is in effect," he said, "to make me absurd! What can a man do against ants? Dey come, dey go."

"They say," said Holroyd, "that these don't go. That chap you said was a Sambo——"

"Zambo;—it is a sort of mixture of blood."

"Sambo. He said the people are going!"

The captain smoked fretfully for a time. "Dese tings 'ave to happen," he said at last. "What is it? Plagues of ants and suchlike as God wills. Dere was a plague in Trinidad—the little ants that carry leaves. All der orange-trees, all der mangoes! What does it matter? Sometimes ant armies come into your houses—fighting ants; a different sort. You go and they clean the house. Then you come back again;—the house is clean, like new! No cockroaches, no fleas, no jiggers in the floor."

"That Sambo chap," said Holroyd, "says these are a different sort of ant."

The captain shrugged his shoulders, fumed, and gave his attention to a cigarette.

Afterwards he reopened the subject. "My dear 'Olroyd, what am I to do about dese infernal ants?"

Six Days Up the Amazon

THE captain reflected. "It is ridiculous," he said. But in the afternoon he put on his full uniform and went ashore, and jars and boxes came back to the ship and subsequently he did. And Holyroyd sat on deck in the evening coolness and smoked profoundly and marvelled at Brazil. They were six days up the Amazon, some hundreds of miles from the ocean, and east and west of him there was a horizon like the sea, and to the south nothing but a sand-bank island with some tufts of scrub. The water was always running like a sluice, thick with dirt, animated with crocodiles and hovering birds, and few by some inexhaustible source of tree trunks; and the waste of it, the headlong waste of it, filled his soul. The town of Alemquer, with its meagre church, its thatched sheds for houses, its discoloured ruins of ampler days, seemed a little thing lost in this wilderness of Nature, a sixpence dropped on Sahara. He was a young man, this was his first sight of the tropics, he came straight from England, where Nature is hedged, ditched, and drained into the perfection of submission, and he had suddenly discovered the insignificance of man. For six days they had been steaming up from the sea by unfrequented channels, and man had been as rare as a rare butterfly. One saw one day a canoe, another day a distant station, the next no men at all. He began to perceive that man is indeed a rare animal, having but a precarious hold upon this land.

He perceived it more clearly as the days passed, and he made his devious way to the Batemo, in the company of this remarkable commander, who ruled over one big gun, and was forbidden to waste his ammunition. Holroyd was learning Spanish industriously, but he was still in the present tense and substantive stage of speech, and the only other person who had any words of English was a negro stoker, who had them all wrong. The second in command was a Portuguese, da Cunha, who spoke French, but it was a different sort of French from the French Holroyd had learnt in Southport, and their intercourse was confined to politenesses and simple propositions about the weather. And the weather, like everything else in this amazing new world, the weather had no human aspect, and was hot by night and hot by day, and the air was steam, even the wind was hot steam, smelling of vegetation in decay: and the alligators and the strange birds, the flies of many sorts and sizes, the beetles, the ants, the snakes, and monkeys seemed to wonder what man was doing in an atmosphere that had no gladness in its sunshine and no coolness in its night. To wear clothing was intolerable, but to cast it aside was to scorch by day, and expose an ampler area to the mosquitoes by night; to go on deck by day was to be blinded by glare and to stay below was to suffocate. And in the daytime came certain flies, extremely clever and noxious about one's wrist and ankle. Captain Gerilleau, who was Holroyd's sole distraction from these physical distresses, developed into a formidable bore, telling the simple story of his heart's affection day by day, a string of anonymous women, as if he were telling beads. Sometimes he suggested sport, and they shot at alligators, and at rare intervals they came to human aggregations in the waste of trees, and stayed for a day or so, and drank and sat about, and, one night, danced with Creole girls who found Holroyd's poor elements of Spanish, without either past tense or future, amply

A WELL-KNOWN entomologist once made the remark that if the insect world, instead of fighting each other, should suddenly decide to fight the human race, we should all soon be annihilated. We know the tremendous power for organization among the ants, and we also know that they have reached a pretty high stage of civilization. For one thing, they seem to be able to govern themselves much better than we can ourselves. In the tropical countries there are many species of giant and poisonous ants existing even now, and they are well known for their ravages and for their destructive power. We can only wish that the brilliant story penned here by our famous author will never come true.

sufficient for their purposes. But these were mere luminous chinks in the long gray passage of the streaming river up which the throbbing engines beat. A certain liberal heathen deity, in the shape of a demi-john, held seductive court aft, and, it is probable, forward.

But Gerilleau learnt things about the ants, more things and more, at this stopping-place and that, and became interested in his mission.

"Dey are a new sort of ant," he said. "We have got to be—what do you call it?—entomologie? Big. Five centimetres!* Some bigger! It is ridiculous. We are like the monkeys—sent to pick insects. . . . But dey are eating up the country."

The Fatal Ants

HE burst out indignantly. "Suppose—suddenly, there are complications with Europe. Here and I—soon we shall be above the Rio Negro—and my gun, useless!"

He nursed his knee and mused.

"Dose people who were dere at de dancing place, dey 'ave come down. Dey 'ave lost all they got. De ants come to deir house one afternoon. Every one run out. You know when de ants come one must—every one runs out and they go over the house. If you stayed they'd eat you. See? Well, presently dey go back; dey say, 'The ants 'ave gone.' . . . De ants *'aven't* gone. Dey try to go in—de son, 'e goes in. De ants fight."

"Swarm over him?"

"Bite 'im. Presently he comes out again—screaming and running. He runs past them to the river. See? He gets into de water and drowns de ants—yes." Gerilleau paused, brought his liquid eyes close to Holroyd's face, tapped Holroyd's knee with his knuckle. "That night he dies, just as if he was stung by a snake."

"Poisoned—by the ants?"

"Who knows?" Gerilleau shrugged his shoulders. "Perhaps they bit him badly. . . . When I joined dis service I joined to fight men. Dese things, dese ants, dey come and go. It is no business for men."

After that he talked frequently of the ants to Holroyd, and whenever they chanced to drift against any speck of humanity in that waste of water and sunshine and distant trees, Holroyd's improving knowledge of the language enabled him to recognise the ascendant word *Saüba*,† more and more completely dominating the whole.

He perceived the ants were becoming interesting, and the nearer he drew to them the more interesting they became. Gerilleau abandoned his old themes almost suddenly, and the Portuguese lieutenant became a conversational figure; he knew something about the leaf-cutting ant, and expanded his knowledge. Gerilleau sometimes rendered what he had to tell to Holroyd. He told of the little workers that swarm and fight, and the big workers that command and rule, and how these latter always crawled to the neck and how their bites drew blood. He told how they cut leaves and made fungus beds, and how their nests in Caracas are sometimes a hundred yards across. Two days the three men spent disputing whether ants have eyes. The discussion grew dangerously heated on the second afternoon, and Holroyd saved the situation by going ashore in a boat to catch ants and see. He captured various specimens and returned, and some had eyes and some hadn't. Also, they argued, do ants bite or sting?

"Dese ants," said Gerilleau, after collecting information at a rancho, "have big eyes. They don't run about blind—not as most ants do. No! Dey get in corners and watch what you do."

"And they sting?" asked Holroyd.

"Yes. Dey sting. Dere is poison in the sting." He meditated. "I do not see what men can do against ants. Dey come and go."

"But these don't go."

"They will," said Gerilleau.

The Hopeless Wilderness

PAST Tamandu there is a long low coast of eighty miles without any population, and then one comes to the confluence of the main river and the Batemo arm like a great lake, and then the forest came nearer, came at last intimately near. The character of the channel changes, snags abound, and the *Benjamin Constant* moored by a cable that night, under the very shadow of dark trees. For the first time for many days came a spell of coolness, and Holroyd and Gerilleau sat late, smoking cigars and enjoying this delicious sensation. Gerilleau's mind was full of ants and what they could do. He decided to sleep at last, and lay down on a mattress on deck, a man hopelessly perplexed, his last words, when he already seemed asleep, were to ask, with a flourish of despair, "What can one do with ants? . . . De whole thing is absurd."

Holroyd was left to scratch his bitten wrists, and meditate alone.

He sat on the bulwark and listened to the little changes in Gerilleau's breathing until he was fast asleep, and then the ripple and lap of the stream took his mind, and brought back that sense of immensity that had been growing upon him since first he had left Para and come up the river. The monitor showed but one small light, and there was first a little talking forward and then stillness. His eyes went from the dim black outlines of the middle works of the gunboat towards the bank, to the black overwhelming mysteries of forest, lit now and then by a fire-fly and never still from the murmur of alien and mysterious activities. . . .

It was the inhuman immensity of this land that astonished and oppressed him. He knew the skies were empty of men, the stars were specks in an incredible vastness of space; he knew the ocean was enormous and untamable, but in England he had come to think of the land as man's. In England it is indeed man's, the wild things live by sufferance, grow on lease, everywhere the roads, the fences, and absolute security runs. In an atlas, too, the land is man's, and all coloured to show his claim to it—in vivid contrast to the universal independent blueness of the sea. He had taken it for granted that a day would come when everywhere about the earth, plough and culture, light tramways and good roads, an ordered security, would prevail. But now, he doubted.

The Ants the Real Masters of the Country

THIS forest was interminable, it had an air of being invincible, and Man seemed at best an infrequent precarious intruder. One travelled for miles, amidst the still, silent struggle of giant trees, of strangulating creepers, of assertive flowers, everywhere the alligator, the turtle, and endless varieties of birds and insects seemed at home, dwelt irreplaceably—but man, man at most held a footing upon resentful clearings, fought weeds, fought beasts and insects for the barest foothold, fell a prey to snake and beast, insect and fever, and was presently carried away. In many places down the river he had been manifestly driven back, this deserted creek or that preserved the name of a *casa*,* and here and there ruinous white walls and a shattered tower enforced the lesson. The puma, the jaguar, were more the masters here. . . .

Who were the real masters?

In a few miles of this forest there must be more ants than there are men in the whole world! This seemed to Holroyd a perfectly new idea. In a few thousand years men had emerged from barbarism to a stage of civilisation that made them feel lords of the future and masters of the earth! But what was to prevent the ants evolving also? Such ants as one knew lived in little communities of a few thousand individuals, made no concerted efforts against the greater world. But they had a language, they had an intelligence! Why should things stop at that any more than men had stopped at the barbaric stage? Suppose presently the ants began to store knowledge, just as men had done by means of books and records, use weapons, form great empires, sustain a planned and organised war?

Things came back to him that Gerilleau had gathered about these ants they were approaching. They used a poison like the poison of snakes. They obeyed greater leaders even as the leaf-cutting ants do. They were carnivorous, and where they came they stayed. . . .

The forest was very still. The water lapped incessantly against the side. About the lantern overhead there eddied a noiseless whirl of phantom moths.

Gerilleau stirred in the darkness and sighed. "What can one *do?*" he murmured, and turned over and was still again.

Holroyd was roused from meditations that were becoming sinister by the hum of a mosquito.

II

The Ants in Command of the Canoe

THE next morning Holroyd learned they were within forty kilometres of Badama, and his interest in the banks intensified. He came up whenever an opportunity offered to examine the surroundings. He could see no signs of human occupation whatever, save for a weedy ruin of a house and the green-stained façade of the long-deserted monastery at Moju, with a forest tree growing out of a vacant window space, and great creepers netted across its vacant portals. Several flights of strange yellow butterfles with semi-transparent wings crossed the river that morning, and many alighted on the monitor and were killed by the men. It was towards afternoon that they came upon the derelict *cuberta*.†

She did not at first appear to be derelict; both her sails were set and hanging slack in the afternoon calm, and there was the figure of a man sitting on the fore planking beside the shipped sweeps. Another man appeared to be sleeping face downwards on the sort of longitudinal bridge these big canoes have in the waist. But it was presently apparent, from the sway of her rudder and the way she drifted into the course of the gunboat, that something was out of order with her. Gerilleau surveyed her through a field-glass, and became interested in the queer darkness of the face of the sitting man, a red-faced man he seemed, without a nose—crouching he was rather than sitting, and the longer the captain looked the less he liked to look at him, and the less able he was to take his glasses away.

But he did so at last, and went a little way to call up Holroyd. Then he went back to hail the cuberta. He hailed her again, and so she drove past him. *Santa Rosa* stood out clearly as her name.

As she came by and into the wake of the monitor, she pitched a little, and suddenly the figure of the crouching man collapsed as though all its joints had given way. His hat fell off, his head was not nice to look at, and his body flopped lax and rolled out of sight behind the bulwarks.

"Caramba!" cried Gerilleau, and resorted to Holroyd forthwith.

Holroyd was half-way up the companion. "Did you see dat?" said the captain.

"Dead!" said Holroyd. "Yees. You'd better send a boat aboard. There's something wrong."

"Did you—by any chance—see his face?"

"What was it like?"

"It was—ugh!—I have no words." And the captain suddenly turned his back on Holroyd and became an active and strident commander.

The Dead Men on the Canoe

THE gunboat came about, steamed parallel to the erratic course of the canoe, and dropped the boat with Lieutenant de Cunha and three sailors to board her. Then the curiosity of the captain made him draw up almost alongside as the lieutenant got aboard, so that the whole of the *Santa Rosa*, deck and hold, was visible to Holroyd.

He saw now clearly that the sole crew of the vessel was these two dead men, and though he could not see their faces, he saw by their outstretched hands, which were all of ragged flesh, that they had been subjected to some strange exceptional process of decay. For a moment his attention concentrated on those two enigmatical bundles of dirty clothes and laxly flung limbs, and then his eyes went forward to discover the open hold piled high with trunks and cases, and aft, to where the little cabin gaped inexplicably empty. Then he became aware that the planks of the middle decking were dotted with moving black specks.

His attention was riveted by these specks. They were all walking in directions radiating from the fallen man in a manner—the image came unsought to his mind—like the crowd dispersing from a bull-fight.

*House. †Canoe.

He became aware of Gerilleau beside him. "Capo," he said, "have you your glasses? Can you focus as closely as those planks there?"

Gerilleau made an effort, grunted, and handed him the glasses.

There followed a moment of scrutiny. "It's ants," said the Englishman, and handed the focused field-glass back to Gerilleau.

His impression of them was of a crowd of large black ants, very like ordinary ants except for their size, and for the fact that some of the larger of them bore a sort of clothing of gray. But at the time his inspection was too brief for particulars. The head of Lieutenant da Cunha appeared over the side of the cuberta, and a brief colloquy ensued.

"You must go aboard," said Gerilleau.

The lieutenant objected that the boat was full of ants.

"You have your boots," said Gerilleau.

The lieutenant changed the subject. "How did these men die?" he asked.

Captain Gerilleau embarked upon speculations that Holroyd could not follow, and the two men disputed with a certain increasing vehemence. Holroyd took up the field-glass and resumed his scrutiny, first of the ants and then of the dead man amidships.

He has described these ants to me very particularly.

The Lieutenant Goes on Board the Canoe

HE says they were as large as any ants he has ever seen, black and moving with a steady deliberation very different from the mechanical fussiness of the common ant. About one in twenty was much larger than its fellows, and with an exceptionally large head. These reminded him at once of the master workers who are said to rule over the leaf-cutter ants; like them they seemed to be directing and co-ordinating the general movements. They tilted their bodies back in a manner altogether singular as if they made some use of the fore feet. And he had a curious fancy that he was too far off to verify, that most of these ants of both kinds were wearing accoutrements, had things strapped about their bodies by bright white bands like white metal threads. . . .

He put down the glasses abruptly, realising that the question of discipline between the captain and his subordinate had become acute.

"It is your duty," said the captain, "to go aboard. It is my instructions."

The lieutenant seemed on the verge of refusing. The head of one of the mulatto sailors appeared beside him.

"I believe these men were killed by the ants," said Holroyd abruptly in English.

The captain burst into a rage. He made no answer to Holroyd. "I have commanded you to go aboard," he screamed to his subordinate in Portuguese. "If you do not go aboard forthwith it is mutiny—rank mutiny. Mutiny and cowardice! Where is the courage that should animate us? I will have you in irons, I will have you shot like a dog." He began a torrent of abuse and curses, he danced to and fro. He shook his fist, he behaved as if beside himself with rage, and the lieutenant, white and still, stood looking at him. The crew appeared forward, with amazed faces.

Suddenly, in a pause of this outbreak, the lieutenant came to some heroic decision, saluted, drew himself together and clambered upon the deck of the cuberta.

"Ah!" said Gerilleau, and his mouth shut like a trap. Holroyd saw the ants retreating before da Cunha's boots. The Portuguese walked slowly to the fallen man, stooped down, hesitated, clutched his coat and turned him over. A black swarm of ants rushed out of the clothes, and da Cunha stepped back very quickly and trod two or three times on the deck.

Holroyd put up the glasses. He saw the scattered ants about the invader's feet, and doing what he had never seen ants doing before. They had nothing of the blind movements of the common ant; they were looking at him—as a rallying crowd of men might look at some gigantic monster that had dispersed it.

"How did he die?" the captain shouted.

Holroyd understood the Portuguese to say the body was too much eaten to tell.

"What is there forward?" asked Gerilleau.

The Death of the Lieutenant

THE lieutenant walked a few paces, and began his answer in Portuguese. He stopped abruptly and beat off something from his leg. He made some peculiar steps as if he was trying to stamp on something invisible, and went quickly towards the side. Then he controlled himself, turned about, walked deliberately forward to the hold, clambered up to the fore decking, from which the sweeps are worked, stooped for a time over the second man, groaned audibly, and made his way back and aft to the cabin, moving very rigidly. He turned and began a conversation with his captain, cold and respectful in tone on either side, contrasting vividly with the wrath and insult of a few moments before. Holroyd gathered only fragments of its purport.

He reverted to the field-glass, and was surprised to find the ants had vanished from all the exposed surfaces of the deck. He turned towards the shadows beneath the decking, and it seemed to him they were full of watching eyes.

The cuberta, it was agreed, was derelict, but too full of ants to put men aboard to sit and sleep; it must be towed. The lieutenant went forward to take in and adjust the cable, and the men in the boat stood up to be ready to help him. Holroyd's glasses searched the canoe.

He became more and more impressed by the fact that a great if minute and furtive activity was going on. He perceived that a number of gigantic ants—they seemed nearly a couple of inches in length—carrying oddly-shaped burthens for which he could imagine no use—were moving in rushes from one point of obscurity to another. They did not move in columns across the exposed places, but in open, spaced-out lines, oddly suggestive of the rushes of modern infantry advancing under fire. A number were taking cover under the dead man's clothes, and a perfect swarm was gathering along the side over which da Cunha must presently go.

He did not see them actually rush for the lieutenant as he returned, but he has no doubt they

did make a concerted rush. Suddenly the lieutenant was shouting and cursing and beating at his legs. "I'm stung!" he shouted, with a face of hate and accusation towards Gerilleau.

Then he vanished over the side, dropped into his boat, and plunged at once into the water. Holroyd heard the splash.

The three men in the boat pulled him out and brought him aboard, and that night he died.

III

The Sinister Canoe

HOLROYD and the captain came out of the cabin in which the swollen and contorted body of the lieutenant lay and stood together at the stern of the monitor, staring at the sinister vessel they trailed behind them. It was a close, dark night that had only phantom flickerings of sheet lightning to illuminate it. The cuberta, a vague black triangle, rocked about in the steamer's wake, her sails bobbing and flapping, and the black smoke from the funnels, spark-lit ever and again, streamed over her swaying masts.

Gerilleau's mind was inclined to run on the unkind things the lieutenant had said in the heat of his last fever.

"He says I murdered 'im," he protested. "It is simply absurd. Some one 'ad to go aboard. Are we to run away from these confounded ants whenever they show up?"

Holroyd said nothing. He was thinking of a disciplined rush of little black shapes across bare sunlit planking.

"It was his place to go," harped Gerilleau. "He died in the execution of his duty. What has he to complain of? Murdered! . . . But the poor fellow was—what is it?—demented. He was not in his right mind. The poison swelled him. . . . U'm."

They came to a long silence.

"We will sink that canoe—burn it."

"And then?"

The inquiry irritated Gerilleau. His shoulders went up, his hands flew out at right angles from his body. "What is one to *do?*" he said, his voice going up to an angry squeak.

"Anyhow," he broke out vindictively, "every ant in dat cuberta!—I will burn dem alive!"

Holroyd was not moved to conversation. A distant ululation of howling monkeys filled the sultry night with foreboding sounds, and as the gunboat drew near the black mysterious banks this was reinforced by a depressing clamour of frogs.

Burning the Canoe

"WHAT is one to *do?*" the captain repeated after a vast interval, and suddenly becoming active and savage and blasphemous, decided to burn the *Santa Rosa* without further delay. Every one aboard was pleased by that idea, every one helped with zest; they pulled in the cable, cut it, and dropped the boat and fired her with tow and kerosene, and soon the cuberta was crackling and flaring merrily amidst the immensities of the tropical night. Holroyd watched the mounting yellow flare against the blackness, and the livid flashes of sheet lightning that came and went above the forest summits, throwing them into momentary silhouette, and his stoker stood behind him watching also.

The stoker was stirred to the depths of his linguistics. "*Saüba,* go pop, pop," he said, "Wahaw!" and laughed richly.

But Holroyd was thinking that these little creatures on the decked canoe had also eyes and brains.

The whole thing impressed him as incredibly foolish and wrong, but—what was one to *do?* This question came back enormously reinforced on the morrow, when at last the gunboat reached Badama.

The Deserted Village

THIS place, with its leaf-thatch-covered houses and sheds, its creeper-invaded sugar-mill, its little jetty of timber and canes, was very still in the morning heat, and showed never a sign of living men. Whatever ants there were at that distance were too small to see.

"All the people have gone," said Gerilleau, "but we will do one thing anyhow. We will 'oot and vissel."

So Holroyd hooted and whistled.

Then the captain fell into a doubting fit of the worst kind. "Dere is one thing we can do," he said presently.

"What's that?" said Holroyd.

"'Oot and vissel again."

So they did.

The captain walked his deck and gesticulated to himself. He seemed to have many things on his mind. Fragments of speeches came from his lips. He appeared to be addressing some imaginary public tribunal either in Spanish or Portuguese. Holroyd's improving ear detected something about ammunition. He came out of these preoccupations suddenly into English. "My dear 'Olroyd!" he cried, and broke off with "But what *can* one do?"

They took the boat and the field-glasses, and went close in to examine the place. They made out a number of big ants, whose still postures had a certain effect of watching them, dotted about the edge of the rude embarkation jetty. Gerilleau tried ineffectual pistol shots at these. Holroyd thinks he distinguished curious earthworks running between the nearer houses, that may have been the work of the insect conquerors of those human habitations. The explorers pulled past the jetty, and became aware of a human skeleton wearing a loin cloth, and very bright and clean and shining, lying beyond. They came to a pause regarding this. . . .

"I 'ave all dose lives to consider," said Gerilleau suddenly.

Holroyd turned and stared at the captain, realising slowly that he referred to the unappetising mixture of races that constituted his crew.

"To send a landing party—it is impossible—impossible. They will be poisoned, they will swell, they will swell up and abuse me and die. It is totally impossible. . . . If we land, I must land alone, in thick boot and with my life in my hand. Perhaps I should live. Or again—I might not land. I do not know. I do not know."

Holroyd thought he did, but he said nothing.

"De whole thing," said Gerilleau suddenly, "'as been got up to make me ridiculous. De whole thing!"

Bombarding the Ants—A Strange Decision

THEY paddled about and regarded the clean white skeleton from various points of view, and then they returned to the gunboat. Then Gerillau's indecisions became terrible. Steam was got up, and in the afternoon the monitor went on up the river with an air of going to ask somebody something, and by sunset came back again and anchored. A thunderstorm gathered and broke furiously, and then the night became beautifully cool and quiet and every one slept on deck. Except Gerilleau, who tossed about and muttered. In the dawn he awakened Holroyd.

"Lord!" said Holroyd, "what now?"

"I have decided," said the captain.

"What—to land?" said Holroyd, sitting up brightly.

"No!" said the captain, and was for a time very reserved. "I have decided," he repeated, and Holroyd manifested symptoms of impatience.

"Well—yes," said the captain, *"I shall fire de big gun!"*

And he did! Heaven knows what the ants thought of it, but he did. He fired it twice with great sternness and ceremony. All the crew had wadding in their ears, and there was an effect of going into action about the whole affair, and first they hit and wrecked the old sugar-mill, and then they smashed the abandoned store behind the jetty. And then Gerilleau experienced the inevitable reaction.

"It is no good," he said to Holroyd; "no good at all. No sort of bally good. We must go back—for instructions. Dere will be de devil of a row about dis ammunition—oh! de *devil* of a row! You don't know, 'Olroyd. . . ."

He stood regarding the world in infinite perplexity for a space.

"But what else was there to *do?*" he cried.

In the afternoon the monitor started down-stream again, and in the evening a landing party took the body of the lieutenant and buried it on the bank upon which the new ants had so far not appeared. . . .

IV

The Conclusion

I HEARD this story in a fragmentary state from Holroyd not three weeks ago.

These new ants have got into his brain, and he has come back to England with the idea, as he says, of "exciting people" about them "before it is too late." He said they threaten British Guiana, which cannot be much over a trifle of a thousand miles from their present sphere of activity, and that the Colonial Office ought to get to work upon them at once. He declaims with great passion: "These are intelligent ants. Just think what that means!"

There can be no doubt they are a serious pest, and that the Brazilian Government is well advised in offering a prize of five hundred pounds for some effectual method of extirpation. It is certain too that since they first appeared in the hills beyond Badama, about three years ago, they have achieved extraordinary conquests. The whole of the south bank of the Batemo River, for nearly sixty miles, they have in their effectual occupation; they have driven men out completely, occupied plantations and settlements, and boarded and captured at least one ship. It is even said they have in some inexplicable way bridged the very considerable Capuarana arm and pushed many miles towards the Amazon itself. There can be little doubt that they are far more reasonable and with a far better social organisation than any previously known ant species; instead of being in dispersed societies they are organised into what is in effect a single nation; but their peculiar and immediate formidableness lies not so much in this as in the intelligent use they make of poison against their larger enemies. It would seem this poison of theirs is closely akin to snake poison, and it is highly probable they actually manufacture it, and that the larger individuals among them carry the needle-like crystals of it in their attacks upon men.

What Will the Ants Do in the Future?

OF course, it is extremely difficult to get any detailed information about these new competitors for the sovereignty of the globe. No eyewitnesses of their activity, except for such glimpses as Holroyd's, have survived the encounter. The most extraordinary legends of their prowess and capacity are in circulation in the region of the Upper Amazon, and grow daily as the steady advance of the invader stimulates men's imaginations through their fears. These strange little creatures are credited not only with the use of implements and a knowledge of fire and metals and with organised feats of engineering that stagger our northern minds—unused as we are to such feats as that of the Saübas of Rio de Janeiro, who in 1841 drove a tunnel under the Parahyba where it is as wide as the Thames at London Bridge—but with an organised and detailed method of record and communication analogous to our books. So far their action has been a steady progressive settlement, involving the flight or slaughter of every human being in the new areas they invade. They are increasing rapidly in numbers, and Holroyd at least is firmly convinced that they will finally dispossess man over the whole of tropical South America.

And why should they stop at tropical South America?

Well, there they are, anyhow. By 1911 or thereabouts, if they go on as they are doing, they ought to strike the Capuarana Extension Railway, and force themselves upon the attention of the European capitalist.

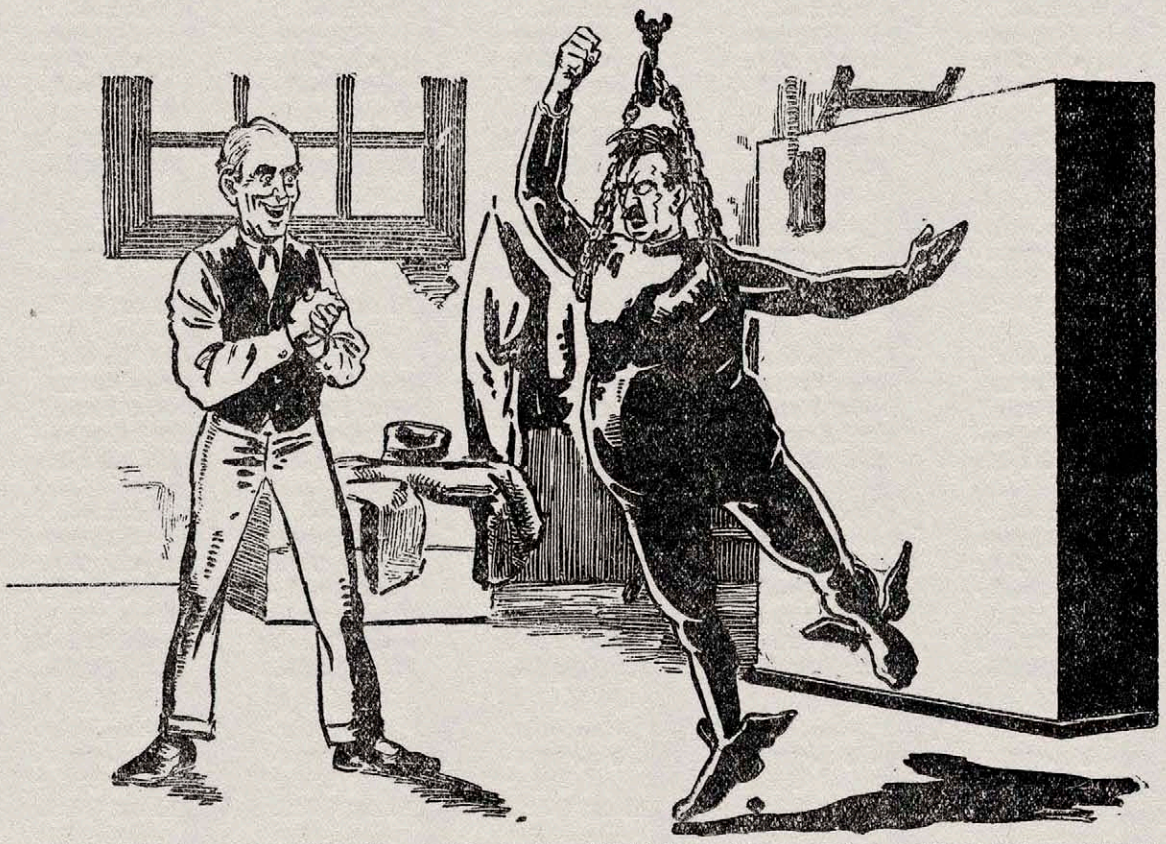
By 1920 they will be half-way down the Amazon. I fix 1950 or '60 at the latest for their discovery of Europe.

THE END

The SCIENTIFIC ADVENTURES of MR. FOSDICK

By Jacque Morgan

The International Electro-Galvanic Undertaking Corporation



Mr. Fosdick had succeeded in lifting him out of the trough and had balanced him on one foot—a Winged Mercury of bright, shining copper.
"Splendid!" he ejaculated and gazed at his handiwork admiringly.

Mr. Fosdick Interests an Old Victim in One of His New Inventions

THE first two envelopes contained only circulars. But from the third dropped a bright yellow slip of paper, and as Eben Stetzle, loafing in the tinshop during the noon hour, picked it up from the floor and handed it to Mr. Fosdick, he saw that it was a check signed by the Ajax Manufacturing Company and that it called for four hundred and twenty dollars in real money.

"Last month's royalties on my curling iron," carelessly explained the inventor.

He always spoke of the device as a curling-iron, although it was advertised and sold by the manufacturing company as a nut-cracker.

Mr. Stetzle sighed. "Gee, I wish I could get in on something like that. Running a chop mill is a mighty slow method of getting rich."

The sight of the check removed the last trace of bitterness that had lingered in Eben's heart since his unhappy experience with The Feline Light and Power Company.

"I should like to get in on the next good thing you get up," he continued, eyeing the check that protruded from Mr. Fosdick's waistcoat pocket. "But, of course, I'm not going in on any more electrified cats. The very sight of a cat makes me shudder even now."

Mr. Fosdick gazed at his friend pensively. "I have been thinking," he said, "of the organization of a company that will make 'Standard Oil' look like a penny savings bank."

Eben Stetzle drew in his breath with audible inquisitiveness. "What is it? What is it?" he demanded.

Mr. Fosdick smiled blandly. "Yes, what is it?" he mimicked,

DR. FOSDICK, who we know is a friend of our readers, after his experiments with the "Seidlitzmobile" and the "Feline Electric Plant" takes a new departure and proposes to electroplate the dead in order to preserve them as beautiful statues for posterity. Although the author of this story is a comical genius, his idea is certainly a beautiful one but he gives it a very funny touch and the reader will find that for sustained interest and pure comedy, it is equal to the preceding stories which we have been fortunate enough to obtain.

genially. "You don't think I'm going to divulge a secret that's worth millions, do you?"

Eben's face fell. "I thought you'd let an old friend in—a brother lodge member," he said wistfully. And at the same time Eben formed his hands into the distress signal of the order.

Mr. Fosdick pondered. His lodge was to him a thing sacred. Every Wednesday night in the hall over Lem Whitley's grocery store, Mr. Fosdick sat in state; he was the presiding officer, and the thunder of his voice as he read the ritual to the trembling neophytes was a thing that was very dear to him. And Eben had given him the grand hailing sign!

"Brother Stetzle," he said at last, "I'm going to tell you—and what's more I'm going to let you in."

Mr. Stetzle leaned forward and with great enthusiasm gave Mr. Fosdick the grip. "Brother!" he exclaimed.

Picking up his textbook, "Electricity at a Glance," Mr. Fosdick turned the pages until he came to the following paragraph:

"Flowers and even insects can be preserved indefinitely by powdering them with graphite and then depositing a thin film of copper over them by means of a plating battery."

"Does that mean anything to you?" His voice was tense with feeling.

Mr. Stetzle read the paragraph and slowly shook his head.

"Who would want to preserve insects indefinitely? I just hate the sight of 'em," and Eben scratched his back as though the very suggestion brought back unpleasant memories.

Mr. Fosdick smiled tolerantly. "You are deficient in imagination, Eben." He leaned forward and whispered: "What would you say to a scheme of using the principle for undertaking purposes?"

Mr. Stetzle failed to grasp the significance of the question.

"I don't know of any insect undertakers—of course there's fellows in the big cities that make a business of killing——"

"But I mean for men—for human beings!"

Preserving the Dead. A Beautiful Silver Statue

EBEN shook his head hopelessly. "I just can't quite get you."

Mr. Fosdick sank back in his chair with almost a feeling of disgust. He surveyed his unimiginative lodge brother for a long minute and then straightening up, outlined his scheme in words of few syllables.

"It's like this, Eben," he began. "If insects can be copper-plated, human beings can be copper-plated. And if a human being can be plated he, or she, can be preserved indefinitely—and with absolute fidelity as to face and form. You take the old Egyptian mummies—what are they to-day? Why, just crumbling shells that don't look like anything. But suppose those bodies had been electroplated? Why, they would simply be statues of their original selves."

Mr. Stetzle nodded. "I begin to understand now," he said.

"Listen. We'd simply make every corpse its own monument. Mount the monument on a cheap concrete base and stand it up in the cemetery. No excavating, no coffin, no box—nothing but the monument itself. Think of the saving! The cadavers can be plated not planted, at an expense of three dollars apiece—we can get fifty, or even a hundred. And there are annually over one and a half million deaths a year in this country alone. Suppose we only made a profit of ten dollars apiece. The total is fifteen million for the United States, annually. Add to that the profits on the undertaking of seven million funerals throughout the balance of the civilized world. Can you grasp it? Why, Eben, a hundred thousand a day would be nothing!"

Mr. Stetzle sat as one in a trance. "It's overpowering," he gasped.

Mr. Fosdick smiled. "Why, I haven't begun yet. As a matter of fact the profit per job of The International Electro-Galvanic Undertaking Corporation —that will be the name of the concern—will be more like fifty dollars than ten. And even more. Listen. Only the cheaper grades of corpses will be finished in copper. The majority will be nickel-plated; silver will be used for those of moderate means; and gold for the aristocrats."

The proprietor of the chop-mill was speechless.

"And just think what a handsome place the new cemeteries will be of a sunny morning. Copper, nickel, silver and gold statues all sprinkled about. Cheerful is no word for it! Why, man, they'd become amusement parks!"

Mr. Fosdick softly drummed his fingers upon the arm of his chair while he allowed the idea to sink in.

"I've thought of a splendid new feature to the scheme," suddenly said Mr. Stetzle. "How would it do to have mounted in the statue somewhere a phonograph with a cylinder of 'last words,' or a song or a recitation—you remember how Clem Titus that's dead and gone now, used to recite every time he got drunk, 'Goodbye, Jim. Take keer of yourself.' Well, that's the idea. By pulling a string the phonograph reels out anything that was characteristic of the deceased. Old man Fisher used to cuss the administration——"

"I think that would be undignified," interrupted Mr. Fosdick, "a thousand of your confounded phonographs working at full blast—songs, recitations, speeches, and so on! Why, it would be noisier than Coney Island!"

The enthusiasm of the new idea slowly faded from Mr. Stetzle's face and he subsided.

"Well," said he, after a silence of some minutes, "when do we try it?"

"As soon as we can get a corpse."

"Must we wait? There hasn't been a death in Whiffleville in five years."

Mr. Fosdick had not thought of that. For a moment his dream was shattered, and then with the resourcefulness of the true inventor he thought of a way to overcome the difficulty.

"No," said he, "we will not wait. We will try the scheme upon a living person—you."

Mr. Stetzle paled. "I'd rather not," he protested weakly. "I'm too fat and wouldn't look good."

"The first statue will be you," declared Mr. Fosdick. "Why, man, it will be an honor!"

"But I don't want my ears and eyes and nose stopped up with no dodgasted copper-plating," protested Eben.

Once more Mr. Fosdick's resourceful brain came to the rescue: "You will only be plated from the neck down."

There was no escape. Mr. Fosdick was adamant, and it was with great reluctance that Mr. Stetzle finally agreed to submit to the experiment.

"To-morrow," said Mr. Fosdick, "the embalming vat—the plating bath, I should say—will be ready for you."

Mr. Fosdick's Associate to Be Experimented On

THE wooden trough, borrowed for the occasion from Jasper Wilcox's hog-lot, contained a solution of copper sulphate. The telegraph company, through the agency of Hi Scruggs, the local operator, had loaned the batteries; and Moses Galblat had contributed the slab of copper junk to be used for the anode—in consideration of the sum of four dollars and eighteen cents.

Everything was ready and at the quiet word of command from the chief engineer of The International Electro-Galvanic Undertaking Corporation, Mr. Stetzle quickly divested himself of his clothing and assisted Mr. Fosdick, who briskly began to powder the rotund form with graphite.

"Makes me look like a nigger—I—I suppose it will come off all right," remarked Mr. Stetzle dubiously.

"Certainly. It's just a matter of a little soap and water," said the inventor, smiling as he caught a distorted reflection of himself upon the highly polished surface of Mr. Stetzle's stomach. "Sure. No doubt about it."

It was the work of only a few minutes for Mr. Fosdick to pose Mr. Stetzle in the plating bath.

"You will represent the Winged Mercury, one of the finest examples of ancient Greek art," said Mr. Fosdick, arranging the legs and arms as he had seen them in the illustration in the back of a dictionary. "I can make some little wings and solder them to your ankles afterwards."

Mr. Stetzle, thoroughly resigned to submit to anything, made no comment.

"And now," said Mr. Fosdick, "I'll just lock you up in the shop for an hour while I go out and fix the Widow Johnson's doorbell, and put in a window at Sam Horton's, and get Lem Hunter's umbrella what's busted, and needs mending, and do a few other little odds and ends."

The Object Experimented on—the Unhappy Mr. Stetzle —Has Fallen Asleep During the Process

IT was late in the afternoon when Mr. Fosdick returned to the shop. His errands had taken him much longer than he had supposed.

In the trough lay Mr. Stetzle, snoring. The afternoon had been hot and the cooling influence of the plating bath had been more than he could resist. Flies had bothered him at first, and in his endeavors to brush them off he had saturated his face and hair with the copper solution and Mr. Fosdick was somewhat startled to see that it had turned them a dark green.

"Wake up, Eben!" Mr. Fosdick punched the recumbent form with a broom handle. It was like punching a stone; Mr. Stetzle's ribs were incased in a quarter-inch armor of solid copper.

A tweak of the green nose brought better results, and Mr. Stetzle opened his eyes and endeavored to stir. There was not the slightest movement.

It was the work of an hour, perhaps, and Mr. Stetzle had begun to become petulant. But in the end, with the aid of a block and tackle, Mr. Fosdick had succeeded in lifting him out of the trough and had balanced him on one foot—a Winged Mercury of bright, shining copper.

"Splendid!" he ejaculated, and he gazed at his handiwork admiringly. "I'll get some of the boys down here to-morrow with old Judge Henley and we'll get up the incorporation papers in no time."

"To-morrow!" yelled Mr. Stetzle with a sudden and fierce indignation. "Do you think I'm going to stand here on one foot all night like a dodgasted cigar store Indian? Not on your life! I've got complimentary tickets for 'Uncle Tom's Cabin' for this evening and I've got to take Mrs. Stetzle and the children. Now you get me out of this dodgasted boiler plate union suit right now!"

Mr. Fosdick scratched his chin reflectively. "All right, Eben," he soothed. "I'll split you up the back and you can scrawl out like a locust. The shell will demonstrate the success of the idea." He picked up a pair of calipers and applied it to various portions of Mr. Stetzle's anatomy. "I should say that the metallic envelope is from a quarter to a half inch thick," he remarked pensively.

"You quit that figurin' and get me out," raged Mr. Stetzle. "I ought to have had more sense after fooling with your dodgasted electrified cats and spending ten days on a foot square insulated galvanometer pier endurin' the grins of all them dodgasted students."

With great labor Mr. Fosdick managed to lower Mr. Stetzle to the floor, and then with a cold chisel and hammer he began the work of divesting him of the metal that incrusted him. With every blow of the hammer Mr. Stetzle let forth a groan.

"That chisel is going right into my backbone!"

The Subject in Trouble—Trying to Get Him Out of His Metallic Casing

MR. FOSDICK considerately laid aside the chisel and took up a hacksaw. It was slow work. Supper time came, it grew dark, and notwithstanding the lamentations and curses of Mr. Stetzle, the now somewhat alarmed Mr. Fosdick had only cut a groove of about six inches along Mr. Stetzle's spine.

"Dodgast you!" he bellowed. "I've missed my supper, I've missed the opry, and I'm missing my sleep!"

"Why, Eben, I'll get you a pillow and you can sleep while I work."

"Sleep!" ejaculated Mr. Stetzle hotly. "How in thunder can I sleep with you a hammerin' my vitals and a punchin' into my backbone with a dodgasted cold chisel?"

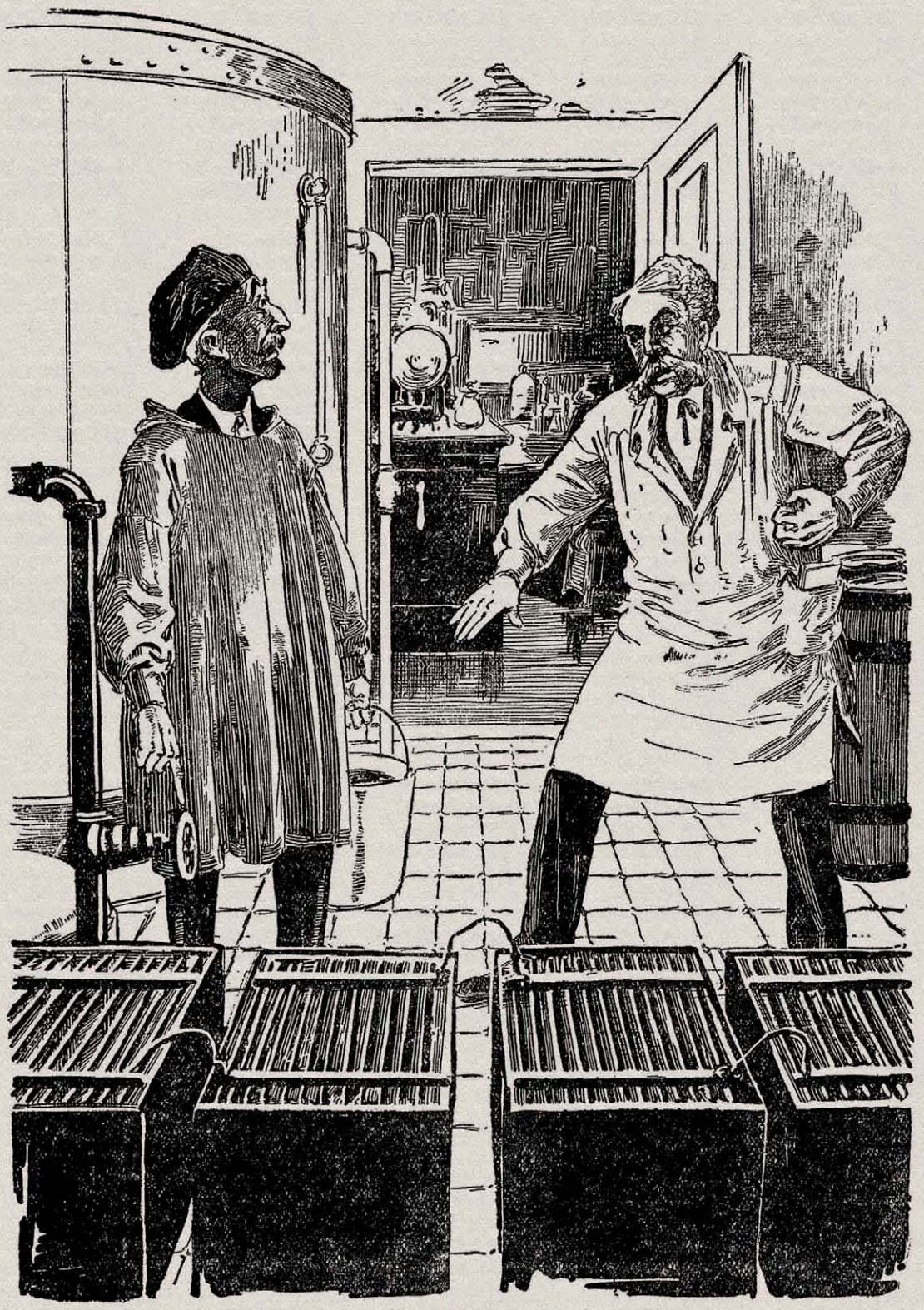
At dawn the thoroughly exhausted Mr. Fosdick began to despair. "I'm afraid, Eben," he said gravely, "that I'll have to crate you up and ship you down to the city where they have steam hammers and hydraulic jacks and things—unless—unless"—why hadn't he thought of it before—"unless I can take the metal off the same way I put it on."

"Do anything," snarled Mr. Stetzle. "Put me under a steam hammer, rip me open with a hydraulic jack, grind me apart on an emery wheel, blow me open with dynamite, melt me apart with an acetylene blowpipe—do any of the dodgasted things you have been talking about!"

(*Continued on page* 476)

DR. OX'S EXPERIMENT

By Jules Verne



"I think it time to . . . . close the valve." "You'd better not" cried Doctor Ox. "If you attempt it, I'll throttle you."

CHAPTER I.

How It Is Useless to Seek, Even On the Best Maps, For the Small Town of Quiquendone

IF you try to find, on any map of Flanders, ancient or modern, the small town of Quiquendone, probably you will not succeed. Is Quiquendone, then, one of those towns which have disappeared? No. A town of the future? By no means. It exists in spite of geographies, and has done so for some eight or nine hundred years. It even numbers two thousand three hundred and ninety-three souls, allowing one soul to each inhabitant. It is situated thirteen and a half kilometers northwest of Oudenarde, and fifteen and a quarter kilometers southeast of Bruges, in the heart of Flanders. The Vaar, a small tributary of the Scheldt, passes beneath its three bridges, each of which is still covered with a quaint medieaval roof, like that at Tournay. An old chateau is to be seen there, the first stone of which was laid as long ago as 1197, by Count Baldwin, afterwards Emperor of Constantinople; and there is a Town Hall, with Gothic windows, crowned by a chaplet of battlements, and surmounted by a turreted belfry, which rises three hundred and fifty-seven feet above the soil. Every hour you may hear there a chime of five octaves, a veritable aerial piano, the renown of which surpases that of the famous chimes of Bruges. Strangers—if ever any come to Quiquendone—do not quit the curious old town until they have visited its "Stadholder's Hall," adorned by a full-length portrait of William of Nassau, by Brandon; the loft of the Church of Saint Magloire, a masterpiece of sixteenth century architecture; the cast-iron well in the spacious Place Saint Ernuph, the admirable ornamentation of which is attributed to the artist-blacksmith, Quentin Matsys; the tomb formerly erected to Mary of Burgundy, daughter of Charles the Bold, who now reposes in the Church of Notre Dame at Bruges; and so on. The principal industry of Quiquendone is the manufacture of whipped creams and barley-sugar on a large scale. It has been governed by the van Tricasses, from father to son, for several centuries. And yet Quiquendone is not on the map of Flanders! Have the geographers forgotten it, or is it an intentional omission? That I cannot tell; but Quiquendone really exists, with its narrow streets, its fortified walls, its Spanish-looking houses, its market, and its burgomaster—so much so, that it has recently been the theatre of phenomena as incredible as they are true, which are to be recounted in the present narration.

THE lovers of Jules Verne here find their author spinning a tale in a lighter vein. It seems to us that our favorite author has deliberately drawn out the story in order to make the denouement, if you have not guessed it by that time, more striking. There is, of course, excellent science in this story, and if any one should go to the trouble of repeating Dr. Ox's experiment on the vast scale shown here, the results would probably be just as depicted by our famous author.

It is a charming tale, and Verne chose, for good reason, a small town in Flanders, because the Dutch and Flemish people are notorious for their supposed sleepiness.

The Placid Flemings of Flanders

SURELY there is nothing to be said or thought against the Flemings of Western Flanders. They are a well-to-do folk, wise, prudent, sociable, with even tempers, hospitable, perhaps a little heavy in conversation as in mind; but this does not explain why one of the most interesting towns of their district has yet to appear on modern maps.

This omission is certainly to be regretted. If only history, or in default of history the chronicles, or in default of chronicles the traditions of the country, made mention of Quiquendone! But no; neither atlases, guides, nor itineraries speak of it. M. Joanne himself, that energetic hunter after small towns, says not a word of it. It might be readily conceived that this silence would injure the commerce, the industries of the town. But let us hasten to add Quiquendone has neither industry nor commerce, and that it does very well without them. Its barley-sugar and whipped cream are consumed on the spot; none is exported. In short, the Quiquendonians have no need of anybody. Their desires are limited, their existence is a modest one; they are calm, moderate, phlegmatic—in a word, they are Flemings; such as are still to be met with sometimes between the Scheldt and the North Sea.

CHAPTER II.

In Which the Burgomaster Van Tricasse and the Counselor Niklausse Consult About the Affairs of the Town.

"YOU think so?" asked the burgomaster.

"I—think so," replied the counselor, after some minutes of silence.

"You see, we must not act hastily," resumed the burgomaster.

"We have been talking over this grave matter for ten years," replied the Counselor Niklausse, "and I confess to you, my worthy van Tricasse, that I cannot yet take it upon myself to come to a decision."

"I quite understand your hesitation," said the burgomaster, who did not speak until after a good quarter of an hour of reflection, "I quite understand it, and I fully share it. We shall do wisely to decide upon nothing without a more careful examination of the question.

"It is certain," replied Niklausse, "that this post of civil commissary is useless in so peaceful a town as Quiquendone."

"Our predecessor," said van Tricasse gravely, "our predecessor never said, never would have dared to say, that anything is certain. Every affirmation is subject to awkward qualifications."

The counselor nodded his head slowly in token of assent; then he remained silent for nearly half an hour. After this lapse of time, during which neither the counselor nor the burgomaster moved so much as a finger, Niklausse asked van Tricasse whether his predecessor—of some twenty years before—had not thought of suppressing this office of civil commissary, which each year cost the town of Quiquendone the sum of thirteen hundred and seventy-five francs and some centimes.

"I believe he did," replied the burgomaster, carrying his hand with majestic deliberation to his ample brow; "but the worthy man died without having dared to make up his mind, either as to this or any other administrative measure. He was a sage. Why should I not do as he did?"

Counselor Niklausse was incapable of originating any objection to the burgomaster's opinion.

"The man who dies," added van Tricasse solemnly, "without ever having decided upon anything during his life, has very nearly attained to perfection."

Suzel van Tricasse

THIS said, the burgomaster pressed a bell with the end of his little finger, which gave forth a muffled sound,—less a sound than a sigh. Presently some light steps glided softly across the tiled floor. A mouse would not have made less noise, running over a thick carpet. The door of the room opened, turning on its well-oiled hinges. A young girl, with long blonde tresses, made her appearance. It was Suzel van Tricasse, the burgomaster's only daughter. She handed her father a pipe, filled to the brim, and a small copper brazier, spoke not a word, and disappeared at once, making no more noise at her exit than at her entrance.

The worthy burgomaster lighted his pipe, and was soon hidden in a cloud of bluish smoke, leaving Counselor Niklausse plunged in the most absorbing thought.

The room in which these two notable personages charged with the government of Quiquendone, were talking, was a parlor richly adorned with carvings in dark wood. A lofty fireplace, in which an oak tree might have been burned or an ox roasted, occupied the whole of one of the sides of the room; opposite to it was a trellised window, the painted glass of which toned down the brightness of the sunbeams. In an antique frame above the chimney-piece appeared the portrait of some worthy man, attributed to Memling, which no doubt represented an ancestor of the van Tricasse, whose authentic genealogy dates back to the period when the Flemings and Guy de Dampierre were engaged in wars with the Emperor Rudolph of Hapsburgh.

This parlor was the principal apartment of the burgomaster's house, which was one of the pleasantest in Quiquendone. Built in the Flemish style, with all the abruptness, quaintness, and picturesqueness of pointed architecture, it was considered one of the most curious monuments of the town. A Carthusian convent, or a deaf and dumb asylum, was not more silent than this mansion. Noise had no existence there; people did not walk, but glided about in it; they did not speak, they murmured. There was not, however, any lack of women in the house, which, in addition to the burgomaster van Tricasse himself, sheltered his wife, Madame Brigitte van Tricasse, his daughter, Suzel van Tricasse, and his domestic, Lotche Jansheu. We may also mention the burgomaster's sister, Aunt Hermance, an elderly maiden who still bore the nickname of Tatanemance, which her niece Suzel, when a child, had given her. But in spite of all these elements of discord and noise, the burgomaster's house was as calm as a desert.

The Burgomaster van Tricasse

THE burgomaster was some fifty years old, neither fat nor lean, neither short nor tall, neither rubicund nor pale, neither gay nor sad, neither contented nor discontented, neither energetic nor dull, neither proud nor humble, neither good nor bad, neither generous nor miserly, neither courageous nor cowardly, neither too much nor too little of anything—a man notably moderate in all respects, whose invariable slowness of motion, slightly hanging lower jaw, prominent eyebrows, massive forehead, smooth as a copper plate and without a wrinkle, would at once have betrayed to a physiognomist that the burgomaster van Tricasse was phlegm personified. Never, either from anger or passion, had any emotion whatever hastened the beating of this man's heart, or flushed his face; never had his pupils contracted under the influence of any irritation, however ephemeral. He invariably wore good clothes, neither too large nor too small, which he never seemed to wear out. He was shod with large square shoes with triple soles and silver buckles, which lasted so long that his shoemaker was in despair. Upon his head he wore a large hat which dated from the period when Flanders was separated from Holland, so that this venerable masterpiece was at least forty years old. But what would you have? It is the passions which wear out body as well as soul, the clothes as well as the body; and our worthy burgomaster apathetic, indolent, indifferent, was passionate in nothing. He wore nothing out, not even himself, and he considered himself the very man to administer the affairs of Quiquendone and its tranquil population.

The town, indeed, was not less calm than the van Tricasse mansion. It was in this peaceful dwelling that the burgomaster reckoned on attaining the utmost limit of human existence, after having, however, seen the good Madame Brigette van Tricasse, his wife, precede him to the tomb, where, surely, she would not find a more profound repose than that she had enjoyed on earth for sixty years.

This demands explanation.

The van Tricasse family might well call itself the "Jeannot family." This is why:

Everyone knows that the knife of this typical personage is as celebrated as its proprietor, and not less incapable of wearing out, thanks to the double operation, incessantly repeated, of replacing the handle when it is worn out, and the blade when it becomes worthless. A precisely similar operation had been going on from time immemorial in the van Tricasse family, to which Nature had lent herself with more than usual complacency. From 1340 it had invariably happened that a van Tricasse, when left a widower, had remarried a van Tricasse younger than himself, who, becoming in turn a widow, had married again a van Tricasse younger than herself; and so on, without a break in the continuity, from generation to generation. Each died in his or her turn with mechanical regularity. Thus the worthy Madame Brigette van Tricasse had now her second husband; and, unless she violated her every duty, would precede her spouse—he being ten years younger than herself—to the other world, to make room for a new Madame van Tricasse. Upon this the burgomaster calmly counted, that the family tradi-

tion might not be broken. Such was this mansion, peaceful and silent, of which the doors never creaked, the windows never rattled, the floors never groaned, the chimneys never roared, the weather-cocks never grated, the furniture never squeaked, the locks never clanked, and the occupants never made more noise than their shadows. The god Harpocrates would certainly have chosen it for the Temple of Silence.

CHAPTER III.

In Which the Commissary Passauf Enters as Noisily as Unexpectedly

WHEN the interesting conversation which has been narrated began, it was a quarter before three in the afternoon. It was at a quarter before four that van Tricasse lighted his enormous pipe, which could hold an ounce of tobacco, and it was at thirty-five minutes past five that he finished smoking it.

All this time the two comrades did not exchange a single word.

About six o'clock the counselor, who had a habit of speaking in a very summary manner, resumed in these words:

"So we decide——"

"To decide nothing," replied the burgomaster.

"I think, on the whole, that you are right, van Tricasse."

"I think so, too, Niklausse. We will take steps with reference to the civil commissary when we have more light on the subject—later on. There is no need for a month yet."

"Nor even for a year," replied Niklausse, unfolding his pocket-handkerchief and calmly applying it to his nose.

There was another silence of nearly a quarter of an hour. Nothing disturbed this repeated pause in the conversation, not even the appearance of the house-dog, Lento, who, not less phlegmatic than his master, came to pay his respects to the parlor. Noble dog—a model for his race! Had he been made of pasteboard, with wheels on his paws, he would not have made less noise during his stay.

Towards eight o'clock, after Lotche had brought the antique lamp of polished glass, the burgomaster said to the counselor:

"We have no other urgent matter to consider?"

"No, van Tricasse; none that I know of."

"Have I not been told, though," asked the burgomaster, "that the tower of the Oudenarde gate is likely to tumble down?"

"Ah!" replied the counselor; "really, I should not be astonished if it fell on some passer-by any day."

"Oh! before such a misfortune happens I hope we shall have come to a decision on the subject of this tower."

"I hope so, van Tricasse."

"There are more pressing matters to decide."

"No doubt; the question of the leather-market, for instance."

The Burning Market

"WHAT, is it still burning?"

"Still burning, and has been for the last three weeks."

"Have we not decided in council to let it burn?"

"Yes, van Tricasse—on your motion."

"Was not that the surest and simplest way to deal with it?"

"Without doubt."

"Well, let us wait. Is that all?"

"All," replied the counselor, scratching his head, as if to assure himself that he had not forgotten anything important.

"Ah!" exclaimed the burgomaster, "haven't you also heard something of an escape of water which threatens to inundate the low quarter of Saint Jacques?"

"I have. It is indeed unfortunate that this escape of water did not happen above the leather-market! It would naturally have checked the fire, and would thus have saved us a good deal of discussion."

"What can you expect, Niklausse? There is nothing so illogical as accidents. They are bound by no rules, and we cannot profit by one, as we might wish, to remedy another."

It took van Tricasse's companion some time to digest this fine observation.

"Well, but," resumed the Counselor Niklausse, after the lapse of some moments, "we have not spoken of our great affair!"

"What great affair? Have we, then, a great affair?" said the burgomaster.

"No doubt. About lighting the town."

"Oh, yes. If my memory serves me, you are referring to the lighting plan of Doctor Ox."

"Precisely."

"It is going on, Niklausse," replied the burgomaster. "They are already laying the pipes, and the works are entirely completed."

"Perhaps we have hurried a little in this matter," said the counselor, shaking his head.

"Perhaps. But our excuse is, that Doctor Ox bears the whole expense of his experiment. It will not cost us a sou."

"That, true enough, is our excuse. Moreover, we must advance with the age. If the experiment succeeds, Quiquendone will be the first town in Flanders to be lighted with the oxy—What is the gas called?"

"Oxyhydric gas."

"Well, oxyhydric gas, then."

Oxyhydric Gas Lighting for Quiquendone

AT this moment the door opened, and Lotche came in to tell the burgomaster that his supper was ready.

Counselor Niklausse rose to take leave of van Tricasse, whose appetite had been stimulated by so many affairs discussed and decisions taken; and it was agreed that the council of notables should be convened after a reasonably long delay, to determine whether a decision should be provisionally arrived at with reference to the really urgent matter of the Oudenarde gate.

The two worthy administrators then directed their steps towards the street door, the one conducting the other. The counselor, having reached the last step, lighted a little lantern to guide him through the obscure streets of Quiquendone, which Doctor Ox had not yet lighted. It was a dark October night, and a light fog overshadowed the town.

Niklausse's preparations for departure consumed at least a quarter of an hour; for after having light-

ed his lantern, he had to put on his big cow-skin shoes and his sheep-skin gloves: then he put up the furred collar of his overcoat, turned the brim of his felt hat down over his eyes, grasped his heavy crow-beaked umbrella, and got ready to start.

However, when Lotche, who was lighting her master, was about to draw the bars of the door, an unexpected noise arose outside.

Yes! Strange as the thing seems, a noise—a real noise, such as the town had certainly not heard since the taking of the donjon by the Spaniards in 1513—a terrible noise, awoke the long dormant echoes of the venerable van Tricasse mansion.

Someone knocked heavily upon this door, hitherto virgin to brutal touch! Redoubled knocks were given with some blunt implement, probably a knotty stick, wielded by a vigorous arm. With the strokes were mingled cries and calls. These words were distinctly heard:

"Monsieur van Tricasse! Monsieur the burgomaster! Open, open quickly!"

The burgomaster and the counselor, absolutely astounded, looked at each other speechless.

This passed their comprehension. If the old culverin of the chateau, which had not been used since 1385, had been let off in the parlor, the dwellers in the van Tricasse mansion would not have been more dumbfounded.

Meanwhile, the blows and cries were redoubled. Lotche, recovering her coolness, had plucked up enough courage to speak.

"Who is there?"

"It is I! I! I!"

"Who are you?"

"The Commissary Passauf!"

A Threatened Duel

THE Commissary Passauf! The very man whose office it had been contemplated to suppress for ten years. What had happened, then? Could the Burgundians have invaded Quiquendone, as they did in the fourteenth century? No event of less importance could have so moved Commissary Passauf, who in no degree yielded the palm to the burgomaster himself for calmness and phlegm.

On a sign from van Tricasse—for the worthy man could not have articulated a syllable—the bar was pushed back, and the door opened.

Commissary Passauf flung himself into the antechamber. One would have thought there was a hurricane.

"What's the matter, Monsieur the Commissary?" asked Lotche, a brave woman, who did not lose her head under the most trying circumstances.

"What's the matter!" replied Passauf, whose big round eyes expressed a genuine agitation. "The matter is that I have just come from Doctor Ox's, who has been holding a reception, and that there ——"

"There?"

"There I have witnessed such an altercation as—Monsieur the burgomaster, they have been talking politics!"

"Politics!" resumed Commissary Passauf, "which has not been done for perhaps a hundred years at Quiquendone. Then the discussion got warm, and the advocate, André Schut, and the doctor, Dominique Custos, became so violent that it may be they will call each other out."

"Call each other out!" cried the counselor. "A duel! A duel at Quiquendone!" And what did Advocate Schut and Doctor Custos say?"

"Just this: 'Monsieur Advocate,' said the doctor to his adversary, 'you go too far, it seems to me, and you do not take sufficient care to control your words!'"

The burgomaster van Tricasse clasped his hands —the counselor turned pale and let his lantern fall —the commissary shook his head. That a phrase so evidently irritating should be pronounced by two of the principal men in the country!

"This Doctor Custos," muttered van Tricasse, "is decidedly a dangerous man—a hare-brained fellow! Come, gentlemen!"

On this, Counselor Niklausse and the commissary accompanied the burgomaster into the parlor.

CHAPTER IV

In Which Doctor Ox Reveals Himself as a Physiologist of the First Rank and as an Audacious Experimentalist

WHO was this personage, known by the singular name of Doctor Ox?

An original character for certain, but at the same time a bold *savant*, a physiologist, whose works were known and highly estimated throughout learned Europe, a happy rival of the Davys, the Daltons, the Bostocks, the Menzies, the Godwins, the Vierordts—of those noble minds who have placed physiology among the highest of modern sciences.

Doctor Ox was a man of medium size and height, aged—but we cannot state his age, any more than his nationality. Besides, it matters little; let it suffice that he was a strange personage, impetuous and hot-blooded, a regular oddity out of one of Hoffmann's volumes, and one who contrasted amusingly enough with the good people of Quiquendone. He had an imperturbable confidence both in himself and in his doctrines. Always smiling, walking with head erect and shoulders thrown back in a free and unconstrained manner, with a steady gaze, large open nostrils, a vast mouth which inhaled the air in liberal draughts, his appearance was far from unpleasing. He was full of animation, well proportioned in all parts of his bodily mechanism, with quicksilver in his veins, and a most elastic step. He could never stop still in one place, and relieved himself with impetuous words and a superabundance of gesticulations.

Was Doctor Ox rich, then, that he should undertake to light a whole town at his expense? Probably, as he permitted himself to indulge in such extravagance,—and this is the only answer we can give to this indiscreet question.

Doctor Ox had arrived at Quiquendone five months before, accompanied by his assistant, who answered to the name of Gedeon Ygene; a tall, dried-up, thin man, haughty, but not less vivacious than his master.

What Does Dr. Ox Want to Do?

AND next, why had Doctor Ox made the proposition to light the town at his own expense? Why had he, of all the Flemings, selected the peaceable Quiquendonians, to endow their town with

the benefits of an unheard-of system of lighting? Did he not, under this pretext, design to make some great physiological experiment by operating *in anima vili?* In short, what was this original personage about to attempt? We know not, as Doctor Ox had no confident except his assistant Ygene, who, moreover, obeyed him blindly.

As it appeared, at least, Doctor Ox had agreed to light the town, which had much need of it, "especially at night," as Commissary Passauf wittily said. Works for producing a lighting gas had accordingly been established; the gasometers were ready for use, and the main pipes, running beneath the street pavements, would soon appear in the form of burners in the public edifices and the private houses of certain friends of progress. Van Tricasse and Niklausse, in their official capacity, and some other worthies, thought they ought to allow this modern light to be introduced into their dwellings.

If the reader has not forgotten, it was said, during the long conversation of the counselor and the burgomaster, that the lighting of the town was to be achieved, not by the combustion of common carburetted hydrogen, produced by distilling coal, but by the use of a more modern and twenty-fold more brilliant gas, oxyhydric gas, produced by mixing hydrogen and oxygen.

The doctor, who was an able chemist as well as an ingenious physiologist, knew how to obtain this gas in great quantity and of good quality, not by using sodium manganate according to the method of M. Tessie du Motay, but by the direct decomposition of slightly acidulated water, by means of a battery made of new elements, invented by himself. Thus there were no costly materials, no platinum, no retorts, no combustibles, no delicate machinery to produce the two gases separately. An electric current was sent through large basins full of water, and the liquid was decomposed into its two constituent parts, oxygen and hydrogen. The oxygen passed off at one end; the hydrogen, of double the volume of its late associate, at the other. As a necessary precaution, they were collected in separate reservoirs, for their mixture would have produced a frightful explosion if it had become ignited. Thence the pipes were to convey them separately to the various burners, which would be so placed as to prevent all chance of explosion. Thus a remarkably brilliant flame would be obtained, whose light would rival the electric light.

It was certain that the town of Quiquendone would, by this liberal contrivance, gain a splendid lighting; but Doctor Ox and his assistant took little account of this, as will be seen in the sequel.

In Dr. Ox's Laboratory

THE day after that on which Commissary Passauf had made his noisy entrance into the burgomaster's parlor, Gedeon Ygene and Doctor Ox were talking in the laboratory which both occupied in common, on the ground-floor of the principal building of the gas-works.

"Well, Ygene, well," cried the doctor, rubbing his hands. "You saw, at my reception yesterday, the cool-bloodedness of these worthy Quiquendonians. For animation they are midway between sponges and coral! You saw them disputing and irritating each other by voice and gesture? They are already metamorphosed, morally and physically! And this is only the beginning. Wait till we treat them to a big dose!"

"Indeed, master," replied Ygene, scratching his sharp nose with the end of his forefinger, "the experiment begins well, and if I had not prudently closed the supply-tap, I know not what would have happened."

"You heard Schut, the advocate, and Custos, the doctor?" resumed Doctor Ox. "The phrase was by no means ill-natured in itself, but, in the mouth of a Quiquendonian, it is worth all the insults which the Homeric heroes hurled at each other before drawing their swords. Ah, these Flemings! You'll see what we shall do some day!"

"We shall make them ungrateful," replied Ygene, in the tone of a man who esteems the human race at its just worth.

"Bah!" said the doctor; "what matters it whether they think well or ill of us, so long as our experiment succeeds?"

"Besides," returned the assistant smiling with a malicious expression, "is it not to be feared that, in producing such an excitement in their respiratory organs, we shall somewhat injure the lungs of these good people of Quiquendone?"

"So much the worse for them! It is in the interests of science. What would you say if the dogs or frogs refused to lend themselves to the experiments of vivisection?"

It is probable that if the frogs and dogs were consulted, they would offer some objection; but Doctor Ox imagined that he had stated an unanswerable argument, for he heaved a great sigh of satisfaction.

The Great Experiment

"AFTER all, master, you are right," replied Ygene, as if quite convinced. "We could not have hit upon better subjects than these people of Quiquendone for our experiment."

"We—could—not," said the doctor, slowly articulating each word.

"Have you felt the pulse of any of them?"

"Some hundreds."

"And what is the average pulsation you found?"

"Not fifty per minute. See—this is a town where there has not been the shadow of a discussion for a century, where the carmen don't swear, where the coachmen don't insult each other, where horses don't run away, where the dogs don't bite, where the cats don't scratch,—a town where the police-court has nothing to do from one year's end to another,—a town where people do not grow enthusiastic about anything, neither about art or business—a town where the gendarmes are a sort of myth, and in which an indictment has not been drawn up for a hundred years,—a town, in short, where for three centuries nobody has struck a blow with his fist or so much as exchanged a slap in the face! You see, Ygene, that this cannot last, and that we must change it all."

"Perfectly! perfectly!" cried the enthusiastic assistant; "and have you analyzed the air of this town, master?"

"I have not failed to do so. Seventy-nine parts of nitrogen and twenty-one of oxygen, carbonic acid

and water vapor in variable quantity. These are the ordinary proportions."

"Good, doctor, good!" replied Ygene. "The experiment will be made on a large scale, and will be decisive."

"And if it is decisive," added Doctor Ox triumphantly, "we shall reform the world!"

CHAPTER V.

In Which the Burgomaster and the Counselor Pay a Visit to Doctor Ox, and What Follows

THE Counselor Niklausse and the Burgomaster van Tricasse at last knew what it was to have an agitated night. The grave event which had taken place at Doctor Ox's house actually kept them awake. What consequences was this affair destined to bring about? They could not imagine. Would it be necessary for them to come to a decision? Would the municipal authority, whom they represented, be compelled to interfere? Would they be obliged to order arrests to be made, that so great a scandal should not be repeated? All these doubts could not but trouble these soft natures; and on that evening, before separating, the two notables had "decided" to see each other the next day.

On the next morning, before dinner, the Burgomaster van Tricasse proceeded in person to the Counselor Niklausse's house. He found his friend more calm. He himself had recovered his equanimity.

"Nothing new?" ask van Tricasse.

"Nothing new since yesterday," replied Niklausse.

"And the doctor, Dominique Custos?"

"I have not heard anything, either of him or of the advocate, André Schut."

After an hour's conversation, which consisted of three remarks which it is needless to repeat, the counselor and the burgomaster had resolved to pay a visit to Doctor Ox, so as to draw from him, without seeming to do so, some details of the affair.

Contrary to all their habits, after coming to this decision the two notables set about putting it into execution forthwith. They left the house and directed their steps towards Doctor Ox's laboratory, which was situated outside the town, near the Oudenarde gate—the gate whose tower threatened to fall in ruins.

They did not take each other's arms, but walked side by side, with a slow and solemn step, which took them forward but thirteen inches per second. This was, indeed, the ordinary gait of the Quiquendonians, who had never, within the memory of man, seen anyone run across the streets of their town.

From time to time the two notables would stop at some calm and tranquil crossway, or at the end of a quiet street, to salute the passers by.

"Good morning, Monsieur the burgomaster," said one.

"Good morning, my friend," responded van Tricasse.

"Anything new, Monsieur the counselor?" asked another.

"Nothing new," answered Niklausse.

A Visit to Dr. Ox's Laboratory

BUT by certain agitated motions and questioning looks, it was evident that the altercation of the evening before was known throughout the town. Observing the direction taken by van Tricasse, the most obtuse Quiquendonians guessed that the burgomaster was on his way to take some important step. The Custos and Schut affair was talked of everywhere, but the people had not yet come to the point of taking the part of one or the other. The Advocate Schut, having never had occasion to plead in a town where attorneys and bailiffs only existed in tradition, had, consequently, never lost a suit. As for the Doctor Custos, he was an honorable practitioner, who, after the example of his fellow-doctors, cured all the illnesses of his patients, except those of which they died—a habit unhappily acquired by all the members of all the faculties in whatever country they may practice.

On reaching the Oudenarde gate, the counselor and the burgomaster prudently made a short detour, so as not to pass within reach of the tower, in case it should fall; then they turned and looked at it attentively.

"I think that it will fall," said van Tricasse.

"I think so too," replied Niklausse.

"Unless it is propped up," added van Tricasse. "But must it be propped up?" That is the question."

"That is—in fact—the question."

Some moments after, they reached the door of the gas-works.

"Can we see Doctor Ox?" they asked.

Doctor Ox could always be seen by the first authorities of the town, and they were at once introduced into the celebrated physiologist's study.

Perhaps the two notables waited for the doctor for about an hour; at least it is reasonable to suppose so, as the burgomaster—never has this happened in his life before—betrayed a certain amount of impatience, from which his companion was not exempt.

Doctor Ox came in at last, and began to excuse himself for having kept them waiting; he had to approve a plan for the gasometer, rectify some of the machinery—But every thing was going on well! The pipes intended for the oxygen were already laid. In a few months the town would be splendidly lighted. The two notables might even now see the orifices of the pipes which were laid on in the laboratory.

Then the doctor begged to know to what he was indebted for the honor of this visit.

"Only to see you, doctor; to see you," replied van Tricasse. "It is long since we have had the pleasure. We go abroad but little in our good town of Quiquendone. We count our steps and measure our walks. We are happy when nothing disturbs the uniformity of our habits."

Niklausse looked at his friend. His friend had never said so much at once—at least, without taking time, and giving long intervals between his sentences. It seemed to him that van Tricasse expressed himself with a certain volubility, which was by no means common with him. Niklausse himself experienced a kind of irresistible desire to talk.

As for Doctor Ox, he looked at the burgomaster with sly attention.

Van Tricasse, who never argued until he had snugly ensconced himself in a spacious armchair, had risen to his feet. I know not what nervous ex-

citement, quite foreign to his temperament, had taken possession of him. He did not gesticulate as yet, but this could not be far off. As for the counselor, he rubbed his legs, and breathed with slow and long gasps. His look became animated little by little, and he had "decided" to support at all hazards, if need be, his trusty friend the burgomaster.

Van Tricasse got up and took several steps; then he came back, and stood facing the doctor.

"And in how many months," he asked in a somewhat emphatic tone, "do you say that your work will be finished?"

In three or four months, Monsieur the burgomaster," replied Doctor Ox.

"Three or four months,—it's a very long time!" said van Tricasse.

"Altogether too long!" added Niklausse, who, not being able to keep his seat, rose also.

"This lapse of time is necessary to complete our work," returned Doctor Ox. "The workmen, whom we have had to choose in Quiquendone, are not very expeditious."

"How not expeditious?" cried the burgomaster, who seemed to take the remark as personally offensive.

The Slow Flemish Workmen

"NO, Monsieur van Tricasse," replied Doctor Ox obstinately. "A French workman would do in a day what it takes ten of your workmen to do; you know, they are regular Flemings!"

"Flemings!" cried the counselor, whose fingers closed tightly. "In what sense, sir, do you use that word?"

"Why, in the amiable sense in which everybody uses it," replied Doctor Ox, smiling.

"Ah, but doctor, said the burgomaster, pacing up and down the room. "I don't like these insinuations. The workmen of Quiquendone are as efficient as those of any other town in the world, you must know; and we shall go neither to Paris nor London for our models! As for your project, I beg you to hasten its execution. Our streets have been unpaved for the putting down of your conduit-pipes, and it's a hindrance to traffic. Our trade will begin to suffer, and I, being the responsible authority, do not propose to incur reproaches which will be but too just."

Worthy burgomaster! He spoke of trade, of traffic, and the wonder was that those words, to which he was quite unaccustomed, did not scorch his lips. What could be passing in his mind?

"Besides," added Niklausse, "the town cannot be deprived of light much longer."

"But," urged Doctor Ox, "a town which has been unlighted for eight or nine hundred years—"

"All the more necessary is it," replied the burgomaster, emphasizing his words. "Times alter, manners alter! The world advances, and we do not wish to remain behind. We desire our streets to be lighted within a month, or you must pay a large indemnity for each day of delay; and what would happen if, amid the darkness, some affray should take place?"

"No doubt," cried Niklausse. "It requires but a spark to inflame Fleming! Fleming! Flame!"

"Apropos of this," said the burgomaster, interrupting his friend, "Commissary Passauf, our chief of police, reports to us that a discussion took place in your drawing-room last evening, Doctor Ox. Was he wrong in declaring that it was a political discussion?"

"By no means, Monsieur the burgomaster," replied Doctor Ox, who with difficulty repressed a sigh of satisfaction.

"So an altercation did take place between Dominique Custos and André Schut?"

"Yes, counselor; but the words which passed were not of grave import."

A Threatened Dispute

"NOT of grave import!" cried the burgomaster. "Not of grave import, when one man tells another that he does not measure the effect of his words! But of what stuff are you made, monsieur? Do you not know that in Quiquendone nothing more is needed to bring about extremely disastrous results? But monsieur, if you, or anyone else, presume to speak thus to me—"

"Or to me," added Niklausse.

As they pronounced these words with a menacing air, the two notables, with folded arms and bristling air, confronted Doctor Ox, ready to do him some violence, if by a gesture, or even the expression of his eye, he manifested any intention of contradicting them.

But the doctor did not budge.

"At all events, monsieur," resumed the burgomaster, "I propose to hold you responsible for what passes in your house. I am bound to insure the tranquility of this town, and I do not wish it to be disturbed. The events of last evening must not be repeated, or I shall do my duty, sir! Do you hear? Then reply, sir."

The burgomaster as he spoke under the influence of extraordinary excitement, elevated his voice to the pitch of anger. He was furious, the worthy van Tricasse, and might certainly be heard outside. At last, beside himself, and seeing that Doctor Ox did not reply to his challenge, "Come, Niklausse," said he.

And, slamming the door with a violence which shook the house, the burgomaster drew his friend after him.

Little by little, when they had taken twenty steps on their road, the worthy notables grew more calm. Their pace slackened, their gait became less feverish. The flush on their faces faded away; from being crimson, they became rosy. A quarter of an hour after quitting the gas-works, van Tricasse said softly to Niklausse, "An amiable man, Doctor Ox! It is always a pleasure to see him!"

CHAPTER VI.

In Which Frantz Niklausse and Suzel van Tricasse Form Certain Projects for the Future

OUR readers know that the burgomaster had a daughter, Suzel. But, shrewd as they may be, they cannot have divined that the Counselor Niklausse had a son, Frantz; and had they divined this, nothing could have led them to imagine that Frantz was the betrothed lover of Suzel. We will add that these young people were made for each

other and that they loved each other, as folks did love at Quiquendone.

It must not be thought that young hearts did not beat in this exceptional place; only they beat with a certain deliberation. There were marriages there, as in every other town in the world; but they took time about it. Betrothed couples, before engaging in these terrible bonds, wished to study each other; and these studies lasted at least ten years, as at college. It was rare that anyone was "accepted" before this lapse of time.

Courtships in Quiquendone

YES, ten years. The courtships last ten years! And is it, after all, too long, when the being bound for life is in consideration? One studies ten years to become an engineer or physician, an advocate or attorney, and should less time be spent in acquiring the knowledge to make a good husband? Is it not reasonable? and, whether it is due to temperament or reason, the Quiquendonians seem to us to be in the right in thus prolonging their courtship. When marriages in other more lively and exciteable cities are seen taking place within a few months, we must shrug our shoulders, and hasten to send our boys to the schools and our daughters to the *pensions* of Quiquendone.

For half a century one single marriage was known to have taken place after the lapse of only two years of courtship, and that turned out badly!

Frantz Niklausse, then, loved Suzel van Tricasse, but quietly, as a man would love when he has ten years before him in which to obtain the beloved object. Once every week, at an hour agreed upon, Frantz went to fetch Suzel, and took a walk with her along the banks of the Vaar. He took good care to carry his fishing-tackle, and Suzel never forgot her canvas, on which her pretty hands embroidered the most unlikely flowers.

Frantz was a young man of twenty-two, whose cheeks betrayed a soft, peachy down, and whose voice had scarcely a compass of one octave.

As for Suzel, she was blonde and rosy. She was seventeen, and did not dislike fishing. A singular occupation this, however, which forces you to struggle craftily with a barbel. But Frantz loved it; the pastime was congenial to his temperament. As patient as possible, content to follow with his rather dreamy eye the cork which bobbed on the top of the water, he knew how to wait; and when, after sitting for six hours, a modest barbel, taking pity on him, consented at last to be caught, he was happy—but he knew how to control his emotion.

On this day the two lovers—one might say, the two betrothed—were seated upon the verdant bank. The limpid Vaar murmured a few feet below them. Suzel quietly drew her needle across the canvas. Frantz automatically carried his line from left to right, then permitted it to descend the current from right to left. The fish made capricious rings in the water, which crossed each other around the cork, while the hook hung useless near the bottom.

Frantz and Suzel Go A-Fishing

FROM time to time Frantz would say, without raising his eyes:

"I think I have a bite, Suzel."

"Do you think so, Frantz?" replied Suzel, who, abandoning her work for an instant, followed her lover's line with earnest eye.

"N-no," resumed Frantz; "I thought I felt a little twitch; I was mistaken."

"You *will* have a bite, Frantz," replied Suzel, in her pure, soft voice. "But do not forget to strike at the right moment. You are always a few seconds too late, and the barbel takes advantage to escape."

"Would you like to take my line, Suzel?"

"Willingly, Frantz."

"Then give me your canvas. We shall see whether I am more adroit with the needle than with the hook."

And the young girl took the line with trembling hand, while her swain plied the needle across the stitches of the embroidery. For hours together they thus exchanged soft words, and their hearts palpitated when the cork bobbed on the water. Ah, could they ever forget those charming hours, during which, seated side by side, they listened to the murmurs of the river?

The sun was fast approaching the western horizon, and despite the combined skill of Suzel and Frantz, there had not been a bite. The barbels had not shown themselves complacent, and seemed to scoff at the two young people, who were too just to bear them malice.

"We shall be more lucky another time, Frantz," said Suzel, as the young angler put up his still virgin hook.

"Let us hope so," replied Frantz.

Then walking side by side they turned their steps towards the house, without exchanging a word, as mute as their shadows which stretched out before them. Suzel became very, very tall under the oblique rays of the setting sun. Frantz appeared very, very thin, like the long rod which he held in his hand.

They reached the burgomaster's house. Green tufts of grass bordered the shining pavement, and no one would have thought of tearing them away, for they deadened the noise made by the passers-by.

As they were about to open the door, Frantz thought it his duty to say to Suzel:

"You know, Suzel, the great day is approaching?"

"It is indeed, Frantz," replied the young girl, with downcast eyes.

"Yes," said Frantz, "in five or six years—"

"Good-bye, Frantz," said Suzel.

"Good-bye Suzel," replied Frantz.

And, after the door had been closed, the young man resumed the way to his father's house with a calm and equal pace.

CHAPTER VII.

In Which the Andantes Become Allegros, and the Allegros Vivaces

THE agitation caused by the Schut and Custos affair had subsided. The affair led to no serious consequences. It appeared likely that Quiquendone would return to its habitual apathy, which that unexpected event had for a moment disturbed.

Meanwhile, the laying of the pipes destined to conduct the oxyhydric gas into the principal edifices of the town was proceeding rapidly. The main pipes and branches gradually crept beneath the pave-

ments. But the burners were still wanting; for, as it required delicate skill to make them, it was necessary that they should be fabricated abroad. Doctor Ox was here, there, and everywhere; neither he nor Ygene, his assistant, lost a moment, but they urged on the workmen, completed the delicate mechanism of the gasometer, fed day and night the immense batteries which decomposed the water under the influence of a powerful electric current. Yes, the doctor was already making his gas, though the pipe-laying was not yet done; a fact which between ourselves, might have seemed a little singular. But before long,—at least there was reason to hope so,—before long Doctor Ox would inaugurate the splendors of his invention in the theater of the town.

For Quiquendone possessed a theater—a really fine edifice, in truth—the interior and exterior arrangement of which combined every style of architecture. Nor was this surprising, the theater having been commenced under the burgomaster Ludwig van Tricasse, in 1175, and only finished in 1837, under the burgomaster Natalis van Tricasse. It had required seven hundred years to build it, and it had been successively adapted to the architectural style in vogue in each period. But for all that it was an imposing structure; the Roman pillars and Byzantine arches of which would appear to advantage lit up by the oxyhydric gas.

The Quiquendone Theater

PRETTY nearly everything was acted at the theatre of Quiquendone; but the opera and the opera comique were especially patronized. It must, however, be added that the composers would never have recognized their own works, so entirely changed were the "movements" of the music.

In short, as nothing was done in a hurry at Quiquendone, the dramatic pieces had to be performed in harmony with the peculiar temperament of the Quiqendonians. Though the doors of the theater were regularly thrown open at four o'clock and closed again at ten, it had never been known that more than two acts were played during the six intervening hours. "Robert le Diable," "Les Huguenots," or "Guillaume Tell" usually took up three evenings, so slow was the execution of these masterpieces. The *vivaces*, at the theatre of Quiquendone, lagged like real *adagios*. The *allegros* were "long-drawn out" indeed. The demisemi-quavers were scarcely equal to the ordinary semibreves of other countries. The most rapid runs, performed according to Quiquendonian taste, had the solemn march of a chant. The gayest shakes were languishing and measured, that they might not shock the ears of the *dilettanti*. To give an example, the rapid air sung by Figaro, on his entrance in the first act of "Le Barbier de Seville," lasted fifty-eight minutes—when the actor was particularly enthusiastic.

Artists from abroad, as might be supposed, were forced to conform themselves to Quiquendonian fashions; but as they were well paid, they did not complain, and willingly obeyed the leader's baton, which never beat more than eight measures to the minute in the *allegros*.

But what applause greeted these artists, who enchanted without ever wearying the audiences of Quiquendone! All hands clapped one after another at tolerably long intervals, which the papers characterized as "frantic applause"; and sometimes nothing but the lavish prodigality with which mortar and stone had been used in the twelfth century saved the roof of the hall from falling in.

Besides, the theatre had only one performance a week, that these enthusiastic Flemish folk might not be too much excited; and this enabled the actors to study their parts more thoroughly, and the spectators to digest more at leisure the beauties of the masterpieces brought out on the stage.

Such had long been the drama at Quiquendone. Foreign artists were in the habit of making engagements with the director of the town, when they wanted to rest after their exertions in other towns; and it seemed as if nothing could ever change these inveterate customs, when, a fortnight after the Schut-Custos affair, an unlooked-for incident occurred to throw the population into fresh agitation.

An Opera Day

IT was on a Saturday, an opera day. It was not yet intended, as may be well supposed, to inaugurate the new illumination. No; the pipes had reached the hall, but for reasons indicated above, the burners had not yet been placed, and the wax candles still shed their soft light upon the numerous spectators who filled the theatre. The doors had been opened to the public at one o'clock, and by three the hall was half full. A queue had at one time been formed, which extended as far as the end of the Place Saint Ernuph, in front of the shop of Josse Lietrinck the apothecary. This eagerness was significant of an unusually attractive performance.

"Are you going to the theater this evening?" inquired the counselor the same morning of the burgomaster.

"I shall not fail to do so," returned van Tricasse, "and I shall take Madame van Tricasse, as well as our daughter Suzel and our dear Tatanemance, who all dote on good music."

"Madamoiselle Suzel is going then?"

"Certainly, Niklausse."

"Then my son Frantz will be one of the first to arrive," said Niklausse.

"A spirited boy, Niklausse," replied the burgomaster sententiously; "but hot-headed! He will require watching!"

"He loves, van Tricasse,—your charming Suzel."

"Well, Niklausse, he shall marry her. Now that we have agreed on this marriage, what more can he desire!"

"He desires nothing, van Tricasse, the dear boy! But, in short, we'll say no more about it—he will not be the last to get his ticket at the box office."

"Ah, vivacious and ardent youth!" replied the burgomaster, recalling his own past. "We have also been thus, my worthy counselor. We have loved—we too! We have danced attendance in our day! Till to-night, then, till to-night! By-the-bye, do you know this Fiovaranti is a great artist? And what a welcome he has received among us! It will be long before he will forget the applause of Quiquendone!"

The Opera "Les Huguenots."

THE tenor Fiovaranti was, indeed, going to sing; Fiovaranti, who, by his talents as a virtuoso, his perfect method, his melodious

voice, provoked a real enthusiasm among the lovers of music in the town.

For three weeks Fiovaranti had been achieving a brilliant success in "Les Huguenots." The first act, interpreted according to the tastes of the Quiquendonians, had occupied an entire evening of the first week of the month. Another evening in the second week, prolonged by infinite *andantes*, had elicited for the celebrated singer a real ovation. His success had been still more marked in the third act of Meyerbeer's masterpiece. But now Fiovaranti was to appear in the fourth act, which was to be performed on this evening before an impatient public. Ah, the duet between Raoul and Valentine, that pathetic love-song for two voices, that strain so full of *crescendos, stringendos,* and *piu crescendos*—all this, sung slowly, compendiously, interminably! Ah, how delightful!

At four o'clock the hall was full. The boxes, the orchestra, the pit, were overflowing. It was customary for the Quiquendonians, while awaiting the rise of the curtain, to sit silent, some reading the paper, others whispering low to each other, some making their way to their seats slowly and noiselessly, others casting timid looks towards the bewitching beauties in the galleries.

But on this evening a looker-on might have observed that, even before the curtain rose, there was unusual animation among the audience. People were restless who were never known to be restless before. The ladies' fans fluttered with abnormal rapidity. All appeared to be inhaling air of exceptional stimulating power. Everyone breathed more freely. The eyes of some became unwontedly bright and seemed to give forth a light equal to that of the candles, which themselves certainly threw a more brilliant light over the hall. It was evident that people saw more clearly, though the number of candles had not been increased. Ah, if Doctor Ox's experiment were being tried! But it was not being tried, as yet.

The musicians of the orchestra at last took their places. The first violin had gone to the stand to give a modest *la* to his colleagues. The stringed instruments, the wind instruments, the drums and cymbals, were in accord. The conductor only waited the sound of the bell to beat the first bar.

The bell sounds. The fourth act begins. The *allegro appassionato* of the inter-act is played as usual, with a majestic deliberation which would have made Meyerbeer frantic, and all the majesty of which was appreciated by the Quiquendonian *dilettanti.*

An Opera at Express Speed

BUT soon the leader perceived that he was no longer master of his musicians. He found it difficult to restrain them, though usually so obedient and calm. The wind instruments betrayed a tendency to hasten the movements, and it was necessary to hold them back with a firm hand, for they would otherwise outstrip the stringed instruments; which, from a musical point of view, would have been disastrous. The bassoon himself, the son of Josse Lietrinck the apothecary, a well-bred young man, seemed to lose his self-control.

Meanwhile, Valentine has begun her recitative, "I am alone," etc.; but she hurries it.

The leader and all his musicians, perhaps unconsciously, follow her in her *cantabile,* which should be taken deliberately, like a 12-8 as it is. When Raoul appears at the door at the bottom of the stage, between the moment when Valentine goes to him and that when she conceals herself in the chamber at the side, a quarter of an hour does not elapse; while formerly, according to the traditions of the Quiquendone theater, this recitative of thirty-seven bars was wont to last just thirty-seven minutes.

Saint Bris, Nevers, Cavannes, and the Catholic nobles have appeared, somewhat prematurely, perhaps, upon the scene. The composer has marked *allegro pompose* on the score. The orchestra and the lords proceed *allegro* indeed, but not at all *pompose,* and at the chorus, in the famous scene of the "benediction of the poniards," they no longer keep to the enjoined *allegro.* Singers and musicians break away impetuously. The leader does not even attempt to restrain them. Nor does the public protest; on the contrary, the people find themselves carried away, and see that they are involved in the movement, and that the movement responds to the impulses of their souls.

"Will you, with me, deliver the land,
From troubles increasing, an impious band?"

They promise, they swear. Nevers has scarcely time to protest, and to sing that "among his ancestors were many soldiers, but never an assassin." He is arrested. The police and the aldermen rush forward and rapidly swear "to strike all at once." Saint Bris shouts the recitative which summons the Catholics to vengeance. The three monks, with white cowls, hasten in by the door at the back of Nevers's room, without taking any account of the stage directions, which enjoin on them to advance slowly. Already all the artists have drawn sword or poniard, which the three monks bless in a trice. The sopranos, tenors, bassos, attack the *allegro furioso* with cries of rage, and of a dramatic 6-8 time they make it 6-8 quadrille time. Then they rush out, bellowing:

"At midnight,
Noiselessly,
God wills it
Yes,
At midnight."

The Audience in a Frenzy

AT this moment the audience start to their feet. Everybody is agitated—in the boxes, the pit, the galleries. It seems as if the spectators are about to rush upon the stage, the Burgomaster van Tricasse at their head, to join with the conspirators and annihilate the Huguenots, whose religious opinions, however, they share. They applaud, call before the curtain, make loud acclamations! Tatanemance grasps her bonnet with feverish hand. The candles throw out a lurid glow of light.

Raoul, instead of slowly raising the curtain, tears it apart with a superb gesture and finds himself confronting Valentine.

At last! It is the grand duet, and it starts off *allegro vivace.* Raoul does not wait for Valentine's pleading, and Valentine does not wait for Raoul's responses.

The fine passage beginning, "Danger is passing time is flying," becomes one of those rapid airs

which have made Offenbach famous, when he composed a dance for conspirators. The *andante amoroso,* "Thou hast said it, aye, thou lovest me," becomes a real *vivace furioso,* and the violoncello ceases to imitate the inflections of the singer's voice, as indicated in the composer's score. In vain Raoul cries, "Speak on, and prolong the ineffable slumber of my soul." Valentine cannot "prolong." It is evident that an unaccustomed fire devours her. Her *b's* and her *c's* above the stave were dreadfully shrill. He struggles, he gesticulates, he is all in a glow.

The alarum is heard; the bell resounds; but what a panting bell. The bell-ringer has evidently lost his self-control. It is a frightful tocsin, which violently struggles against the fury of the orchestra.

Finally the air which ends this magnificent act, beginning, "No more love, no more intoxication, O the remorse that oppresses me!" which the composer marks *allegro con moto,* becomes a wild *prestissimo.* You would say an express train was whirling by. The alarum resounds again. Valentine falls fainting. Raoul precipitates himself from the window.

Almost a Riot at the End of the Opera

IT was high time. The orchestra, really intoxicated, could not have gone on. The leader's baton is no longer anything but a broken stick on the prompter's box. The violin strings are broken, and their necks twisted. In his fury the drummer has burst his drum. The counter-bassist has perched on the top of his musical monster. The first clarionet has swallowed the reed of his instrument, and the second hautboy is chewing his reed keys. The groove of the trombone is strained, and finally the unhappy cornetist cannot withdraw his hand from the bell of his instrument, into which he had thrust it too far.

And the audience! The audience, panting, all in a heat, gesticulate and howl. All the faces are as red as if a fire were burning within their bodies. They crowd each other, hustle each other to get out—the men without hats, the women without mantles! They elbow each other in the corridors, crush between the doors, quarrel, fight! There are no longer any officials, any burgomaster. All are equal amid this infernal frenzy!

Some moments after, when all have reached the street, each one resumes his habitual tranquility, and peaceably enters his house, with a confused remembrance of what he has just experienced.

The fourth act of the "Huguenots," which formerly lasted six hours, began, on this evening at half-past four, and ended at twelve minutes before five.

It had only lasted eighteen minutes.

CHAPTER VIII

In which the Ancient and Solemn German Waltz Becomes a Whirlwind

BUT if the spectators, leaving the theater, resumed their customary calm, if they quietly regained their homes, preserving only a sort of passing stupefaction, they had none the less undergone a remarkable exaltation, and, overcome and weary, as if they had committed some excess of dissipation, they fell heavily upon their beds.

The next day each Quiquendonian had a kind of recollection of what had occurred the evening before. One missed his hat, lost in the hubbub; another a coat-flap, torn in the brawl; one her delicately fashioned shoe, another her best mantle. Memory returned to these worthy people, and with it a certain shame for their unjustifiable agitation. It seemed to them an orgy in which they were the unconscious heroes and heroines. They did not speak of it; they did not wish to think of it. But the most astounded personage in the town was van Tricasse the burgomaster.

The Wig of van Tricasse

THE next morning, on waking, he could not find his wig. Lotche looked everywhere for it, but in vain. The wig had remained on the field of battle. As for having it publicly claimed by Jean Mistrol, the town-crier,—no, it would not do. It were better to lose the wig than to advertise himself thus, as he had the honor to be the first magistrate of Quiquendone.

The worthy van Tricasse was reflecting upon this, extended beneath his sheets, with bruised body, heavy head, furred tongue, and burning breast. He felt no desire to get up—on the contrary—and his brain worked more during this morning than it had probably worked before for forty years. The worthy magistrate recalled to his mind all the incidents of the incomprehensible performance. He connected them with the events which had taken place shortly before at Doctor Ox's reception. He tried to discover the causes of the singular excitability which, on two occasions, had betrayed itself in the best citizens of the town.

"What *can* be going on?" he asked himself. "What giddy spirit has taken possession of my peaceable town of Quiquendone? Are we about to go mad, and must we make the town one vast asylum? For yesterday we were all there, notables, counselors, judges, advocates, physicians, schoolmasters; and all, if my memory serves me,—all of us were assailed by this excess of furious folly! But what was there in that infernal music? It is inexplicable! Yet I certainly ate or drank nothing which could put me into such a state. No; yesterday I had for dinner a slice of well done veal, several spoonfuls of spinach with sugar, eggs, and a little beer and water,—that couldn't get into my head! No! There is something that I cannot explain, and as after all I am responsible for the conduct of the citizens, I will have an investigation."

An Investigation by the Municipal Council

BUT the investigation, though decided upon by the municipal council, produced no result. If the fats were clear, the causes escaped the sagacity of the magistrates. Besides, tranquillity has been restored in the public mind, and with tranquillity, forgetfulness of the strange scenes of the theatre. The newspapers avoided speaking of them, and the account of the performance which appeared in the *Quiquendone Memorial,* made no allusion to this intoxication of the entire audience.

Meanwhile, though the town resumed its habitual phlegm, and became apparently Flemish as before, it was observable that, at bottom, the character and

temperament of the people changed little by little. One might have truly said, with Dominique Custos, the doctor, that "their nerves were affected."

Let us explain. This undoubted change only took place under certain conditions. When the Quiquendonians passed through the streets of the town, walked in the squares or along the Vaar, they were always the cold and methodical people of former days. So, too, when they remained at home, some working with their hands and others with their heads,—these doing nothing, those thinking nothing,—their private life was silent, inert, vegetating as before. No quarrels, no household squabbles, no acceleration in the beating of the heart, no excitement of the brain. The mean of their pulsations remained as it was of old.

But, strange and inexplicable phenomenon though it was, which would have defied the sagacity of the most ingenious physiologists of the day, if the inhabitants of Quiquendone did not change in their home life, they were visibly changed in their civil life and in their relations between man and man, to which it leads.

The Strange Localization of the Excitement

IF they met together in some public edifice, it did not "work well" as Commissary Passauf expressed it. On 'change, at the town-hall, in the amphitheater of the academy, at the sessions of the council, as well as the reunions of the *savants*, a strange excitement seized the assembled citizens. Their relations with each other became embarrassing before they had been together an hour. In two hours the discussion degenerated into an angry dispute. Heads became heated, and personalities were used. Even at church, during the sermon, the faithful could not listen to van Stabel, the minister, in patience, and he threw himself about in the pulpit and lectured his flock with far more than his usual severity. At last this state of things brought about altercations more grave, alas! than that between Custos and Schut, and if they did not require the interference of the authorities, it was because the antagonists, after returning home, found therein, its calm, forgetfulness of the offences offered and received.

This peculiarity could not be observed by these minds, which were absolutely incapable of recognizing what was passing in them. One person only in the town, he whose office the council had thought of suppressing for thirty years, Michael Passauf, had remarked that this excitement, which was absent from private houses, quickly revealed itself in public edifices; and he asked himself, not without a certain anxiety, what would happen if this infection should ever develop itself in the family mansions; and if the epidemic—this was the word he used—should extend through the streets of the town. Then there would be no more forgetfulness of insults, no more tranquillity, no intermission in the delirium; but a permanent inflammation, which would inevitably bring the Quiquendonians into collision with each other.

"What would happen then?" Commissary Passauf asked himself in terror. "How could these furious savages be arrested? How check these goaded temperaments? My office would be no longer a sinecure, and the council would be obliged to double my salary—unless it should arrest me myself, for disturbing the public peace!"

The Banker's Dancing Party

THESE very reasonable fears began to be realized. The infection spread from 'change, the theatre, the church, the town-hall, the academy, the market, into private houses, and that in less than a fortnight after the terrible performance of the "Huguenots."

Its first symptoms appeared in the house of Collaert, the banker.

That wealthy personage gave a ball, or at least a dancing-party, to the notabilities of the town. He had issued, some months before, a loan of thirty thousand francs, three quarters of which had been subscribed; and to celebrate this financial success, he had opened his drawing-rooms, and given a party to his fellow-citizens.

The Dancing

EVERYBODY knows that Flemish parties are innocent and tranquil enough, the principal expense is usually in beer and sirups. Some conversation on the appearance of crops, the fine condition of the gardens, the care of flowers, and especially of tulips; a slow and measured dance, from time to time, perhaps a minuet; sometimes a waltz, but one of those German waltzes which achieve a turn and a half per minute, and during which the dancers hold each other as far apart as their arms will permit,—such is the usual fashion of the balls attended by the aristocratic society of Quiquendone. But the dancers always lagged behind the orchestra, no matter how slow the measure, and it had to be abandoned.

These peaceable reunions, in which the youths and maidens enjoyed an honest and moderate pleasure, had never been attended by any outburst of ill-nature. Why, then, on this evening at Collaert the banker's, did the sirups seem to be transformed into heady wines, into sparkling champagne, into heating punches? Why, towards the middle of the evening, did a sort of mysterious intoxication take possession of the guests? Why did the minuet become a jig? Why did the orchestra hurry with its harmonies? Why did the candles, just as at the theatre, burn with unwonted refulgence? What electric current invaded the banker's drawing-rooms? How happened it that the couples held each other so closely, and clasped each other's hands so convulsively, that the *"cavaliers seuls"* made themselves conspicuous by certain extraordinary steps in that figure, usually so grave, so solemn, so majestic, so very proper?

Alas! what Edipus could have answered these unsolvable riddles? Commissary Passauf, who was present at the party saw the storm coming distinctly, but he could not control it or fly from it, and he felt a kind of intoxication entering his own brain. All his physical and emotional faculties increased in intensity. He was seen, several times, to throw himself upon the confectionery and devour the dishes, as if he had just broken a long fast.

The animation of the ball was increasing all this while. A long murmur, like a dull buzzing, escaped from all breasts. They danced—really danced. The feet were agitated by increasing frenzy. The faces

became as purple as that of Silenus. The eyes shone like carbuncles. The general fermentation rose to the highest pitch.

Waltz From Der Freischuetz

AND when the orchestra thundered out the waltz in *"Der Freischütz,"*—when this waltz, so German, and with a movement so slow, was attacked with wild arms by the musicians,—ah! it was no longer a waltz, but an insensate whirlwind, a gyration worthy of being led by some Mephistopheles, beating the measure with a firebrand! Then a galop, an infernal galop, which lasted an hour without any one being able to stop it, whirled off, in its windings, across the halls, the drawing-rooms, the antechambers, by the staircases, from the cellar to the garret of the opulent mansion, the young men and young girls, the fathers and mothers, people of every age, of every weight, of both sexes; Collaert, the fat banker, and Madame Collaert, and the counselors, and the magistrates, and the chief justice, and Niklausse, and Madame van Tricasse, and the Burgomaster van Tricasse, and the Commissary Passauf himself, who never could recall afterwards who had been his partner on that terrible evening.

But *she* did not forget! And ever since that day she has seen in her dreams the fiery commissary, enfolding her in an impassioned embrace! And "she"—was the amiable Tatanemance.

CHAPTER IX.

In Which Doctor Ox and Ygene, His Assistant, Say a Few Words

"WELL, Ygene?"

"Well, master, all is ready. The laying of the pipes is finished."

"At last! Now, then, we are going to operate on a large scale, on the masses!"

CHAPTER X.

In Which It Will Be Seen That the Epidemic Invades the Entire Town, and What Effect It Produces

DURING the following months the evil, in place of subsiding, became more extended. From private houses the epidemic spread into the streets. The town of Quiquendone was no longer to be recognized.

A phenomenon yet stranger than those which had already happened, now appeared; not only the animal kingdom, but the vegetable kingdom itself, became subject to the mysterious influence.

According to the ordinary course of things, epidemics are special in their operation. Those which attack humanity spare the animals, and those which attack the animals spare the vegetables. A horse was never afflicted with small-pox, nor a man with the cattle-plague, nor do sheep suffer from the potato-rot. But here all the laws of nature seemed to be overturned. Not only were the character, temperament, and ideas of the townsfolk changed but the domestic animals—dogs and cats, horses and cows, asses and goats—suffered from this epidemic influence, as if their habitual equilibrium had been changed. The plants themselves were infected by a similar strange metamorphosis.

In the gardens and vegetable patches and orchards very curious symptoms manifested themselves. Climbing plants climbed more audaciously. Tufted plants became more tufted than ever. Shrubs became trees. Cereals, scarcely sown, showed their little green heads, and gained, in the same length of time, as much in inches as formerly, under the most favorable circumstances, they had gained in fractions. Asparagus attained the height of several feet; the artichokes swelled to the size of melons, the melons to the size of pumpkins, the pumpkins to the size of barrels, the gourds to the size of the belfry bell, which measured, in truth, nine feet in diameter. The cabbages were bushes, and the mushrooms were umbrellas.

The fruits did not lag behind the vegetables. It required two persons to eat a strawberry, and four to consume a pear. The grapes also attained the enormous proportions of those so well depicted by Poussin in his "Return of the Envoys to the Promised Land."

The Giant Tulip

IT was the same with the flowers; immense violets spread the most penetrating perfumes through the air; exaggerated roses shone with the brightest colors; lilies formed, in a few days, impenetrable copses; geraniums, daisies, camellias, rhododendrons, invaded the garden walks, and stifled each other. And the tulips,—those dear liliaceous plants so dear to the Flemish heart,—what emotion they must have caused to their zealous cultivators! The worthy van Bistrom nearly fell over backwards, one day, on seeing in his garden an enormous *"Tulipa gesneriana,"* a gigantic monster, whose cup afforded space for a nest of a whole family of robins!

The entire town flocked to see this floral phenomenon, and renamed it the *"Tulipa quiquendonia."*

But alas! if these plants, these fruits, these flowers, grew visibly to the naked eye, if all the vegetables insisted on assuming colossal proportions, if the brilliancy of their colors and perfume intoxicated the smell and the sight, they quickly withered. The air which they absorbed rapidly exhausted them, and they soon died, faded, and dried up.

Such was the fate of the famous tulip, which, after several days of gorgeous splendor, became emaciated, and fell lifeless.

The Domestic Animals

IT was soon the same with the domestic animals, from the house dog to the stable pig, from the canary to the turkey of the back court. It must be said that in ordinary times these animals were not less phlegmatic than their masters. The dogs and cats vegetated rather than lived. They never betrayed a wag of pleasure nor a snarl of wrath. Their tails moved no more than if they had been made of bronze. Such a thing as a bite or scratch from any of them had not been known from time immemorial. As for mad dogs, they were looked upon as imaginary beasts, like the griffins and the rest in the menagerie of the apocalypse.

But what a change had taken place in a few months, the smallest incidents of which we are trying to reproduce! Dogs and cats began to show teeth and claws. Several executions had taken place after reiterated offenses. A horse was seen, for

the first time, to take his bit in his teeth and rush through the streets of Quiquendone; an ox was observed to precipitate itself, with lowered horns, upon one of his herd; an ass was seen to turn himself over, with his legs in the air, in the Place Saint Ernuph, and bray as ass never brayed before! a sheep, actually a sheep, defended valiantly the cutlets within him from the butcher's knife.

The Madness Spreads

VAN Tricasse, the burgomaster, was forced to make police rules and regulations concerning the domestic animals as, seized with lunacy, they rendered the streets of Quiquendone unsafe.

But alas! if the animals were mad, the men were scarcely less so. No age was spared by the scourge. Babies soon became quite insupportable, though till now so easy to bring up; and for the first time Honoré Syntax, the judge, was obliged to apply the rod to his youthful offspring.

There was a kind of insurrection at the high school, and the dictionaries became formidable missiles in the classes. The scholars would not submit to be shut in, and, besides, the infection took the teachers themselves, who overwhelmed the boys and girls with extravagant tasks and punishments.

Another strange phenomenon occurred. All these Quiquendonians, so sober before, whose chief food had been whipped creams, committed wild excesses in their eating and drinking. Their usual regimen no longer sufficed. Each stomach was transformed into a gulf, and it became necessary to fill this gulf by the most energetic means. The consumption of the town was trebled. Instead of two repasts they had six. Many cases of indigestion were reported. The Counselor Niklausse could not satisfy his hunger. Van Tricasse found it impossible to assuage his thirst, and remained in a state of rabid semi-intoxication.

In short, the most alarming symptoms manifested themselves and increased from day to day. Drunken people staggered in the streets, and these were often citizens of high position.

The Physician's Work Increases

DOMINIQUE CUSTOS, the physician, had plenty to do with the heartburns, inflammations, and nervous affections, which proved to what a strange degree the nerves of the people had been irritated.

There were daily quarrels and altercations in the once deserted but now crowded streets of Quiquendone; for nobody could stay at home any longer. It was necessary to establish a new poilce force to control the disturbers of the public peace. A prison cage was established in the Town Hall, and speedily became full, night and day, of refractory offenders. Commissary Passauf was in despair.

A marriage was concluded in less than two months,—such a thing had never been seen before. Yes, the son of Rupp, the schoolmaster, wedded the daughter of Augustine de Rovere, and that fifty-seven days only after he had petitioned for her hand and heart!

Other marriages were decided upon, which, in old times, would have remained in doubt and discussion for years. The burgomaster perceived that his own daughter, the charming Suzel, was escaping from his hands.

As for dear Tatanemance, she had dared to sound Commissary Passauf on the subject of a union, which seemed to her to combine every element of happiness, fortune, honor, youth!

At last,—to reach the depths of abomination,—a duel took place! Yes, a duel with pistols—horse-pistols—at seventy-five paces, with ball cartridges. And between whom? Our readers will never believe!

Between M. Frantz Niklausse, the gentle angler, and young Simon Collaert, the wealthy banker's son.

And the cause of this duel was the burgomaster's daughter, for whom Simon discovered himself to be fired with passion, and whom he refused to yield to the claims of an audacious rival!

CHAPTER XI

In Which the Quiquendonians Adopt An Heroic Resolution.

WE have seen to what a deplorable condition the people of Quiquendone were reduced. Their heads were in a ferment. They no longer knew or recognized themselves. The most peaceable citizens had become quarrelsome. If you looked at them askance, they would speedily send you a challenge. Some let their mustaches grow, and several—the most belligerent—curled them up at at the ends.

This being the condition, the administration of the town and the maintenance of order in the streets became difficult tasks, for the government had not been organized for such a state of things. The burgomaster—that worthy van Tricasse whom we have seen so placid, so dull, so incapable of coming to any decision—the burgomaster became intractable. His house resounded with the sharpness of his voice. He made twenty decisions a day, scolding his officials, and himself enforcing the regulations of his administration.

Ah, what a change! The amiable and tranquil mansion of the burgomaster, that good Flemish home—where was its former calm? What changes had taken place in your household economy? Madame van Tricasse had become acrid, whimsical, harsh. Her husband sometimes succeeded in drowning her voice by talking louder than she, but could not silence her. The petulant humor of this worthy dame was excited by everything. Nothing went right. The servants offended her every moment. Tatanemance, her sister-in-law, who was not less irritable, replied sharply to her. M. van Tricasse naturally supported Lotche, his servant as is the case in all good households, and this permanently exasperated Madame, who constantly disputed, discussed, and made scenes with her husband.

Changes in the Household

"WHAT on earth is the matter with us?" cried the unhappy burgomaster. "What is this fire that is devouring us? Are we possessed with the devil? Ah, Madam van Tricasse, you will end by making me die before you, and thus violate all the traditions of the family!"

The reader will not have forgotten the strange custom by which M. van Tricasse would become a

widower and marry again, so as not to break the chain of descent.

Meanwhile, this disposition of all minds produced other curious effects worthy of note. This excitement, the cause of which has so far escaped us, brought about unexpected physiological changes.

Talents, hitherto unrecognized, betrayed themselves. Aptitudes were suddenly revealed. Artists, before common-place, displayed new ability. Politicians and authors arose. Orators proved themselves equal to the most arduous debates, and on every question inflamed audiences which were quite ready to be inflamed. From the sessions of the council, this movement spread to the public political meetings, and a club was formed at Quiquendone; while twenty newspapers, the *Quiquendone Signal*, the *Quiquendone Impartial*, the *Quiquendone Radical*, and so on, written in an inflammatory style, raised the most important questions.

An Impending War

BUT what about?" you will ask. Apropos of everything, and of nothing; apropos of the Oudenarde tower, which was falling, and which some wished to pull down, and others to prop up; apropos of the police regulations issued by the council, which some obstinate citizens threatened to resist; apropos of the sweeping of the butters, repairing the sewers, and so on. Nor did the enraged orators confine themselves to the internal administration of the town. Carried on by the current, they went further, and essayed to plunge their fellow-citizens into the hazards of war.

Quiquendone had had for eight or nine hundred years a *casus belli* of the best quality; but she had precisiously laid it up like a relic, and there had seemed some probability that it would become effete, and no longer serviceable. This was what had given rise to the *casus belli*. It is not generally known that Quiquendone, in this cosy corner of Flanders, lies next to the little town of Virgamen. The territories of the two communities are contiguous. Well, in 1185, some time before Count Baldwin's departure to the Crusades, a Virgamen cow—not a cow belonging to a citizen, but a cow which was common property, let it be observed—audaciously ventured to pasture on the territory of Quiquendone. This unfortunate beast had scarcely eaten three mouthfuls; but the offense, the abuse, the crime—whatever you will—was committed and duly indicted, for the magistrates, at that time had already begun to know how to write.

Revenge For a National Offence

"WE will take revenge at the proper moment," said simple Natalis van Tricasse, the thirty-second predecessor of the burgomaster of this story, "and the Virgamenians will lose nothing by waiting."

The Virgamenians were forewarned. They waited, thinking, without doubt, that the remembrance of the offense would fade away with the lapse of time; and really, for several centuries, they lived on good terms with their neighbors of Quiquendone.

But they counted without their hosts, or rather without this strange epidemic, which, radically changing the character of the Quiquendonians, aroused their dormant vengeance. It was at the club of the Rue Monstrelet that the truculent orator Schut, abruptly introducing the subject to his hearers, inflamed them with the expressions and metaphors used on such occasions. He recalled the offense, the injury which had been done to Quiquendone, and which a nation "jealous of its rights" could not admit as a precedent; he showed the insult to be still existing, the wound still bleeding; he spoke of certain special head-shakings on the part of the people of Virgamen, which indicated in what degree of contempt they regarded the people of Quiquendone; he appealed to his fellow-citizens, who, unconsciously perhaps, had supported this mortal insult for long centuries; he adjured the "children of the ancient town" to have no other purpose than to obtain a substantial reparation. And, lastly, he made an appeal to "all the living energies of the nation"!

With what enthusiasm these words, so new to Quiquendonian ears, were greeted, may be surmised, but cannot be told. All the auditors rose, and with extended arms demanded war with loud cries. Never had the Advocate Schut achieved such a success, and it must be avowed that his triumphs were not few.

A Memorable Reading

THE burgomaster, the counselor, all the notabilities present at this memorable meeting, would have vainly attempted to resist the popular outburst. Besides, they had no desire to do so, and cried as loud, if not louder, than the rest: "To the frontier! To the frontier!"

As the frontier was but three kilometers from the walls of Quiquendone, it is certain that the Virgamenians ran a real danger, for they might easily be invaded without having had time to look about them.

Meanwhile, Josse Lietrinck, the worthy chemist, who alone had preserved his senses on this grave occasion, tried to make his fellow-citizens comprehend that guns, cannon and generals were equally wanting to their design. They replied to him, not without many impatient gestures, that these generals, cannon, and guns would be improvised; that the right and love of country sufficed, and rendered a people irresistible.

Hereupon the burgomaster himself came forward, and in a sublime harangue make short work of those pusillanimous people who disguise their fear under a veil of prudence, which veil he tore off with a patriotic hand. At this sally it seemed as if the hall would fall in under the applause.

The vote was eagerly demanded, and was taken amid acclamations. The cries of "To Virgamen to Virgamen!" redoubled.

The burgomaster then took it upon himself to put the armies in motion, and in the name of the town he promised the honors of a triumph, such as was given in the times of the Romans to that one of its generals who should return victorious.

Meanwhile, Josse Lietrinck, who was an obstinate fellow, and did not regard himself as beaten, though he really had been, insisted on making another observation. He wished to remark that the triumph was only accorded at Rome to those victorious generals who had killed five thousand of the enemy.

"Well, well!" cried the meeting deliriously.

"And as the population of the town of Virgamen consists of but three thousand, five hundred and seventy-five inhabitants, it would be difficult, unless the same person was killed several times——" But they did not let the luckless logician finish, and he was turned out, hustled and bruised.

"Citizens," said Pulmacher, the grocer, who usually sold groceries by retail, "whatever this cowardly apothecary may have said, I engage by myself to kill five thousand Virgamenians, if you will accept my services!"

"Five thousand, five hundred!" cried a yet more resolute patriot.

"Six thousand, six hundred!" retorted the grocer.

"Seven thousand!" cried Jean Orbideck, the confectioner of the Rue Hembling, who was on the road to fortune by making whipped creams.

"Adjudged!" exclaimed the burgomaster van Tricasse, on finding that no one else rose on the bid.

And this was how Jean Orbideck, the confectioner, became general-in-chief of the forces of Quiquendone.

CHAPTER XII

In Which Ygene, the Assistant, Gives a Reasonable Piece of Advice, Which Is Eagerly Rejected by Doctor Ox

"WELL, master," said Ygene next day, as he poured the pails of sulphuric acid into the troughs of the great battery.

"Well," resumed Doctor Ox, "was I not right? See to what not only the physical developments of a whole nation, but its morality, its dignity, its talents, its political sense, have come! It is only a question of molecules."

"No doubt; but——"

"But——"

"Do you not think that matters have gone far enough, and that these poor devils should not be excited beyond measure?"

"No, no!" cried the doctor; "no! I will go on to the end!"

"As you will, master; the experiment, however, seems to me conclusive, and I think it time to——"

"To——"

"To close the valve."

"You'd better not!" cried Doctor Ox. "If you attempt it, I'll throttle you!"

CHAPTER XIII

In Which It Is Once More Proved That by Taking High Ground All Human Littlenesses May Be Overlooked

"YOU say?" asked the Burgomaster van Tricasse of the Counselor Niklausse.

"I say that this war is necessary," replied Niklausse, firmly, "and that the time has come to avenge this insult."

"And I repeat to you," snapped the burgomaster tartly, "that if the people of Quiquendone do not profit by this occasion to vindicate their rights, they will be unworthy of their name."

"And as for me, I maintain that we ought, without delay, to collect our forces and lead them to the front."

"Really, monsieur, really!" replied van Tricasse. "And do you speak thus to *me?*"

"To yourself, monsieur the burgomaster; and you shall hear the truth unwelcome as it may be."

"And you shall hear it yourself, counselor," returned van Tricasse in a passion, "for it will come better from my mouth than from yours! Yes, monsieur, yes, any delay would be dishonorable. The town of Quiquendone has waited nine hundred years for the moment to take its revenge, and whatever you may say, whether it pleases you or not, we shall march upon the enemy."

"Ah you take it thus!" replied Niklausse harshly. "Very well, monsieur, we will march without you, if it does not please you to go."

"A burgomaster's place is in the front rank, monsieur!"

"And that of a counselor also, monsieur."

"You insult me by thwarting all my wishes," cried the burgomaster, whose fists seemed likely to hit out before long.

"And you insult me equally by doubting my patriotism," cried Niklausse, who was equally ready for a tussle.

"I tell you, monsieur, that the army of Quiquendone shall be put in motion within two days!"

"And I repeat to you, monsieur, that forty-eight hours shall not pass before we shall have marched upon the enemy!"

The Counselor and the Burgomaster

IT is easy to see, from this fragment of conversation, that the two speakers supported exactly the same idea. Both wished for hostilities; but as their excitement disposed them to altercation, Niklausse would not listen to van Tricasse, nor van Tricasse to Niklausse. Had they been of contrary opinions on this grave question, had the burgomaster favored war and the counselor insisted on peace, the quarrel could not have been more violent. These two old friends gazed fiercely at each other. By the quickened beating of their hearts, their red faces, their contracted pupils, the trembling of their muscles, their harsh voices, it might be conjectured that they were ready to come to blows.

But the striking of a large clock happily checked the adversaries at the moment when they seemed on the point of assaulting each other. "At last the hour has come!" cried the burgomaster.

"What hour?" asked the counselor.

"The hour to go to the belfry tower."

"It is true, and whether it pleases you or not, I shall go, monsieur."

"And I, too."

"Let us go!"

"Let us go!"

It might have been supposed from these last words that a collision had occurred, and that the adversaries were proceeding to a duel; but it was not so. It had been agreed that the burgomaster and the counselor, as the two principal dignitaries of the town, should repair to the Town Hall, and there show themselves on the high tower which overlooked Quiquendone; that they should examine the surrounding country, so as to make the best strategic plan for the advance of their troops.

Though they were in accord on this subject, they did not cease to quarrel bitterly as they went. Their

loud voices were heard resounding in the streets; but all the passers-by were now accustomed to this; the exasperation of the dignitaries seemed quite natural, and no one took notice of it. Under the circumstances, a calm man would have been regarded as a monster.

Climbing the Belfry Tower

THE burgomaster and the counselor, having reached the porch of the belfry, were in a paroxysm of fury. They were no longer red, but pale. This terrible discussion, though they had the same idea, had produced internal spasms and everyone knows that paleness shows that anger has reached its last limits.

At the foot of the narrow tower staircase there was a real explosion. Who should go up first? Who should first creep up the winding steps? Truth compels us to say that there was a tussle, and that the Counselor Niklausse, forgetful of all that he owed to his superior, to the supreme magistrate of the town, pushed van Tricasse violently back, and dashed up the staircase first.

Both ascended, denouncing and raging at each other at every step. It was to be feared that a terribel climax would occur on the summit of the tower, which rose three hundred and fifty-seven feet above the pavement.

The two enemies soon got out of breath, however, and in a little while, at the eightieth step, they began to move up heavily, breathing loud and short.

Then—was it because of their being out of breath?—their wrath subsided, or at least only betrayed itself by a succession of unseemly epithets. They became silent, and, strange to say, it seemed as if their excitement diminished as they ascended higher above the town. A sort of lull took place in their minds. Their brain became cooler, and simmered down like a coffee pot when taken away from the fire? Why?

A Lull in the Excitement

WE cannot answer this "why"; but the truth is that, having reached a certain landing-stage, two hundred and sixty-feet above ground, the two adversaries sat down and, really more calm, looked at each other without any anger in their faces.

"How high it is!" said the burgomaster, passing his handkerchief over his rubicund face.

"Very high!" returned the counselor. "Do you known that we have gone fourteen feet higher than the Church of Saint Michael at Hamburg?"

"I know it," replied the burgomaster in a tone of vanity very pardonable in the chief magistrate of Quiquendone.

The two notabilities soon resumed their ascent, casting curious glances through the loopholes pierced in the tower walls. The burgomaster had taken the head of the procession, without any remark on the part of the counselor. It even happened that at about the three hundred and fourth step, van Tricasse being completely tired out, Niklausse kindly pushed him from behind. The burgomaster offered no resistance to this, and, when he reached the platform of the tower, said graciously: "Thanks, Niklausse; I will do the same for you one day."

A little while before it had been two wild beasts, ready to tear each other to pieces, who had presented themselves at the foot of the tower; it was now two friends who reached its summit.

The weather was superb. It was the month of May. The sun had absorbed all the vapors. What a pure and limpid atmosphere! The most minute objects over a broad space might be discerned. The walls of Virgamen, glistening in their whiteness,—its red, pointed roofs, its belfries shining in the sunlight—appeared a few miles off. And this was the town that was foredoomed to all the horrors of fire and pillage!

Peace Once More

THE burgomaster and the counselor sat down beside each other on a small stone bench, like two worthy people whose souls were in close sympathy. As they recovered breath, they looked around; then after a brief silence: "How fine this is!" cried the burgomaster.

"Yes, it is admirable!" replied the counselor. "Does it not seem to you, my good van Tricasse, that humanity is destined to dwell rather at such heights, than to crawl about on the surface of our globe?"

"I agree with you, honest Niklausse," returned the burgomaster, "I agree with you. You seize sentiment better when you get clear of nature. You breathe it in every sense! It is at such heights that philosophers should be formed and that sages should live, above the miseries of this world!"

"Shall we go around the platform?" asked the counselor.

"Let us go around the platform," replied the burgomaster.

And the two friends, arm in arm, and putting, as formerly, long pauses between their questions and answers, examined every point of the horizon.

"It is at least seventeen years since I have ascended the belfry tower," said van Tricasse.

"I do not think I ever came up before," replied Niklausse; "and I regret it, for the view from this height is sublime! Do you see, my friend, the pretty stream of the Vaar, as it winds among the trees?"

"And, beyond, the heights of Saint Hermandad! How gracefully they shut in the horizon! Observe that border of green trees, which nature has so picturesquely arranged! Ah, nature, nature, Niklausse! Could the hand of man ever hope to rival her?"

"It is enchanting, my excellent friend," replied the counselor. "See the flocks and herds lying in the verdant pasture,—the oxen, the cows, the sheep!"

"And the laborers going to the fields! You would say they were Arcadian shepherds; they only want a bagpipe!"

"And over all this fertile country the beautiful blue sky, which no vapor dims! Ah, Niklausse, one might become a poet here! I do not understand why Saint Simeon Stylites was not one of the greatest poets of the world."

"It was because, perhaps, his column was not high enough," replied the counselor with a gentle smile.

The Chimes of Quiquendone

AT this moment the chimes of Quiquendone rang out. The clear bells played one of their most melodious airs. The two friends listened in ecstasy.

Then in his calm voice, van Tricasse said: "But what, friend Niklausse, did we come to the top of this tower to do?"

"In fact," replied the counselor, "we have permitted ourselves to be carried away by our reveries ——"

"What did we come here to do?" repeated the burgomaster.

"We came," said Niklausse, "to breathe this pure air, which human weaknesses have not corrupted."

"Well, shall we descend, friend Niklausse?"

"Let us descend, friend van Tricasse."

They gave a parting glance at the splendid panorama which was spread before their eyes; then the burgomaster passed down first, and began to descend with a slow and measured pace. The counselor followed a few steps behind. They reached the landing stage at which they had stopped on ascending. Already their cheeks began to redden. They tarried a moment, then resumed their descent.

In a few moments van Tricasse begged Niklausse to go more slowly, as he felt him on his heels, and it "worried him." It even did more than worry him; for twenty steps lower down he ordered the counselor to stop, that he might get on some distance ahead.

The counselor replied that he did not wish to remain with his leg in the air to await the good pleasure of the burgomaster, and kept on.

Van Tricasse retorted with a rude expression.

The counselor responded by an insulting allusion to the burgomaster's age, destined as he was, by his family traditions, to marry a second time.

The burgomaster went down twenty steps more and warned Niklausse that this should not pass thus.

Niklausse replied that, at all events, he would pass down first; and, the space being very narrow, the two dignitaries came into collision, and found themselves in utter darkness. The words "blockhead" and "booby" were the mildest which they now applied to each other.

"We shall see, stupid beast!" cried the burgomaster,—"we shall see what figure you will make in this war, and in what rank you will march!"

"In the rank that precedes yours, you silly old fool!" replied Niklausse.

The Dispute Begins Again

THEN there were other cries, and it seemed as if bodies were rolling over each other. What was going on? Why were these dispositions so quickly changed? Why were the gentle sheep of the tower's summit metamorphosed into tigers two hundred feet below it?

However this might be, the guardian of the tower, hearing the noise, opened the door, just at the moment when the two adversaries, bruised, and with protruding eyes, were in the act of tearing each other's hair,—fortunately they wore wigs.

"You shall give me satisfaction for this!" cried the burgomaster, shaking his fist under his adversary's nose.

"Whenever you please!" growled the Counselor Niklausse, attempting to respond with a vigorous kick.

The guardian, who was himself in a passion,—I cannot say why,—thought the scene a very natural one. I know not what excitement urged him to take part in it, but he controlled himself, and went off to announce throughout the neighborhood that a hostile meeting was about to take place between the Burgomaster van Tricasse and the Counselor Niklausse.

CHAPTER XIV.

In which Matters go so far that the Inhabitants of Quiquendone, the Reader, and even the Author, Demand an Immediate Denouement

THE last incident proves to what a pitch of excitement the Quiquendonians had been wrought. The two oldest friends in the town,—and the most gentle before the advent of the epidemic,—to reach this degree of violence! And that, too, only a few minutes after their old mutual sympathy, their amiable instincts, their contemplative habit, had been restored at the summit of the tower!

On learning what was going on, Doctor Ox could not contain his joy. He resisted the arguments which Ygene, who saw what a serious turn affairs were taking, addressed to him. Besides, both of them were infected by the general fury. They were not less excited than the rest of the population, and they ended by quarreling as violently as the burgomaster and the counselor.

Besides, one question eclipsed all others, and the intended duels were postponed by issue of the Virgamenian difficulty. No man had the right to shed his blood uselessly, when it belonged, to the last drop, to his country in danger. The affair was, in short, a grave one, and there was no withdrawing from it.

Beginning the War

THE Burgomaster van Tricasse, despite the war-like ardor with which he was filled, had not thought it best to throw himself upon the enemy without warning him. He had, therefore, through the medium of the rural policeman, Hottering, sent to demand reparation of the Virgamenians for the offense committed, in 1195, on the Quiquendonian territory.

The authorities of Virgamen could not at first imagine of what the envoy spoke, and the latter, despite his official character, was conducted back to the frontier very cavalierly.

Van Tricasse then sent one of the aides-de-camp of the confectioner-general, citizen Hildevert Shuman, a manufacturer of barley sugar, a very firm and energetic man, who carried to the authorities of Virgamen the original minute of the indictment drawn up in 1195 by order of the Burgomaster Natalis van Tricasse.

The authorities of Virgamen burst out laughing, and served the aide-de-camp in the same manner as the rural policeman.

The burgomaster then assembled the dignitaries of the town.

A letter, remarkably and vigorously drawn up, was written as an ultimatum; the cause of quarrel

was plainly stated, and a delay of twenty-four hours was accorded to the guilty city in which to repair the outrage done to Quiquendone.

The letter was sent off, and returned a few hours afterwards, torn to bits, which made so many fresh insults. The Virgamenians knew of old the forebearance and equanimity of the Quiquendonians, and made sport of them and their demand, of their *casus belli* and their *ultimatum*.

There was only one thing left to do,—to have recourse to arms, to invoke the God of battles, and, after the Prussian fashion, to hurl themselves upon the Virgamenians before the latter could be prepared.

This decision was made by the council in solemn conclave, in which cries, objurgations, and menacing gestures were mingled with unexampled violence. An assembly of idiots, a congress of madmen, a club of maniacs, would not have been more tumultuous.

Assembling the Troops

As soon as the declaration of war was known, General Jean Orbideck assembled his troops, perhaps two thousand, three hundred and ninety-three combatants from a population of two thousand, three hundred and ninety-three souls. The women, the children, the old men, were joined with the able-bodied males. The guns of the town had been put under requisition. Five had been found, two of which were without cocks, and these had been distributed to the advance guard. The artillery was composed of the old culverin of the chateau, taken in 1339 at the attack on Quesnoy, one of the first occasions of the use of cannon in history, and which had not been fired off for five centuries. Happily for those who were appointed to take it in charge, there were no projectiles with which to load it; but such as it was, this engine might well impose on the enemy. As for side-arms, they had been taken from the museum of antiquities,—flint hatchets, helmets, Frankish battle axes, javelins, halberds, rapiers, and so on; and also out of those domestic arsenals commonly known as "cupboards" and "kitchens." But courage, the right, hatred of the foreigner, the yearning for vengeance, were to take the place of more perfect engines, and to replace—at least it was hoped so—the modern machine guns and breech-loaders.

The troops were passed in review. Not a citizen failed at the roll call. General Orbideck, whose seat on horse-back was far from firm, and whose steed was a vicious beast, was thrown three times in front of the army; but he got up again without injury, and this was regarded as a favorable omen. The burgomaster, the counselor, the civil commissary, the chief justice, the school teacher, the banker, the rector,—in short, all the notabilities of the town,—marched at the head. There were no tears shed, either by mothers, sisters, or daughters. They urged on their husbands, fathers, brothers to the combat and even followed them and formed the rear guard, under the orders of the courageous Madam van Tricasse.

The crier, Jean Mistrol, blew his trumpet; the army moved off, and directed itself, with ferocious cries, towards the Oudenarde gate.

Shutting Off the Oxygen

At the moment when the head of the column was about to pass the walls of the town, a man threw himself before it.

"Stop! stop! Fools that you are!" he cried. "Suspend your blows! Let me shut the valve! You are not changed in nature! You are good citizens, quiet and peacable! If you are so excited, it is my master, Doctor Ox's, fault! It is an experiment! Under the pretext of lighting your streets with oxyhydric gas, he has saturated——"

The assistant was beside himself; but he could not finish. At the instant that the doctor's secret was about to escape his lips, Doctor Ox himself pounced upon the unhappy Ygene in an indescribable rage, and shut his mouth by blows with his fist.

It was a battle. The burgomaster, the counselor, the dignitaries, who had stopped short on Ygene's sudden appearance, carried away in turn by their exasperation, rushed upon the two strangers, without waiting to hear either the one or the other.

Doctor Ox and his assistant, beaten and lashed, were about to be dragged, by order of van Tricasse, to the roundhouse, when——

CHAPTER XV

In Which the Denouement Takes Place

When a formidable explosion resounded. All the atmosphere which enveloped Quiquendone seemed on fire. A flame of an intensity and vividness quite unwonted shot up into the heavens like a meteor. Had it been night, this flame would have been visible for ten leagues around.

The whole army of Quiquendone fell to the earth, like an army of monks. Happily there were no victims; a few scratches and slight hurts were the only result. The confectioner, who, as chance would have it, had not fallen from his horse this time, had his plume singed, and escaped without any further injury.

What had happened?

Something very simple, as was soon learned; the gas works had just blown up. During the absence of the doctor and his assistant, some careless mistake had no doubt been made. It is not known how or why a communication had been established between the reservoir which contained the oxygen and that which inclosed the hydrogen. An explosive mixture had resulted from the union of these two gases, to which fire had accidentally been applied.

This changed everything; but when the army got upon its feet again, Doctor Ox and his assistant Ygene had disappeared.

CHAPTER XVI

In which the Intelligent Reader Sees that he has Guessed Correctly, Despite All the Author's Precautions

After the explosion, Quiquendone immediately became the peaceable, phlegmatic, and Flemish town that it formerly was.

After the explosion, which indeed did not cause a very lively sensation, each one, without knowing why, mechanically took his way home, the burgomaster leaning on the counselor's arm, the advo-

(*Continued on page* 477)

The TALKING BRAIN

By M. H. Hasta

He lived near to madness with his grisly guest. . . . the placid waxen features must have been worst of all—with their staring, indifferent eyes behind which his victim and his judge spoke out in endless alternate prayer and invective——the face without feeling, hiding hell.

The Beginning of a Strange Story—A Friendless Scientist

THE death of the student Vinton, and Professor Murtha's suicide following, brought the University a good deal of unwelcome prominence. In fact, the newspapers demanded investigation; and President Archer asked me to prepare a statement of the facts for general publication, because I know them better than anyone now living.

Circumstances forced me into the very heart of the affair. I am glad of the opportunity to explain it, for my own name was rather unpleasantly mentioned on recent front pages. I worked with Murtha for months; perhaps I helped him somewhat in developing the remarkable instruments which tempted him to crime; I introduced him to Vinton; I was with him the night of his death, and heard his confession; and for the validity of his notes I am his sole witness to science. It is said that I was his only friend.

This last is not quite true. Murtha had no friends—he was not a man who could or would undertake the ordinary human relations. Up to his last days he was self-sufficient—impersonal—official—unbendingly scientific. The first evening I met him an incident occurred which illustrates very well why he was rather outside the general fellowship of the faculty.

We were introduced at the club by Jedney, Murtha's department head. "Here's a new chap we're extra proud to have in the psychology department," he said, and then with a twinkle, "Look out for him, Harvey, for he's dabbling with your specialty and he'll show up all of us old boys if we don't hustle." He went on to say the usual amiable things about my electrical work and the more recent X-ray research with crystals. Then he moved away leaving us together.

I made conversation, since Professor Murtha seemed inclined to leave me the duty and I studied him. He was ill-at-ease. There was clearly no humor there, for he made no attempt to respond to Jedney's joviality. He was of medium height, with rather an academic face beneath red hair, and his speech was clipped and formal. He dressed with almost conspicuous quietness. A typical assistant professor, you might judge from the description—and yet somehow the man was set off from the rest of us as an arrow is distinguished in a rack of walking sticks. It was not poise or strength, it was rather a kind of fierce concentration on some hidden purpose. It was the most noticeable thing about him.

THE possibility of maintaining life in an organ separated from the body to which it belongs is claimed to have been approached by Dr. Flexner, a celebrated scientist. The insertion of tissue from one live animal into another, even the transfusion of blood, which of course, is comparatively simple, suggests endless possibilities to the creative surgeon. And in this story, our author depicts such a surgeon—a wonderful genius, wrapt up in his science, self-contained, aloof from the rest of humanity—and tells of his work upon living subjects and leads to a denouement that is only reached at the very end of the story, which compares favorably with Edgar A. Poe's tales. It is an interesting successor to the wonderful story, "The Case of M. Valdemar."

Testing the Psychological Reactions Unknown to the Subject of the Experiment

WE talked of trivialities, and then I rose to go. Uninvited, he was beside me at once, with a light flowing step, and we passed out onto the dimming campus beneath the sturdy elms. Opposite Carson Hall he said in a hesitant way, which he seemed to try to make cordial, "Could you come up to my rooms for a few minutes, Professor Harvey? I'd like very much to have your help with this new electro-neural work I'm undertaking. Professor Jedney says you know more about the action of weak electric currents than anyone else on this side of the Atlantic. I want to ask a few questions."

I was idle that evening, and I went. He installed me by an open fire—it was September, but chilly—and left me, after pushing a box of cigarettes to my elbow. I had time to receive an impression of austere richness—handsome books, the glint of mahogany, etchings—before he returned with a small box that trailed wires. He set it on the table beside me, took the chair opposite, and lighted a cigarette.

The box contained a galvanometer with a recording dial, and two wrist straps were in the circuit. He explained that he wanted to get some records of the body's resistance to electric currents, and asked if I would mind his taking one while we talked. All that was required was that I should wear the straps. I consented.

We discussed currents and resistances. He spoke intelligently, and betrayed a good knowledge of the physical side of the subject, although he was weak in mathematics. It was interesting to see how he came to life in the talk. Shyness and self-consciousness vanished as soon as he spoke of technicalities. He was vital, interested, assured. But suddenly he seemed to remember something. He checked himself, rose, and picked a book from the table near at hand. It fell open to a familiar passage.

The Shakespearean Test

"HERE'S something I'd like to read you," he said abruptly. We had been talking about hysteresis and Steinmetz's formulae, and I blinked a bit with surprise when he began to read from Shakespeare — the scene in "King John" where little Prince Arthur pleads with Hubert for his eyesight. The King, you remember, has ordered Hubert to blind the child. Some of the passages are so poignant they hurt.

"Arthur: Must you with hot irons burn out both mine eyes?

Hubert: Young boy, I must.

Arthur: And will you?

Hubert: And I will.

Arthur: Have you the heart? When your head did but ache,
I knit my handkercher about your brows,
(The best I had, a princess wrought it me)
And I did never ask it you again.
And with my hand at midnight held your head,
And like the watchful minutes to the hour,
Still and anon cheered up the heavy time."

They were two suffering people together, man

and boy—the one with his terror of the flaming iron, and the other with his memory of the child's gentleness and helplessness, and his dread of seeing forever the blackened, empty sockets under the smooth boyish forehead—and going to his grave with the smell of searing flesh in his nostrils. It is no wonder Hubert's voice shook as he answered the Prince's question,

"Is there no remedy?

Hubert: None, but to lose your eyes.

Arthur: O, heaven! that there were but a mote in yours,

A grain of dust, a gnat, a wandering hair,

Any annoyance in that precious sense!

Then feeling what small things are boisterous there,

Your vile intent must needs seem horrible!"

It is easy to be brutal at a distance—but to hurt something small and helpless is enough to make a man detest himself.

"Let me not hold my tongue! Let me not, Hubert,

Or, Hubert, if you will, cut out my tongue,

So I may keep mine eyes. O spare mine eyes!"

I have never seen the play on the stage, but I can imagine the sigh of relief that flutters over an audience when Hubert breaks down and exclaims, "I will not touch thine eyes!" And the boy's reply comes like a benediction, "Ah, *now* you look like Hubert! All this while you were disguised!"

I had forgotten Murtha and everything in fact but Prince Arthur—when suddenly the reading stopped. Lifting the galvanometer lid Murtha removed the disc of paper, on which was scratched a wavering line.

A Discussion of the Result of the Test

"SEE," he said as he took several similar discs from a table drawer. "Here are some pictures of sympathy. You know, I suppose, that the body's resistance to electricity varies with its emotional state? I couldn't let you know I was planning a test or you'd have been on your guard—but the light current I sent through you while I was reading made a chart which tells how responsive you are to appeals of this sort."

I stared at him, uncertain whether to laugh or be irritated at his casual trespass on the emotional privacy of a stranger, his guest. This was science with a vengeance! But he laid the last record beside the others, carefully noting my name and the date, and went on placidly, "Here is President Archer's reaction to that same passage—" evidently I was not alone!—"and this is Cardy's—and this is De Grasse's. Notice the excitable Latin temperament in that sharp down-swing. This one I got from the boy who cleans up my laboratory. By the way, come and let me show you the place I've fixed up to work in."

What could I say? He was so simple, so naive about it all! I tried a question as I rose to follow him, "Have you ever tested yourself, Murtha? What does that passage mean to you? Nothing more than material for an experiment?"

"No one could test himself that way—an emotion alters when you try to watch it. I like the scene well enough. It's a fine piece of writing. Perhaps I *do* seem pretty cold-blooded about it, but that is because I've been over it so often and I know it all so well. Now here is my work table, with water and gas and electrical connections, and this is a small lathe—" and he was off on the subject of his workroom.

It was an admirable place—light, clean, well-equipped. There were sinks and tables, glass cabinets full of glittering instruments, a hood with a fan for exhausting gases. In one corner, on a pedestal, was a life-sized head and bust in wax-work—which I took to be one of those cheerful models anatomists and psychologists have to indicate the structure of the head, brain, and the muscular and nervous systems. Beside it an electrical transformer gave him a wide range of voltages; dark shades and a battery of powerful lights with reflectors and color screens put the lighting in his control. There was even an operating table rolled against the wall. I was impressed, and said so; and he was very evidently pleased.

But as I left, I wondered about a man who could traffic thus in his associates' personal feelings with such scant apology, and who could think that that terrible scene was merely fine writing. I agreed with Page in the Department of History, who said to me next day, "The man's too damned scientific for my tastes. He told me life was simply another form of energy. I've met men who *said* they were mechanists, but I never met one who acted the part as thoroughly as Murtha!" I related my experience of the night before, and Page grinned. "That is just what Archer said—and Cardy—and several more. He's impartial, anyway."

He was. He treated us all alike, and all rather as if we were laboratory animals. He sought me out and set himself to cultivate me with earnest thoroughness; but he had no idea of how to go about it. I could not help realizing that he wanted me near him mainly for what I knew of the electrical science he required. He had none of the tact or intuition which might have concealed his selfishness; he hardly knew how to make his contacts agreeable. As a *human being*, I never touched him.

More About Professor Murtha, the Strange Scientist

I TRIED to. Having seats for a symphony concert, I invited him to go with Mrs. Harvey and myself, but he excused himself—and when we came home we saw the lights burning late in his laboratory. I took him around to one of the Wednesday evening bridge gatherings of the men of the faculty, at the club; but he pleaded ignorance of the game, escaped early, and never came again. He even avoided the baseball games. Perhaps it was partly from shyness, and a fear of human contacts; partly from pride, and an arrogant exclusiveness; but chiefly, I think, from a genuine enthusiasm for his research.

I learned a little of his history while we worked together. He had been sent to medical school by a wealthy uncle—had gained the love of scientific investigation, and had accomplished enough in his ordinary classes to gain his degree—had spent several miserable years as a general practitioner in the country, paying as little attention as possible to his patients, and heartily disliked by most of them—and had suddenly come into wealth on the death of the uncle. Freedom and leisure he turned to account, and he was already a man of note when

Jedney introduced us that first evening. He was two-sided—daring and aggressive in his work, thorough and patient and precise, but shy, awkward, inept in everyday matters.

Only once did I detect evidence of real emotion, when a speaker at the commencement exercises paid a tribute to science. It was commonplace enough—Huxley said it all better years before; but I happened to glance at Murtha, and was amazed to see how his eyes were shining. In the crowd moving out at the end, we came together, and he spoke to me almost breathlessly, "Wasn't that *great?* There's a man who sees truly, Harvey—he knows! Science is food and drink, it is rest and work, it is life itself to me! You people who can work and stop——" he broke off, flushed and moved away in silence. I had not the heart to follow him and point out that the speaker was a politician, a professional orator who knew neither science nor scientists—inexpensive and sentimental.

But Murtha was sincere. There are people who can love an abstraction that way—who can fling their own egotisms into a cause, and forget themselves for it, and I believed he was one of them. He had his limitations. Even the memory of his tragic end has not wiped out the general enjoyment of his reply when someone asked him something about the Lion of Lucerne.* "I know absolutely nothing about zoology," he said.

In his laboratory, however, he was inspired as a great actor is before an audience. My own work was in one of those stages of routine checking important in all research, but leaving the mind free; and Murtha's daring hypotheses attracted me. I disliked him—but the problems he offered were fascinating.

Experiments in Vivisection—a Selenium Retina

DURING the autumn we restored something very like sight to a blind rabbit. A student named Vinton had volunteered for experiment; but we were uncertain how the voltages we used would affect the nervous system, and it seemed best to try first with the rabbit. I didn't enjoy the blinding of the poor little beast—it reminded me most unpleasantly of little Prince Arthur, in its patient helplessness—but Murtha was briskly efficient, and had no qualms. With selenium as the basis of an artificial retina, we were able to make the creature turn toward the light, and even follow an electric torch about a darkened room. Later we planned to conduct tests with Vinton, who would be able to describe his sensations.

Sight investigations were therefore postponed, and we took up hearing. By means of a series of Helmholz resonators we built artificial ears tuned to cover two octaves, and had just finished them when fortune favored us. A trepanning case at Fairchild hospital gave Murtha the chance to set his electrodes directly on an exposed human brain, transmitting sound over his wires and past nature's ordained channels direct to the center of consciousness. To me it was uncanny—although it was nothing to what followed later.

Perhaps his triumph in this case gave him his dreadful idea. At any rate, he flung himself into the work more savagely than ever, and hardly took time away for meals and sleep. He had but one advanced class that year, and no elementary work, so that almost the whole day (and night) belonged to the work he loved. Also, such had been our progress that he could go on with only occasional assistance from me.

This was fortunate, for a short time before I had been appointed to accompany the Frazier Polar Expedition on the air-flight to the north the following April. We wanted to check Vegard's and McLennan's studies of the aurora, and to pick up whatever else we might see of interest in the region of the pole. I made preparations to turn over my crystal research to Dr. Marling, who also took my classes and my administrative duties. It was necessary for me to do a good deal of extra reading and some consultation with the people in the department of astronomy, and to correspond with other physicists, to be ready. But I found time to be present when Murtha went over the contemplated experiment with Vinton.

A Brilliant Student Afflicted With Blindness—Murtha Experiments With His Eyes

VINTON was blind—but he was a brilliant youngster, and led most of his classes in spite of his handicap. To watch him swing along the street you might think he could see as well as anyone. There was a curious mottled scar across his face, without which he would have been handsome; for there was none of the vacancy in his expression that generally marks the blind man. He looked clean and young and decent, and he was—the sort that makes me enjoy being a teacher.

Against the dark curtain he used to see pictures—for there were two books of verse to his credit, and he was paying his way through school by writing pirate stories. If he had been different there might have been something pitiful in the idea of a blind boy's writing of adventure; but he never asked sympathy. He wanted desperately to see, however, for as soon as the rumor of our work reached him, he came and offered to help. He would run *any* risk, or endure *any* hardship.

When I was convinced there was very little of either involved, I took him around to Murtha. Before we went ahead Murtha asked him, "How did your lose your sight" and he replied, "When I was nine a chum of mine and I rigged a telegraph line between our homes and studied Morse. One day I pulled a wet battery down on my face. That is why I'm scarred in this way." Murtha was satisfied—"I wanted to make sure that the optic nerves were sound, for I can't get farther in," he explained, and we put the boy on the operating table. Murtha made his incisions, connected his electrodes, and swung in the current.

For a time nothing happened; and then the most beautiful look came upon his face and he said very softly, "I can see a yellow light." Murtha pulled the window blinds and brought his electric torch into action. He flashed it on the selenium, shut it off, flashed it on, darkened it again—and each time Vinton reported the waxing and waning of the radiance. Color screens were tried, but all except the blue screen dimmed the image or illumination or

*Famous monument to Louis XVI's Swiss Guards.—Ed.

whatever it was that went to him through the selenium and the wires. In time perhaps Murtha would enable the blind to see again!

The boy agreed to give him as much time as he wanted, and we came away together. We walked in silence most of the way to his room—he was very evidently stirred—but as he left me he said in a tone of reverence, "He's wonderful, isn't he?"

"Yes," I replied, "I hope he *can* do this thing he's started."

"Won't you come in and meet Mother?" he asked. "Ever since my accident she's been eyes for me. She's very much interested in all this work."

"Thank you, I can't this morning," I said, "I'd like to later though. I wish I might be here to see it all through, but you know about the expedition."

We parted—but it was certain Murtha had at least one worshipper. Well—who can blame the boy? He had no idea of the hollowness behind that remarkable mind, and the reaction to a promise of sight is a thing which we who see as a matter of course can hardly understand. At any rate, there seemed no harm in it. At worst, he would only lose a few illusions.

An Expedition to the Arctic and the Return

AS the months went by and the time came nearer for sailing, I had to withdraw more and more from Murtha's investigations. I knew, however, that he was going far to duplicate the whole efferent nervous system—the senses. Taste, he readily matched; nerves of heat and cold he constructed, but the other touch-sensations eluded him—as did the colors blue, red and green; and of course the most difficult of all would be the complex sense of smell. Before undertaking that, he tried to develop an efferent nerve—or at least one relay of the pathway by which orders go from the brain to the muscles. I did not learn how he would know when he had been successful in this last.

In the excitement of departure, I all but forgot him, and afterward he seldom troubled my memory. The journey was such a novel interruption of my quiet life—the voyage to Norway, the airplane flight, our forced landing, the struggle over the ice by sledge, the coming of winter that forced us to camp on Northeast Land; the polar darkness, the desolation, few chances for observation, but endless hours of playing cards; snow—wind—the returning sun—the grinding ice that piled up on our barren rock, threatening to sweep us into the sea; food running low—the coming of the ship—that glorious first sight of green trees, and the easy journey home, with somewhat of scientific value but without the glory or satisfaction of having been anywhere near the Pole. There was the usual newspaper excitement, and we learned that we had been a source of anxiety to the whole civilized world ever since our start. Frazier's classic reply that we "had also been something of a source of anxiety to ourselves," struck the desired note, and the public had a very good time with us.

A Shocking Change in Murtha

I WAS rather surprised to find Murtha at the pier when we steamed in, and still more surprised at the shocking change in the man. He was gaunt and pale, and looked at least ten years older. In place of his former alternations of shyness and disciplined composure, was a manner of slinking furtiveness. He greeted me without heartiness, but with urgent haste. He seemed to want to get me away from my newly-met family, for some mysterious private talk. Perhaps I was rather brusque in pointing out that my own preferences were against him; but certainly that was before I dreamed of the things he had to say!

I went home. How good it was to relax into the old familiar ways and places—to see the people I had known, to enjoy warmth and cleanliness and safety and leisure once again, to find my friends and my books where they had always been, to see the soft green of the campus, and hear the voices of students in song through the quiet of the evening! But twice I was asked, "Have you seen Murtha?" and one man handed me a newspaper clipping which told of Vinton's death "under rather unusual circumstances." All this was of course before the recent newspaper furor.

These two inquiries coupled with Murtha's curious actions at the pier, disturbed me; and accordingly, early in the evening I walked over to his room. He was away. I left a card with what was meant for a cheery message scribbled on it. I had hardly reached home when his voice came to me strained and tense over the telephone, "Couldn't you come back, Harvey? For God's sake come if you can—I can't come to you, and it is very important."

"I'll be right there," I said briefly.

It is queer now to remember the mood in which I set out. His looks and manner had been ominous—but I was so steeped in the peace and happiness of my homecoming that other people's affairs seemed of small account. I was sorry for young Vinton, a splendid youngster cut off without his chance; but he was gone, beyond recall—and the wind was sweet. Murtha was a solemn, self-centered individual, seemingly in some distress—but I was glad of the young moon peering through the elms. If I seem unduly hard-hearted, I can only suggest that my critic spend seven months of exile on an arctic rock, before passing final judgment.

Murtha opened the door for me, and led me to his fireplace without a word. It was mild autumn, but again a fire burned in the grate. He stooped and warmed his hands; and looking away from me at the fire he began to speak. The words of his prepared speech tumbled over one another and got out of order in his eagerness to get them said.

A Dreadful Revelation

"HARVEY, I—I want to talk to you about Vinton. He is dead, as you've probably heard—or at least people think he is. As a matter of fact he's in the laboratory. He wanted me to do the thing I've done—he urged me to—but I'm not sure—that is—Vinton—Oh Harvey, I've killed him—or rather I've kept him alive—he'll be alive forever!" He broke off short, and gasped like a swimmer coming up from deep water. "I don't know what I'm saying!" He sank back into the chair and covered his face with his hands.

"What do you mean, Murtha? Tell me just what happened."

He looked over at me, caught my eye, and glanced hastily back at the fire. The astonishing confession

was meaningless to me. Chiefly I think I was amazed at the evidence that there was really a human being, capable of feeling, inside that shell of mind and matter and handsome clothes which we had all called by his name. He was a new man—able to suffer. But he began now to speak—and his story was beyond belief.

Some months after I sailed, Vinton had been the victim of a motor accident, going home late one night through the familiar streets. Night was like day to him—but alas, not to the driver of the car that crushed him!

He could speak when they picked him up, and he begged to be taken to Murtha's room. Murtha, he knew, was a physician, and he did not want his mother alarmed unnecessarily. He had no idea how badly he was hurt; but a moment's examination told Murtha he could do very little. He stopped the hemorrhages, and tried with local anaesthetics to make the poor broken body temporarily comfortable—but there was no cure ever again for Vinton. Life—yes; but helplessness, and probable pain as long as he might live; pain that would stand between him and his fancies, pain that in time would wear down his courage and break his self-control. He told it all to the boy, with his blunt, unfeeling tactlessness. I cannot believe he deliberately made the picture dark.

Details of the Awful Experiment

BUT while he was speaking the temptation came—the idea he had cherished as a wild impossible fancy. How he presented it I do not know. He could be very subtle when he chose. Perhaps he promised Vinton immortality in this world—freedom from the body's limitations, time without end for learning and thought and the creative activity the boy loved. Perhaps he only suggested the possibility of escape from pain, and a share in a daring venture. But I can imagine how it was—the confident, self-assured man, speaking as one with authority to the discouraged, tortured youth who was trying to make up his mind to face a future of helpless idleness. He who was to have been the support of that mother who was eyes to her son—who by the magic of his fancy was to have kept them in comfort—must be a burden to her as long as he lasted alive.

At this point Murtha threw his wealth into the scales. He would make her an allowance to keep her comfortable—he would represent it as insurance and furthermore make her his heir. Remember, he was the hero who was slowly giving him back his sight. Vinton knew the things Murtha had accomplished; he knew of the work of Loeb and Carrel. If a heart could be kept beating in a bottle for years at a time, why should not a brain be kept thinking in a bottle forever? There seemed nothing impossible in the plan. How could he communicate? That was simple—for he knew his Morse, and Murtha had solved the problem of efferent impulses. He must trust the man to carry out his promise about the money; but if he did not, there was the certainty of poverty for the woman struggling to support her invalid son. Insurance policies contain "suicide clauses," I was well aware—men had been known to kill themselves to get money for someone as dear as this mother was to her boy. I was not surprised to hear that he had said "Yes."

Murtha was his own anaesthetist. He wheeled the operating table under the lights, brought the head from his wax figure (with its brain-shaped cavity ready and waiting) and set it beside the table, coolly mixed and spread the cleansing, nourishing liquids in the wax interior, made his temperature coils and capillary tubes ready, completed his electrical connections, and applied the ether-cone. The skull was fractured, and he cut along the fracture; he severed the spinal cord with infinite skill, working feverishly. Probably in his excitement he forgot what manner of thing he was doing; but before the night was gone he had moved—Vinton—from the kind, familiar habitation of flesh and blood to that still, dead body of wax and steel which was never meant to hold a fragile living spirit. When he had finished, he collapsed. He slept out the night in the very chair where I was sitting.

His dreams were ghastly; but in the morning he took himself strongly in hand, and forced himself through the routine duties of a physician reporting a death. His certificate was accepted without question then, because of his connection with the University, although he was not yet known locally as a medical man but as a teacher. Then he telephoned the mother and broke the news, calling on her immediately after as her son's friend and physician. He told his lie about the insurance, and faithfully carried out the promised deception. He left her with a check and a promise of more to come; and it is probable that she never noticed that it was a personal check on a local bank. Going back to his rooms he wrote out a clear, short, simple will in her favor, had it witnessed, locked it away, and faced the placid waxen features of his apparatus.

Dreadful Messages from the Transplanted Brain of a Dead Man

HE took the speaking tube in hand, and in a trembling voice—for by now he was feeling "strangely" about it all—he spoke some words. Instantly the telegraph key began to chatter—weak, wobbly, uncertain Morse, but clear enough to be unmistakable. Vinton was there, alive!

He could not tell what it meant. He did not know the code. He took down the dots and dashes with infinite care for a long time, and closing the key rushed out to buy a code-book. The rest of the day he spent working out the message.

And such things as it contained! Curses, prayers, pleading, long stretches of incoherent letter-groups, quotations from the boy's verse and evidence of frequent delirium! It was dreadful—I am using Murtha's word. His horror grew, and often he sprang up from the table, only to return and plunge again into the work. Very soon he had memorized the dots and dashes, and could read whole sentences—always bitter and terrible sentences. In time he could endure no more, and stole away to walk wild-eyed through the streets fighting for sanity and composure. But always, drawn by a fascination, irresistible, he returned to his rooms.

He opened the door again, and the awful metallic voice seemed to condemn him in the rattling language which he could not yet translate by ear. This time he took it gradually, a few sentences at a time

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HIGH TENSION

By Albert B. Stuart M.D.

As Carter straightened to his feet and tossed the crumpled dollar on the table, his arm struck the reading lamp and turned it over. The globe caught in the trailing wire of his apparatus and burst. There was a flash of bluish flame, and Carter sank limply to the floor.

A Wonderful Surgeon—As Irritable as Able

"WHAT is the matter, Madge?" The grave-featured head nurse stopped in front of the weeping girl as she asked the question.

"I just can't stand that Dr. Carter," the girl gasped. "Here I've been working for him in the operating room the last six months, and he abuses me worse than if I were an apprentice. "I didn't do anything wrong, but I couldn't work fast enough to suit him. It was, 'hurry up nurse—ligature..needle-holder..why the deuce do you have to finger over everything before you can find what I want?' If I had had four hands instead of two I couldn't have worked fast enough to suit him. He raved at his assistant all through the operation, and no one could do anything fast enough to please him."

"Yes, I know, my dear," the head nurse comforted, "Dr. Carter is a very hard man to work for, but you must remember that he is a wonderful surgeon and works under great nervous tension."

"He may be" the girl sobbed, "but he might act like a human being as the rest of the doctors do, anyway."

"My dear, you must remember that Dr. Carter is different from other doctors. Really, he is uncanny in his ability. He does things no other surgeon would even think of attempting, and his knowledge of brain surgery is remarkable. Dr. Bryan was telling me just now that Dr. Carter is the greatest living authority on brain-centers and their action."

"That may be true," replied the nurse, "but he isn't human. There are times when I think he isn't just right. His face is so flushed and red when he works, and he looks like a man with a burning fever, his eyes are so bright and piercing. And he always wears that head lamp when he works. He never leaves it off for a minute, and Heaven save anyone who touches it."

"Yes, my dear," the head nurse soothed. "He is a queer man, but we have our duty to perform. You must try to do your best, even if it is hard and disagreeable at times."

With this copy-book comfort the head nurse continued on her morning round of inspection, leaving the still weeping and irate nurse to compose herself as best she could.

THE author of this narration is a medical doctor and his knowledge of medicine shown in what he tells us deserves respect. He gives us quite an unusual story and not at all impossible, if we take adequate consideration of our present meagre knowledge of high frequency electric currents. That electrical currents could be responsible for a man's undreamt-of physical strength, has, perhaps, not been exploited in science, and it deserves more than passing interest on the part of our research laboratories. It is well known that a strong electrical current will affect our muscular actions to a tremendous extent, so much so that when we grasp a highly-charged handle of an induction coil, we find it impossible to let go of it. These are facts, not fiction. We are quite certain that you will like this most amazing and unusual story.

Dr. Reginald Carter and His Life Described

DR. REGINALD CARTER was a queer man. He came from the East unheralded and unknown, and in the brief space of a few years had risen to the position of chief surgeon of the hospital, and a commanding position in the medical profession. About his antecedents nothing was known, and being of a very reticent disposition, he made few acquaintances, except among medical associates. No one could claim the position of friend with him. Lean and wiry of figure, with dark eyes and rather swarthy complexion, his personality was that of the student and dreamer—such a one as nature seemed to have designed to tread the pathways of life alone.

The little that could be learned of his past was very unsatisfying to the curious. He had served in the army, and was stationed in a large hospital in Paris. This much was known from the reports of soldiers that were patients in the hospital. His reputation for surgical ability was known there, and his work was the wonder of the hospital. He made no friends, even there, and a soldier-patient was to him merely a problem which had to be dropped as soon as convalescence was established. On his location in the city the American Legion asked him to join their body, which he did, but he never even attended a meeting. No lodge could claim him as a member.

He lived in an apartment in the upper part of the city—alone—except for a single man-servant. Like his master, the servant was a taciturn, reticent type.

With the single exception of Dr. James Bryan, Dr. Carter's relations with the staff of the hospital was strictly formal. He would occasionally unbend enough with Dr. Bryan to briefly discuss an unusual or interesting case.

Such an attitude and such a personality would indubitably have spelled failure for anyone else. But his weird, and supernormal skill in diagnosis, and his uncanny ability as a surgeon, kept him supplied with work. Brain cases that seemed hopeless, were referred to him. Time and again he had achieved the seemingly impossible, and had restored unfortunates to life and well-being. Their words of gratitude left him untouched, and his anger with and answer to one of the nouveaux-riches who tried to patronizingly offer him an excessive fee, was the talk of the hospital for days.

"My dear sir," the doctor said, "You were a very interesting case. You are well now and therefore of no further interest. Our relations were of a purely business nature and call for no payment beyond the bill I have rendered you."

Gasping like a fish, the patient hastily paid his bill, and without further attempts, left the hospital.

Dr. Carter's gruffness seemed uncalled for.

Dr. Carter's Head-Lamp

TO the nurses and internes of the hospital Dr. Carter was a never-ending source of conversation, tinged with respect and fear as it was. To work with him in the operating room was a task that daunted the stoutest-hearted nurse or interne. Dr. Carter demanded more of them than any other surgeon of the hospital. He himself worked with lightning-like speed, his deft hands moved with the skill and grace of the practiced musician, and with no

more lost motion or hesitancy than a well-oiled machine.

No assistant, however capable, could keep up with his demands, let alone anticipate his wishes, and the doctor's biting and sarcastic words made the careless or laggard assistant and nurse wish they were somewhere else.

One thing peculiarly noticeable about the doctor, was the head lamp that he always wore while working. A head lamp is needed to illuminate the deeper recesses of an operative wound, but it is scarcely necessary to wear in the operating room all the time.

This head lamp was of a distinctive pattern, and current was supplied to it by a small battery that the doctor carried in his hip pocket.

As soon as Dr. Carter arrived at the hospital in the morning, he went to the dressing-room and donned a gown, and affixed the head lamp. Then he was ready to see whatever patients were referred to him.

With his brilliant shining eyes and his nervous intense manner he was a unique figure, and caused a great deal of comment among his associates. There was a suspicion that Dr. Carter used drugs, but the cleanliness and poise of the man's life forbade such a belief.

His nearest—one might say his only acquaintance—was Dr. James Bryan. To Bryan the surgeon would occasionally unbend, and there were times when his conversation even approached cordiality. Bryan on one or two occasions had tried to make some friendly advances. Once he asked Dr. Carter to lunch with him. Carter's refusal was courteous, but final, and Bryan did not try again.

The Chief of Detectives Has an Interview with Dr. Bryan

THE loud insistent ringing of Dr. Bryan's telephone awoke him early one morning. It was the chief of detectives calling. Dr. Bryan had at times helped out the police department, and his keen perception and active brain had more than once put them on the right track in some mysterious case. The chief of detectives often said that Bryan had missed his calling and should have been a detective instead of a surgeon.

During the war Bryan had in fact served in the intelligence department of the army and had received the warm commendations of his superiors for his capable work.

When Bryan walked into the chief's office he was met by a worried and distraught officer.

"Doctor, I am sure glad you came. We are in a mess and you are probably the only man who can help us out."

"Flattering," replied Bryan. "You folks give me credit for capabilities I don't possess."

"Do you suppose, Doctor, that we called you here just to pass the time of day? We know all about your capabilities, and we surely need your help."

"Well, tell me your troubles," the doctor grinned, "and I'll see what I can do."

"It is more serious than you think," the detective gravely replied. "This is a case of murder, and a peculiarly baffling one, too."

"Ah! a murder," the doctor replied. "What are the features that make this case so baffling?" He was all interest now, as with glowing eyes and intent expression, he questioned the chief.

"Well, to begin with, Doctor, we can only find one mark of violence on his body. The coroner has examined the body carefully and can give no cause of death. Don't you think it would be well if you came to look the body over?"

"Surely, surely," the doctor replied. "Will you ride in my car, chief?" They hastened out to the waiting car and rapidly drove to the morgue.

"Who is the man?" Bryan asked, after they were ushered into the room and stood beside the murdered victim.

The chief referred to his notebook. "We have the name as Ivan Kronsky. This name was found on letters in his pockets and the initials I. K. are marked on his linen. We were called last night by the janitor of the Earling Apartments where he roomed."

Kronsky had told the janitor to call him at six o'clock because he had to catch a train. The janitor receiving no answer when he rang, thought that he had not been awakened by the 'phone and went up to his room. The door was ajar, and he entered. He found the body sprawled on the floor of the bed room. He called the police at once.

"I went up to the Earling to look things over," the chief continued. "I tell you, doctor, there was no clue or trace of the murderer in that room. The only mark we can find is this bruise on the wrist."

The detective pointed to a ringlike bruise encircling the dead man's wrist. "Ah!" said the doctor, as he examined the arm, "both bones broken by direct violence. Now, how could a man come by a circular bruise like that? It looks as if his wrist had been squeezed in a vise. Queer.....very queer. Let's turn the body over and look at his back."

On turning the body over, the head fell back in a strange manner that at once attracted the doctor's attention. "See here, Chief," he exclaimed excitedly, as he pointed out a dark bruised area, the size of a half dollar, at the hair-line on the back of the neck, "the neck is broken. See how it rolls around when I move the head."

"What on earth could break a man's neck and not leave any mark bigger than that, doctor?"

"That's the puzzle, Chief. It looks as if some giant had pressed his thumb down there, but what kind of a being could have sufficient strength to break the neck of a burly man with the pressure of a thumb?" The doctor turned the body back on the table and asked to see what had been found in the man's clothing.

A little heap of articles were turned over to him. They were the usual things found in men's pockets. A roll of bills, a knife, and a few keys made up the collection.

"I found this on the floor," the detective interjected, handing the doctor a small flat-headed screw. "Looks as though it might be out of a watch."

"Yes," said the doctor absent-mindedly. Then with sudden interest, "Where did you say you found it?"

"On the floor near the body. Can you attach any significance to that?"

"I don't know," the doctor mused. "Let me keep it. It may help us." He carefully placed the

screw in an envelope and put it into his pocket. "Let's go up to the apartment, Chief, and see what we can find."

The Scene of a Murder

A SHORT drive brought them to the Earling—one of those modern monstrosities, the homes of so many of our city dwellers. They were accompanied to the apartment by a scared janitor of Irish persuasion, who, however fearless they are of the living, have a wholesome respect for the dead.

"Shore Mr. Kronsky was a foine man. 'Tis many the tip he gave the byes."

"When did you find him, Casey?" the chief asked.

"Just a little after six, Chief."

"You say the door was wide open?"

"Shore 'twas. I was surproised to foind it thot way as Kronsky was always careful to kape it locked."

Dr. Bryan, who had been carefully examining the lock, looked up with sudden questioning eyes. "See, Chief, this is a spring lock. It works only from the inside. This door was opened from the inside and left open."

The doctor, without awaiting the chief's reply, hurried into the room and opened the window. The room was on the fourth floor of the apartment and a bare expanse of wall devoid of pipes or fire escape greeted the doctor's eyes.

"The fire escape is at the end of the hall," the chief answered the doctor's unspoken question. "See here, doctor, no one could climb that wall. I've seen human flies, but I never saw one that could climb a sheer wall like that."

"Don't be too sure, Chief. There are ledges where a man, if he had nerve enough, could get a grip. Anyway the person or thing that could break a man's neck with his thumb might be active enough to climb the side of this wall."

He turned from the window and started a careful search of the room. Look as he might, it bore out the chief's contention. It was barren of the slightest trace of evidence. The man had simply died at the hands of some assailant who had come and gone as silently and mysteriously as the evening shadows.

"Chief, we are up against a tough one. According to the story books the criminal always leaves some clue, always forgets something, or slips up in some way that lets the astute investigator find his trail. You and I know that this idea is pure bunk. If it were not, then why so many unsolved crimes?"

"I'm afraid you're right, doctor," sighed the chief. "The newspapers will give me the merry razz on this case."

"Never mind, Chief, we all have our left-handed friends. I'll think this thing over and see if there isn't some way.

"Smoke up, Chief," he said, handing the detective a fat cigar. "This may make things look brighter."

The Flat-Headed Screw

DR. BRYAN was busy at his professional work for the rest of the day and did not have time to give any thought to the murder. But in his room that evening he settled down for a period of intense concentration and study of the meager details that he possessed. He laid the little screw out on the table and studied it from every angle. It was a peculiar screw, short and flat-headed, and resembled one of the screws from a watch, as the chief had suggested.

In the meantime the chief had put in a busy day tracing the history of the murdered man. This was as barren of results as was the search of the apartment. The man was unknown outside of the apartment in which he lived, and the bank where he had his account. He seemed plentifully supplied with money on deposit, and his safety deposit box disclosed a large investment in Liberty bonds and a considerable collection of unset diamonds.

Days passed into weeks and still the mystery remained unsolved. To the chief the doctor briefly explained, "When I examine a sick man I must find a few symptoms or signs before I can make a diagnosis. A murder case is the same. Unless we have something to work on we are helpless. I think this case will be solved by chance, and chance only."

Chance indeed at last gave him a clue; but his wildest stretch of imagination could not have shown him the strange dénounement it was to bring forth.

Dr. Bryan was unusually busy at the hospital for some weeks, and had come in contact with Dr. Carter more frequently than in the past. A series of brain injuries brought them together on many occasions. To Bryan it seemed that Carter was slightly more affable,—though he still held himself aloof.

The two associates were standing in a corridor and discussing a recent case when they were startled by the screams of a nurse. She came running down the hall, wringing her hands....then, at the sight of them she cried out: "Oh! come quick, please! A man got stuck in the elevator. Oh! hurry, please," she sobbed.

Hurrying down the hall they were met by an appalling sight. The janitor of the hospital had brought the freight elevator to the second floor and left the door open while he unloaded some articles. Familiarity with the elevator had developed dangerous habits. He always reached in to the starting lever, turned on the power, and then stepped inside the car. Nothing ever happened. This time, however, his foot slipped as he stepped through the door and he fell on his face across the sill. The heavy elevator came down with resistless power and pinned him to the floor.

The look of agony on the man's face was enough to appal even the doctors inured to sights of suffering as they were.

"My God! Carter, how can we get him out," Bryan cried. "Someone run downstairs and shut off the power."

"Just a moment, Doctor." Dr. Carter stepped up and grasped the edge of the elevator top in his hands. "Just get the man's shoulders and pull him out as I lift."

Wondering at the apparent insanity of the request, Bryan mechanically obeyed. With a heave of his slender shoulders Dr. Carter lifted the elevator and Bryan drew the body of the dying man out on the floor.

Stunned at the tremendous feat of strength, Bryan could only stand there breathless. Then the arrival of an orderly with a cart distracted his attention and the care of the injured man drove all thoughts of it from his mind for the time being.

A Strange Interview Between Dr. Bryan and Dr. Carter

IT was only in the quiet of his room that he had time to think over the surprising incident of the day. Carter had left the hospital without comment. There had been no opportunity to talk with him and ask an explanation of the mystery. Mystery it was....his whole life was a mystery. Bryan was being fully supplied with mysteries of late. A sudden thought struck him...."If he can lift an elevator he can do other things!" Then, with a flash of recollection...."That screw is part of a head lamp!" He remembered now that Carter had been wearing it at the time. He called for his car and rapidly drove to Dr. Carter's apartment.

His plan of action was not exactly clear in his mind. How could he confront Carter with such a meager bit of evidence as a little flat-headed screw. The man would think him insane, or drunk. With his mind still in a state of confusion he arrived at Carter's rooms.

He was ushered in by the taciturn man-servant. Dr. Carter looked up at him in surprise. "To what am I indebted for this call, doctor"? he asked.

Looking him squarely in the eye, Bryan advanced to the table and threw down the screw. "I just called to give you this screw out of that pet lamp of yours," he replied.

For a fleeting moment a look of surprise, not unmixed with fear, flashed in Dr. Carter's eyes. It was gone in an instant, however, and he smiled. "Surely, my dear fellow, you haven't come out at this time of night to deliver such a paltry object as this."

"Not so paltry, Carter, as you think. This screw was found in the Earling apartment under peculiar circumstances."

The smiling, suave look disappeared from Carter's face, and it took on instead a grim and stern expression of understanding tinged with menace.

"Oh, yes, I remember now. You do a little dabbling in detective science, don't you? Well, what of it, my dear fellow? Use your judgment. Do you think you could go before any jury in this land of the free and convict me with one little screw as your evidence?"

"Men have been convicted on less," Bryan answered coldly.

"Yes, in the story books, but not in courts of law. Go ahead, my dear sir, and do your little best. Do you think I have failed to make preparations for eventualities?"

A Direct Accusation of Murder

CARTER was right, and Bryan knew it. He knew enough of the law to realize that it would be absolutely foolish to attempt to lay a charge against Carter and have the slightest hope of even getting it a respectable hearing before a grand jury. In the present state of the case it would be impossible even to show a motive for the crime, let alone to produce a scrap of evidence that would connect the slenderly built Carter with the iron-muscled being who had broken a burly man with no other weapon than his hands.

Carter silently sat watching the changing expressions of the other's face, evidently reading accurately the thoughts that passed through Bryan's mind.

"Don't you think, Doctor Bryan, that it would be better if I were to be allowed to make some sort of an explanation? Surely one has a right to give his reasons."

"Yes, if one can give a reason for murder," Bryan retorted.

"You use rather harsh terms, Doctor, do you not? Please wait until you know the facts," Carter replied. "Doctor, while you were in the intelligence department service in France did you ever, by any chance, hear of Serge Ivanoff?"

"Ivanoff?" Bryan started to his feet. "You mean to say that that man was Serge Ivanoff? That devil of the Russian revolution?"

"No other," Carter replied. "Now you understand why I objected to the harsh term of murder that you applied. No one could murder that man. Justifiable homicide is the only term that could be applied to his taking-off. How did you happen to run across his trail?"

"I had no personal experience with the man," Bryan replied; "but one of my lieutenants entered Russia and fell into his hands. I had always liked the boy and the thought of his murder, for that was what it was, has always grieved me."

"My experience was of a decidedly personal nature," Carter grimaced. "See here, Bryan,....I can't bear to go into complete details as to the past. Some things are too painful to speak of even after the lapse of years. It may help you to understand when I tell you that my family was of the old nobility of Russia. We tried to escape the country, but were apprehended. You wonder why I have not made friends? I tell you, Bryan, it was the man whom I considered my closest friend who betrayed us. My old Father, my Sister..." a spasm of pain distorted his clear cut features. "See here, Bryan, I can't go on. I can only say that that devil was the cause of it all. I was thrown in a filthy cell. Every day he used to call and manhandle me. He wanted me to tell where our family jewels were hidden. I refused to tell, for I knew that it would mean my death as soon as he knew.

"I won't trouble you with details, but I escaped. That escape is a horrible memory to me. I dream of it in the night sometimes, and wake wringing with perspiration.

"I came to this country to repair my shattered health and plan for vengeance. Friends of mine informed me that Ivanoff had been proscribed by the Soviet government. He was even too gross for them. Imagine my feelings when I was informed by secret agencies that he was in this very city. I made my preparations and entered his apartment. When I stepped into the room and stood before him he laughed at me. 'Ah! my little doctor,' he cried, 'You have come for another beating I see. This one shall be the last, for this country's laws allow one to kill a burglar.' Can I ever forget the look on his face when I gripped his wrist with my fingers and broke the bones? For once in his wicked life he had fallen into the hands of one stronger, immeasurably stronger than he. Devil as he was, I could not find it in my heart to torture him. I broke his neck with my hands and then quietly walked out of the room and down the stairs. No one saw me and I came to my room with a feeling of duty well

done. You can call this murder if you like, but I can not feel that it is."

"Your explanation is very clear," Bryan replied. "There is just one thing I cannot understand. How could you, who are not at all muscular or strong, do as you have said?"

Explanation from Dr. Carter—Why He Wore the Head-Light

"THAT requires an explanation," said Carter, "that will be rather hard to believe. In fact, if it weren't for that episode at the hospital, I think you would put me down for the most monumental liar living. I don't think anyone could blame you either. I must go back to my earlier student days to give you a fair idea.

"I was not always a student of medicine. In fact I started out to be an electrical engineer, but changed to medicine at the request of my father. Electricity has always been a fascinating study to me. It has so many and varied manifestations. In the ultimate I feel that we are going to find that the controlling principle of the universe is some form of electrical manifestation. Your great surgeon, Crile, has practically demonstrated that the body cell is in the final analysis, an electrical element.

"I have been especially interested in high frequency currents, their effects are so totally unlike the currents of lower voltage and lesser frequency. You know how we make use of them in electrical treatments. Well, I experimented along this line, and finally I was able to produce a current with a frequency rate far beyond any known. Also its effects were totally unlike any therapeutic current that is used. I found that I was able to focus the effect of this current on a definite area in the tissues. The apparatus was small and noiseless, and could easily be carried in one's pocket. It was only by chance that I discovered some of its properties. During the war I was injured in the back of the head by a shell fragment. The surgeon removed part of the fractured bone and left a small area of bony defect which did not heal over. This scar at times caused me pain, and it was in trying to relieve this pain that I made a startling discovery. You know, Doctor, that the human brain and body have capacities far in excess of what we daily use. Physiologists have determined that muscle tissue has capacities enormously in excess of what a man's nerve force is able to utilize. For instance, why is it that a baboon who weighs less than a man has over eight times the strength of a strong man? His muscles are of no better substance than the man's. The baboon is able to make them work to better advantage, that is all.

"Well, I found that when this high frequency current of mine was concentrated on a certain area of my brain, I not only had a greatly increased mental capacity, but I could also make use of the inherent power in my muscles. There were drawbacks, however, that I was unable to overcome. I found that the heating effect which raised my body-temperature to around one hundred degrees Fahrenheit, also caused a mental irritation, which you have noticed, and which has made me heartily disliked by all who came in contact with me. I couldn't help it. It was impossible not to be impatient at the apparent slowness of their mentalities.

"Again, it was a serious problem to get sufficient nutrition into my body to make up for the tremendous tissue waste that ensued from driving the engine at excessive speed. I could never eat enough, nor could my digestive organs handle what I did eat. It was only by injecting nutriment solutions intravenously that I was able to hold even. At that I have come to the end. The human body seems made to undergo a slow evolution, and I have stepped centuries ahead of my time. I am going away to try to rebuild my shattered health. Needless to say, my invention goes with me.

"I climbed the side of that building as easily as a baboon could because I was stronger than any baboon. Shall I give you a final demonstration?"

The End of Dr. Carter

TOO dazed to reply Bryan only stared at Carter while he produced from a drawer the head lamp that he was in the habit of wearing. He opened the small case which he carried in his pocket and showed a peculiar coil made of wire of hair-like fineness. Attached to this was apparently a minute condenser of innumerable plates.

"I can't go into a technical explanation," he said, as he adjusted the lamp to his head. "The light is merely a blind, and derives its current from a small battery of the usual flashlight type. Now," he said, as he adjusted the lamp. "Do you want a demonstration? Ask me to give you the cube root of some number of six figures. Or read me a page from that book. I will repeat it word for word. Or would a feat of strength be better?" He reached into his pocket, drew out a silver dollar, and with a twist of his fingers, bent it double.

As Carter straightened to his feet and tossed the crumpled dollar upon the table, his arm struck the reading-lamp and knocked it over. The globe caught in the trailing wire of his apparatus and burst. There was a flash of bluish flame, and Carter sank limply to the floor. Springing to his feet, Bryan rushed to his side; but the deadly current had done its work. In some unexplainable way it was carried deep into the brain, and death was instantaneous.

When Bryan later examined the coil and condenser, he found them burned beyond any hope of discovering their construction.

The coroner's verdict was "death from accidental electrocution." Bryan still keeps the mutilated dollar and occasionally looks at it to assure himself that he is still sane.

And the chief of detectives is still looking for the murderer.

THE END

STATION X

By G. McLeod Winsor

Lieut. Hughes glanced up from his book at the sound of rapid footsteps, and saw the hurrying figure enter the signal room, and cross toward the signaler's chair. Macrae was removing the head-piece. As the professor paused, Macrae rose from his chair. "Come here," he said, speaking in a ringing level tone of assured command. Macrae did not move. He looked up. Their eyes met.

What Went Before

ALAN MACRAE, simple, uneducated, yet a skilful radio operator, endowed with an unusually keen sense of hearing, is sent as operator to a secret radio station, operated by the British Government, known as STATION X, somewhere off on an island in the Pacific. He is chosen for the post because of his ability as a radio expert and his fine hearing. He accepts the offer because the extra pay involved brings him that much nearer to the day when he and May Treherne, the heroine, can be married. He takes leave of his sweetheart with peculiar forebodings of impending, intangible dangers, fears which seem to have no foundation or reason. He soon learns, while still en route to the island, that his partner-to-be for several months is not going to be much of a companion for him. Lieut. Wilson is very well educated and is very intolerant of Macrae's educational shortcomings. Ling, the Chinese cook and caretaker, completes the party to remain on the island, and incidently also serves as the "butt" for Lieut. Wilson's ill-temper.

Before long both men—Lieut. Wilson and the Chinaman—are found lying dead, apparently murdered by each other. And it is probably because of his nervous condition, caused by this mysterious murder, that Macrae falls under the influence of an inhabitant of Venus, who is known in this story, as a "Venerian," and whose voice comes to him over the radio, telling him all kinds of interesting things about the inhabitants of Venus, giving him a great deal of scientific information, etc., although Macrae understands nothing of the greatest part of it.

Because London has received no answer from Station X for three days, the "Sagitta" with a crew of investigators and relief is despatched to the island and arrives to find Macrae lying on the floor, apparently dead, still wearing the ear-set; the chair on which Macrae sat seems to have been thrown over, and not another living soul is to be seen.

The doctor, thinking that Macrae may be suffering from catalepsy rather than that he is dead, takes him back to London on the "Sagitta." Macrae recovers on the boat and tells a weird tale, which, however, coincides perfectly with his shorthand notes of both his report and of the mysterious messages, and with his diary.

When they arrive in London, the government starts an investigation.

STATION X

By G. McLEOD WINSOR

Part *II*

CHAPTER VII

The Voice From Mars

IF the question had been asked, Who is the most eminent scientists of the day? nine out of ten would have answered: Stanley Rudge. His distinguishing characteristic was his open-mindedness. If, for example, he had been a church dignitary, his tolerance would have become a scandal. The same quality in him that would have caused him to make ribbons of the rubrics, caused him to encounter an occasional sidelong look, even in the halls of science. It was disgusting to some of his *confrères*, that a man whose scientific attainments and labors could not be gainsaid, whose position was unchallengeable, should dabble with the, to them, unclean thing; should dare to assert the possibility of the existence of what could not be put under the microscope.

THE story is now reaching an interesting point, bringing in the tale of planetary inter-communication, of the rivalry between the planets, of hypnotism across millions of miles of space, directly and indirectly, all told with vraisemblance. The rivalry of the powers for good and for evil, the help given by the gentle inhabitants of Venus, the asperities of the Martian inhabitants, are all told of so that we almost believe the words of the author, whose imagination follows such scientific lines and makes us feel that a climax perhaps fraught with disaster is approaching.

The value of his scientific work admitted, because it was undeniable, his leaning towards spiritualism was looked upon as a strange weakness in an otherwise fine intellect. The extra narrow-minded believed that there must be a bee in his bonnet somewhere.

The Professor was by no means thin-skinned, but there are few who do not chafe, however slightly, under ridicule. He was well aware that this had been the attitude with which his psychological investigations had been regarded, and that the results which he believed himself to have verified, were met with undisguised incredulity. He knew also that his treatise on the habitability of Mars had met with a cold reception. His own opinion on the universality of life, that it would be found, could the fact be ascertained, to exist wherever the conditions necessary to organic chemistry rendered its presence possible, he kept to himself. That such conditions existed on Mars, and probably other planets, he considered to be perfectly established. In this view he did not stand alone, but many hesitated.

Professor Rudge Appears to Be a Great Authority

IT will not be difficult to believe, in the circumstances of such division of opinion in the scientific world, that when the case of Macrae was brought to Professor Rudge's notice he took it up with enthusiasm. The more he pondered over Macrae's story, the more interested he became. He was convinced by his examination of Macrae that there was no intentional deception, and the peculiar conditions existing seemed absolutely to exclude any explanations other than the one advanced. Of this he was so convinced that he resolved at once to pursue the investigations on the spot, in spite of its remoteness.

"I am going to visit Station X," he said, "and I am going to take you with me!"

Macrae's reply surprised him.

"No, sir! Anything else that I can do to oblige you, I will do, but I will never, never set foot on that island again."

"What nonsense! Why, man, I cannot imagine a being on earth not grasping with avidity at such a chance to make himself forever celebrated. You have already convinced me of the truth of your account, but I assure you others will not be so readily persuaded."

"I cannot help it, sir," said Macrae with quiet determination, "and I am very sorry indeed to disoblige you."

"But you can, and shall help it," said the Professor. "You must understand that because, pending investigation, I accept your story, that does not prove it. It merely induces me to take you with me to the spot and devote the time necessary for its confirmation."

"I regret, sir, very much that——"

"Now, Macrae," interrupted Professor Rudge, "on this point I will take no refusal. You are at once to put any fanciful objections you may have on one side. I shall procure an order from the Admiralty, and that will settle it."

"I would rather resign my appointment than go there," said Macrae doggedly. "I beg of you, sir, to excuse me. Ask anything else of me, but I cannot go back to that station."

"I intend to reward you liberally for your time and services while we are away; on a much higher scale than the pay you receive from the Admiralty."

"Thank you, sir, but——"

Rudge Endeavors to Induce the Operator to Go With Him to Station X

"WHEN you think of Miss Treherne, of whom you profess to be fond, are you justified in refusing? She is waiting until you are in a position to marry her, and here are the very means you require, and you refuse them." Professor Rudge regarded Macrae as an obstacle in his path of investigation.

It was a shrewd question. Macrae was silent. He shuffled his feet and looked much disturbed.

The Professor, thinking his victory nearly won, added, "Surely also there is not a man in the world who will not envy you your fame. Think too of this young lady's pride and pleasure, and of the immeasurable use you will be to all your species, a use it would have been criminal to neglect by a persistence in your refusal. What is any recompense that I can give you compared to the rewards the world will shower on you?"

Macrae looked as if he were being torn between two impulses; his face was a picture of contending emotions. At length he found his voice, saying, in a scarcely audible tone:

"I am very sorry, but I cannot return to Station X!"

It was the Professor's turn to be silent. He was astounded. He looked at Macrae with a glance that said plainly, Have I, after all, misread your character? Yet in the face of the young fellow before him there was no trace of obstinacy. Its expression was rather one of unrelieved distress, such as one might feel on being asked the impossible by a friend whom he particularly wished to oblige.

Making an effort to conceal his annoyance, Professor Rudge at last said:

"Of course you have had a terrible experience there, and it is quite possible that you have not yet quite got over the shock of it. I will not detain you longer at present. Return to Plymouth, and you will hear from me again soon."

Continued Indecision

MACRAE took his leave, and made his way to Paddington in a state as depressed as well could be. He did not deceive himself into the idea that Professor Rudge had given up the scheme. Macrae was convinced that he would apply for an Admiralty order. This, if granted, meant yielding or loss of his berth. Nevertheless, he felt it literally true, what he had said, not that he would not, but that for some reason, he *could* not agree to go. His only hope now was in the Admiralty refusing the required permission.

This was not, however, the case. The application was received with surprise; but the fact that so great a scientist, after full investigation, was sufficiently interested to be willing to make such a journey, showed that he, at all events, did not consider it a mere hallucination, and certainly not as intentional deceit. Permission was consequently given him to take Macrae to Station X, and authority would be given him to have the Signal House placed at his disposal for such time as he might require it, consistent with the official duties of the post.

Armed with this, Professor Rudge went to Plymouth, and had another long interview with Macrae. It was not in the Professor's nature to use the document he had in the way Macrae had feared. No threats were employed, but every other means was taken to alter his determination. Macrae had taken such a genuine liking to the Professor that the interviews were quite painful to him, as he still felt unable to accede to his request.

Any one acquainted with Professor Rudge knew that he was not a man lightly to give up a thing on which he had set his mind. If he had been one easily diverted from his purpose, his own early struggles would not have led to his present success. A comparatively small matter was often sufficient to show the firm tenacity of his nature; but this to him was no small matter. As long therefore as he desired Macrae to accompany him to Station X, so

long would he continue to fight to that end. He would have gone off by himself at once, but his long experience and profound knowledge of psychic phenomena taught him that it would be useless. He fully understood that the ability to hear this voice across the void, always supposing it to be genuine, depended infinitely more on the previously established mental *rapport* of the speaker and listener, than on the ears of the latter.

Rudge Continues His Efforts

HE saw how the sensorial organism of Macrae when he first heard the voice, an exceptional condition of an exceptional being, poised by combined exhaustion and horror on a needle point of unstable equilibrium, had enabled him to feel, rather than hear, the etheric impulse of the far-flung call. By one chance in a million, or rather, in countless millions, Macrae while in a sub-conscious state, had over his ears the receiver of the most powerful radio installation on earth.

By such a chance, *rapport* had been established, and now it only remained to take advantage of that fact. Macrae must be brought again to the instrument. But how was his obstinacy to be subdued?

To the scientist everything reduced itself to a problem. He knows there is no cause without effect, or effect without a cause. Professor Rudge had ascertained Macrae to be a young man of keen intelligence but weak will. The human will is like everything else in this, that the weaker has to give way to the stronger. Rudge had no doubt as to his own will being much the stronger; yet Macrae did not give way. There was the problem, evidently containing an unknown quantity somewhere for further investigation.

The Professor decided meanwhile to try to overcome the obstacle by further pressure, and to that end made the acquaintance of May Treherne. He had learned that she made her living as a typist in Plymouth.

He was agreeably surprised when he met her. He perceived at once that she had been much better educated than Macrae, that she was a strong character, of sound common sense. He had intended to enlist her aid by demonstrating to her the material advantages to Macrae, and eventually to herself. He quickly saw that she would be capable of enthusiasm without regard to sordid considerations, and began to ask himself how much he might tell her.

The Operator's Sweetheart Tells Him to Go

HE decided that he was bound to respect the Government secret, but that he would trust her with what he considered his own, thus showing the confidence with which she had inspired him. He was surprised to find how little Macrae had told. This had been due to the rebuke administered by Captain Evered on the *Sagitta*. Of that the Professor knew nothing.

Under pledge of secrecy, May Treherne was placed in possession of the facts, except that Professor Rudge was careful to omit everything that could indicate the existence of such a place as Station X.

Her enthusiasm was pleasant to witness, and surpassed the Professor's expectations. The record of "the voice" was placed in her hands, and she was told it was a part, in fact the end, of a diary that Macrae had kept while at the station, in the form of daily letters addressed to herself.

"Then you did do it, after all," she said, turning to Macrae, and there was that in her look and tone that showed the previous absence of the diary had not escaped her attention. Yet she had never once alluded to what must have appeared to her an unfulfilled promise.

"Where, then," she asked, "is the rest of it?"

The Professor told her that at the Admiralty it had been considered to contain remarks referring too closely to what were Government secrets, and that it had been confiscated in consequence.

"I may add," said he, "that I think they were on the whole justified."

"Oh!" she said, and for a moment appeared about to say more, but she took the discreet but unfeminine course of adding nothing.

She put a great many questions to Macrae on the subject on which Professor Rudge had enlightened her. During these the Professor, who was on the watch to intervene if necessary, was struck by the tactful way in which she kept within the bounds of that subject and did not tread on forbidden ground.

"And to you, Alan," she glowed, "has come this distinction! You must go with Professor Rudge, as he wishes, and return the most famous man in the world."

Professor Rudge saw at once what a powerful ally he had enlisted, and he could not doubt the result. But he was mistaken. Macrae was as immovable as ever.

Evolving a Theory and Some Letters

NOT being able to spend further time at Plymouth, the Professor left the lovers to fight it out, and returned to town. But he had not abandoned the thing. He knew he had for the moment played his best trump, and, while awaiting events, he carefully studied the subject. He gave special attention to what information he had been able to get from Macrae respecting the time when he lost consciousness. He was particularly struck with the words employed in describing it to Dr. Anderson—"Then suddenly something like darkness descended on me, accompanied by some sharp command of the first voice, and I was apparently struck a violent blow in the darkness on the back of my head." A theory was beginning to form itself in his mind, but before working further on it he decided to await news from Plymouth.

It was toward the end of Macrae's month when there came a letter from May:

"DEAR PROFESSOR RUDGE,—

"I have not met with any success with Alan, and cannot understand him. I thought I had the stronger will of the two. I have done all I can to persuade him to do as you wish, but failed. He is not obstinate about it; on the contrary, he is greatly upset apparently at not being able to humor me. In the circumstances I cannot do more, and I beg of you not to write to him again on the subject; it worries him so. I am very sorry to disappoint you.

"Yours sincerely,

"MAY TREHERNE."

Professor Rudge laughed when he read the letter.

"The little traitress! Got out of her depth and had to scramble back, and now stands on the side of the enemy. Put not thy confidence in woman! That girl is a brick, and would scratch my face cheerfully if I returned to the charge. But I know now all about it. My theory is absolutely established."

May received the following reply:

"My Dear Miss Treherne,—

"Short of hearing the voice myself, I could not desire any better confirmation of its reality, and that of the personality behind it, than your letter. This remark may appear to you cryptic, so I will explain. Your opinion respecting the will of Mr. Macrae compared with your own, and, I may say, with mine, is correct. When I found we did not succeed, a reason for this had to be sought. On reading over the reports in my possession, I find that at the moment when he lost consciousness, he had the distinct impression of an order being given him. The order itself, quite in accordance with the well-known laws of hypnotism, does not now rise to the level of consciousness, but, none the less, absolutely decides his will and conduct.

"We have both been wasting our exertions, and distressing our friend, uselessly. He does not yield because he cannot. It is, in fact, not him we are up against, but the Venerian! Therefore there *is* the Venerian. It is possible, although not certain, that, by means of hypnotism, the order itself might be discovered, but I think the course would be open to objection in this case. For the purpose of investigation I am now so interested in, it will be better to do nothing hastily that might interfere with the influence now at work. The order may have been a prohibition from returning to the instrument for ever, or for a time only. In the latter case it may not be a long time. So I propose to wait awhile, and do nothing. I wish the whole matter to remain a secret for the present, so will you please burn this so soon as read.

"With kind regards,

"Believe me,

"Yours sincerely,

"Stanley Rudge."

May was pleased with the letter, principally because Alan was not going to be worried any more. On the general argument she did not feel competent to form an opinion. Seeing the whole subject had become very distasteful to him, Macrae was not even shown the letter, which May Treherne duly burnt, as requested.

"That Voice Was From Mars"

It must not be supposed that the subject by any means died out of the Professor's thoughts. He continued at intervals to give it careful study. He often puzzled over the mystery of the two voices. Why were there two? What was the disagreement among the Venerians? It was inconceivable that there could be any person or party who could have any objection to communicate with the Earth. The voice had distinctly said they had longed for it for thousands of years, that nothing but our own backwardness had prevented it. In its last words, according to Macrae's report, the voice had appeared to be about to give a warning, when the other voice, the "greater voice"——"My God!"—the Professor sprang from his chair in the excitement of his discovery—"That's it," he said to himself; "the whole thing is clear! Clear as possible! That voice was from Mars!"

CHAPTER VIII

At Station X

Arrived at this new hypothesis, Professor Rudge felt as a man might who had been hammering away with hammer and cold chisel at some old shell from a battlefield, and suddenly discovered before it was too late, that the shell was charged. He fully realized that if his surmise were correct, the situation was not to be played with. He also remembered that he had once made an attempt to establish communication, or at least to exchange signals, with Mars. He had failed.

"Fools rush in where angels fear to tread," he muttered to himself (no one else would have used the word as applied to him). "How fortunate that the influence of the Venerian was too strong for my meddlesome interference!"

Time passed with things in this state, no one having the least desire to make any further move. It was as though Station X had never existed.

At the expiration of Macrae's leave of absence, he had been ordered to one of the home stations, after a medical examination as to fitness. From there May Treherne received frequent letters from him. She thought she could perceive by these that he seemed in some way changed by his experiences. There was none of the buoyancy of former days. She wondered if it was regret at the loss of the double pay that had lasted so short a time, and the consequent postponement of their plans. If his life were as monotonous as hers, she could forgive him any amount of depression.

The Operator Writes His Consent to Professor Rudge

On the 10th of June of the following year, Professor Rudge, who had come with regret to fear that the whole episode was closed, was surprised to receive a letter from Macrae, written from the West of Ireland installation, known as the Cruaghaun Station, which looks down on the Atlantic rollers from a height of two thousand feet.

"Dear Sir" (it ran),—

"If you still have the same wish as you had when last I saw you, I would be glad to hear from you. For my part, I am now quite willing to go with you to the place you wished to visit. Looking back on it, I feel quite ashamed of my previous obstinacy, and am at a loss to account for it. My inclination now is quite the other way. I wish to go there, and dream of it continually, not only in sleep, but frequently in a sort of waking dream, while in this lonely spot, almost as lonely as that other. I seem as though called, requested, to come. Even a date seems put into my head, and I feel a great desire to be there at that time. You will think this a fanciful thing in the extreme, but would it be possible to be there on the 27th of July? I am writing you in the hope that your wish is the same, and that the time is sufficient. I think it is, by the

time it took me to return. Hoping to hear from you soon,

"I remain, dear sir,
"Yours faithfully,
"ALAN MACRAE."

"That," said the Professor to himself, "quite settles one question. He was forbidden for a time, not for always; evidently a definite named time. How tremendous must be the psychic force wielded by these beings!"

Making a Date With a Venerian

HE saw there would be time to reach Station X by the date given, with a little Government assistance at the other end. Obeying his first impulse, he at once replied to Macrae's letter. While in the middle of his letter, he paused. A thought had occurred to him which completely altered the aspect of the affair. He felt perfect confidence in obeying the wishes of the Venerian, but Macrae had heard two voices, both of which he described as addressing him with imperative orders of some kind. He had also the impression that they were in opposition to each other. By which influence, then, was he now being swayed? This it was vital to ascertain; but how?

He decided not to proceed further unless, or until, this question could be answered. For a moment he saw no way of doing so, but presently a possible clue occurred to him. He turned to a book containing some astronomical tables. After making a short calculation he gave vent to a sigh of relief. What he had discovered was that, on the 27th of July, Mars was in conjunction, that is, at the extreme other side of his orbit from the Earth, and with the Sun itself intervening.

"Well done, Venerian!" he exclaimed aloud. "Caught unawares, evidently utterly by surprise and unprepared, with not a second to lose, contending in a losing battle with a being greater than himself, and every instant full of peril, the Venerian had kept his head. In a moment of time he had decided on a plan of action, made the astronomical calculation mentally, forced his order on Macrae, and sent him into temporary oblivion, to be out of harm's way. 'Something like darkness descended on me,' Macrae had said, 'accompanied by some sharp command of the first voice, and I was apparently struck a violent blow on the back of my head.' The floor struck him. In his conversation with Macrae the Venerian claimed the mental superiority. It is already placed beyond dispute; he has given his proofs."

The Trip to Station X and the Parting of the Lovers

PROFESSOR Rudge was not a man who easily showed excitement, or allowed himself to be influenced perceptibly by his emotions, but for once he seemed a little carried away. The thing he had desired, more than he knew, seemed at last to show probability of realization, to be almost within his grasp. In point of fact there was, in his attitude for the moment, something of the man as well as the scientist. He reflected that if this discovery fell to him, he would not only have made an advance, the extent of which was beyond human power to estimate, but also he would have his opponents beaten.

The renewal of the Admiralty permission, and Macrae's leave of absence, were easily obtained. It remained but to pack up the few things necessary for the journey, and those that might be wanted at Station X. Here Professor Rudge was in a quandary. He could not decide how much or little to encumber himself with. Should he take books of reference? What was really going to happen, if all went well? A scientific discussion? Would he not, according to what had been spoken to Macrae, be in the position of a pupil, with much to learn and little to impart? He became so engrossed with the possibilities of the affair before him, that his absent-mindedness became very pronounced and his sister, who kept house for him, had the gravest suspicions that he must have fallen in love at last.

It was decided to go by P. & O. steamer to Hong-Kong, and there the Admiralty had arranged to take them on board one of the cruisers attached to the China Station and convey them to Station X. The authorities were quite willing to make this slight return for the valuable services the scientist had previously rendered in connection with radio telephony, and the choice and equipment of these stations; services for which he had refused remuneration.

The leave-taking between Macrae and May Treherne again took place on Plymouth Hoe, and again it fell to her lot to hearten her lover. She could not fail to see how depressed he was.

"Are you sure you want to go on this journey, Alan?" she asked. "You remember we agreed that it should be given up."

"I must go, May," he replied, with decision; "in fact, nothing would prevent me. But do you remember, dear, the last time we said good-bye, when I went to—to that place? I spoke to you then of a cloud looming in the future."

"Yes, Alan, and you were justified," May said; "but that is all past now, isn't it?"

The Voyage to Station X

"WHEN I came back you said what had happened had proved me right, and I let it go at that. But in spite of that the cloud has not passed away. It remains ahead, May, darker than ever, and very much nearer." He shuddered involuntarily.

Greatly distressed, the girl endeavored to dissuade him, even at this last moment, from starting on such an ill-presaged journey, but without success. Just as it had been before impossible to incline him to go, now his one idea was to start. She saw that further words would be wasted. She was not herself unduly impressed with his premonition, yet she would have been quite willing for him to give up the idea. Finding him immovable, she did her best to cheer him, and with some success. Yet the parting was a sad one, the outward cheerfulness of both somewhat forced.

The voyage passed uneventfully, and on the 26th of July, only a day from the time desired, they were landed at Station X.

Professor Rudge, having made the acquaintance of Lieutenant Hughes, the officer in charge, found that arrangements against his arrival had been

made, and quarters allotted him and Macrae. He handed Lieutenant Hughes the written authority he had brought with him respecting the use of the signal-room, and so great was his impatience to put the purpose of his journey to the test, that he and Macrae went to the signal-table that same evening.

Waiting for the Message From Venus

MACRAE put on the receivers. "Are you there?" he said, and it struck him at once that he had, without premeditation, used the same low tone as in his previous conversations. He then sat silent.

Professor Rudge was sufficiently convinced of the interest of the Venerians to feel confident that his and Macrae's coming to Station X had been observed, having the Venerian's own word for it that such observation was within their power. A prompt reply obviously depended on that.

The time seemed interminable. The Professor could not take his eyes off his companion, nor could he sit still upon his chair. Neither could he, now that the great moment had come, entirely drive from his mind that "second voice." He felt as one reaching out in the dark expecting to grasp a desired object, but with an uncomfortable feeling of not being certain on what his fingers might close.

One, two, three minutes passed. He drummed with his fingers upon the table. Would the time never pass? His watch was lying before him. Four, five minutes passed. Six minutes, the interval in Macrae's previous conversations elapsed, and there was no reply. He felt his throat dry. The second hand of his watch crawled on.

Suddenly Macrae gave a start, at the sight of which the Professor almost jumped out of his chair.

"Yes, I am here," said Macrae. Then, turning from the mouthpiece to the Professor, he said, as he had agreed—

"It is he!"

The Friendly Venerians Talking With Station X

AFTER an interval (the Professor soon became accustomed to these intervals) he saw Macrae begin to take shorthand notes. He repeated the words as he wrote, and thus Professor Rudge was able to follow the conversation.

"You have some one with you?" The conversations are given without reference to the intervals.

"Yes, there is a scientific gentleman with me, and he hopes to speak with you."

"We have already heard of Professor Rudge. At this moment he could not hear my voice, and you are necessary, but for a reason I will explain to him when possible, it is desirable to establish direct communication at once. Ask him if he is willing to place himself under my control, in full *rapport* with me."

Professor Rudge on hearing these words as repeated by Macrae at once understood what was required, but not the means by which it was to be achieved.

For a moment he was silent. It was a risk. It was surrendering his ego to another. For a few seconds he thought rapidly. Then he seemed to come to a decision. He motioned Macrae to remove the receivers from his ears.

"Macrae, do you still clearly recall the two voices you heard at the moment you were last here?"

"Very clearly, sir. I shall never forget either!"

"Are you quite certain, absolutely certain, that the voice you now hear is the first voice, the one with whom you had conversations?"

"Quite sure, sir."

"Did the voices have any resemblance?"

"None whatever! The second voice," he added, and the Professor noticed the same tone and look of awe that had struck his two hearers on board the *Sagitta*, "was—was—I felt a worm. This is the friendly voice that spoke to me all through."

After another short pause, the Professor said, "Reply that I am willing to do as desired." He added to himself. "But I cannot see how it is to be done."

Macrae then replied to the voice, "Yes, he is willing."

Hypnotism From the Planet Venus

IN due course came the direction, "Face each other." Professor Rudge perceived that Macrae was in some way about to be used as the medium, but could not guess the intended proceedings. He knew that his companion's will was so much the weaker, that of his own power he would be quite incapable of acquiring the necessary dominance.

The voice then addressed Macrae. "Although you are under my influence, and it is by the *rapport* so established that you hear me, that is not enough for the present purpose. In the present phase of the *rapport*, the attempt would fail; in the first place because you would probably be incapable of influencing Professor Rudge, who has probably the stronger mind, and in the second place because, if you succeeded, he would be under your influence, not mine, and therefore be still incapable of hearing me. It is necessary that you pass on into the second phase, in which your consciousness is merged in mine. You will now sleep, and then act as I shall direct you. In thought contact there will be little need of words."

At the first suggestion, at the mention of the word sleep, Macrae instantly responded and, offering no resistance, his hold on consciousness slipped from him, as it might from one who had taken an anaesthetic.

Professor Rudge saw the change, and his own knowledge of the subject enabled him to gather that the second phase had been brought about.

"Look fixedly in my eyes," said the voice of the unconscious operator, and, on being obeyed, he moved his hand in backward sweeps above the other's head.

As they remained eye to eye the Professor began to notice a very peculiar expression that he had never noticed before, in the eyes before him. Was it expression, or was it something in their contour? Certainly very peculiar—and yet not altogether new to him. How strangely fixed and unwinking they seemed. He had never before seen anything like that in Macrae's eyes—nor in those of any other human being. What are those creatures that have eyes that these reminded him of? His memory seemed vague—those passes were very soothing.

"Sleep!" said Macrae, in a quiet but firm tone.

The Professor nodded.

"Sleep!" said Macrae.

The Professor's head fell forward.

Presently Macrae, evidently in obedience to instructions, rose, saying, "Come, sit in this seat; take the headpiece and put it on, and hear the voice that will speak to you."

Good Appetites After the Hypnotizing

THE other, looking like a somnambulist, changed places with him. He put on the headpiece, and Macrae, in obedience to a last suggestion, gradually rose to consciousness. He then saw the change that had been brought about, and moved away toward the entrance. He stood there a moment, looking at the Professor, then heard him say, "Yes! I am here.' Macrae quietly closed the door after him.

It was eight o'clock, and night had descended. He went to the door of the outer entrance, but, feeling no desire to join the station staff, stood there watching a bright star that shone with silvery and steady beam, in the western sky. He knew that star was Venus.

An hour passed. He waited, dozing on the bench in the corner of the little outer lobby of the station-house. Then he slept.

When he woke it was with a start; broad day, a hand upon his shoulder. Looking up, he saw it was Professor Rudge standing beside him. He immediately rose. "Good morning, sir. It has been a success? You have heard?"

He noticed that the Professor wore a puzzled look.

"The fact is," said the latter, "I have heard nothing. I know nothing, even of how I came to be sitting with the receiver on my head. Can you give me some information?"

Macrae at once understood the situation. He remembered his own twenty-hour spell; the Professor's seemed to have been only about twelve hours. He explained that this was doubtless a similar experience.

Professor Rudge now understood what had happened. He realized that he, like a bag full of information, had been untied, taken by the bottom corners, and held upside down. It seemed undignified. But presently the sane and healthy man came to the surface, and he laughed, recovered his temper—and his appetite.

"Have you had anything to eat since yesterday, Macrae?" he asked.

"No, sir," said Macrae, smiling.

"Then, my boy, let us attend to that at once. Everything else can wait."

So the station staff took possession of the signal-room, and the Professor took possession of the attendant, and the two men ate. Six feet of burly brawn and muscle represented a powerful engine, not to be kept going without considerable stoking.

After this, he and his companion thoroughly explored the island. The Professor was always careful to keep himself in thorough physical training, and his companion would have been all the better had he followed the same course. This was Macrae's conclusion after the walking and cliff-climbing of the next two hours. He returned to the station-house nearly run off his feet. Professor Rudge believed in the strenuous life, and he lived up to his creed.

CHAPTER IX

Macrae Under Suspicion

IN the afternoon, as soon as the instrument was again at his disposal, Professor Rudge and Macrae took possession of the signal-room.

The Professor was impatient to find out if he would now be able to hear the voice himself, and at once put on the headpiece.

"Are you there?" The tone was a little unsteady from suppressed excitement.

After the usual interval, it was with a thrill of pleasure that he heard, faint but clear, a voice, *the* voice. There could be no mistaking its agreement with Macrae's description.

"Yes, Professor Rudge," it said, "I am here; but speak low, as Macrae did. Your other stations will then not hear you, but I shall hear you. Also, that you may have a record of our conversation, repeat my words aloud to Macrae, and he will take them down.

"I foresee," proceeded the voice, "that you may disapprove of the manner of our first intercourse during the past night. It was the best way. It saved time, which is most vital. You have supplemented to the utmost of your ability the information given by Macrae, and our future conversations can be devoted to the return you will no doubt desire, except for a matter on which I must speak before you remove the receiver. On what topic would you first wish to compare Venerian opinions with your own?"

The Great Moment of Professor Rudge's Life

AS he heard these words, Professor Rudge felt that the great moment of his life had come.

Although he had rehearsed a hundred imaginary conversations with the "voice," on as many topics, now that the voice was suddenly offered him, he was momentarily at a loss what to say. At last he spoke.

"Now that this new door to knowledge has been so unexpectedly opened to mankind, I hope it will never be closed again. I hope that the time is near when, under your instruction, our knowledge will be equal to your own, so far as our lesser minds are capable of understanding all that constitutes your attainments."

"We shall," said the voice, "withhold no information we can give you. It is not in our power to make you our equals. The increase of knowledge will tend to develop your minds, but you must ever remember that the two things are entirely separate entities."

"I realize that," said the professor, "and that as you are the greater in both respects, you are the best judge of what should be our subject now. As I have the use of the instrument for a limited time, I will leave the choice to you and remain a listener, to save the intervals of waiting for replies."

The Venerian commended the course proposed by Professor Rudge, and at once proceeded with what was practically a long scientific lecture, that held his auditor spellbound with interest. The attainments displayed, the sweep of intellect indicated, caused Professor Rudge to feel himself a novice again.

The Venerian commenced by saying, "Do not suppose we arrogate to ourselves anything approaching infallibility. We are but fellow travellers with yourselves toward the great goal—Truth."

A Theory of the Universe Told From Venus

THE subject he chose was the Venerian theory of the universe corresponding to what is known as the La Placian theory, but to which it had no resemblance.

"Your theory," he said, "contemplates a universal loss of energy, until space is peopled only by dead suns; a universe with all heat, light, life, extinct; without one ray to wander through its blackness of darkness, or one sigh to break its eternal silence. To minds cultivated as are ours, such a development, with an eternity still to come, would be sufficient refutation."

The Venerian then proceeded to give the theory accepted in his world, and to support it with such evidence that Professor Rudge's acceptance of it was complete and inevitable. It proved to him the perfect and complete conservation of solar energy beyond possibility of dispute.

As soon as the enunciation of the new theory and its demonstration were completed, the Venerian said, "We felt that this was due to you as a first fruit of the information we hope to give you on many subjects in return for the information you have given us respecting your terrestrial affairs; but we must now speak on a subject of more immediately vital importance. Do not repeat my words to Macrae. What follows is for yourself alone."

At this moment some one was heard knocking at the door of the signal-room. Evidently they were about to be interrupted. In dumb show Macrae imparted the fact. "Go," said the Professor, "and see if the instrument is wanted. If so, ask if we can retain it for a few minutes."

Macrae presently returned from the door to say that Lieutenant Hughes wished to send a message, but that it could wait a few minutes.

On replacing the receivers, that he had removed to hear Macrae's answer, the Professor found that the Venerian had ceased speaking. He had heard the words of Macrae.

Presently the voice resumed: "Are you there, Professor Rudge?"

Danger of Interruption From Mars

ON receiving the affirmative reply, the voice proceeded: "Do not speak! Remember that on the subject I am about to speak on nothing must be said to Macrae. There was great anxiety here lest you and he should not arrive in time. By good fortune you did. But every day now the position becomes less secure. When my last interview with Macrae, on his first visit to this Station, was brought to an abrupt interruption, it was on account of an unforeseen interruption from Mars." ("I was right," thought the professor.)

"By an exhibition of powers that we did not even know them to possess, Macrae was reached indirectly, through his *rapport* with me. I was rapidly being overborne in my defence of him, when I succeeded in entrancing him, and had only just time to give him instructions to remain so until far from the island, and not return to it until the 27th of July.

"My instructions were inadequate, and even faulty, but the situation at the moment of giving them was extremely difficult. We have now taken adequate precautions that the same thing shall not happen to you, but we cannot undo the evil that may have been done in the case of Macrae, nor say, for the present, the extent of it. It is this latter point that we wish to test. We have reason to suppose that it is of a serious nature, in fact fatal, unless guarded against.

"With such extremely little time for thought, my instructions to him were, not to return to the island before the 27th of July, the date suggested by the next conjunction of Mars. With time for reflection, I should have taken a much more drastic course. For this reason I feel, to a certain extent, responsible for the position that has arisen; a position much too full of danger. Our reason now for fearing that the malign influence was successfully brought to bear on him is that, although I did not bid him return, yet he showed an anxious desire to be here by the expiration of the forbidden period. His experiences at the Station were not of a kind to make that desire natural as a spontaneous wish.

"We therefore conclude that he is now, of course quite unconsciously to himself, under the Martian's influence, and that to allow him to go to the receiver after Mars has passed from behind the solar screen would be to run the greatest risk. To-day is safe, probably tomorrow, but it is best to be on the safe side, for those beings always seem to surpass our calculations. My instructions to you are, to see to it, as though your life depended on it, which it may, that Macrae never again puts on the headpiece, and that you find out by watching him, whether he shows any secret desire to do so, or is prompted to do so. That is all. Do not reply. I will be ready to continue our discourse when you next come to the instrument."

"We will now tell Lieutenant Hughes that the signal-room is at his disposal," said the Professor.

"What did the voice say, the last minute or two?" asked Macrae, as they went out.

"He spoke to me about the receiver," said the Professor calmly. "With the instructions he will give me I hope to be able to make improvement in that part of the instrument. Let us take a turn around the island."

Night was falling as they returned to the station-house, and Macrae was told to defer writing out his report until next morning. Being tired, he was glad of this respite, and was soon fast asleep.

Professor Rudge also retired early to his room, but not to sleep. That afternoon had opened up to him novel views, not merely on one, but on many scientific subjects. He was a student again, his whole world revolutionized. Sleep! What man could sleep in such circumstances?

Ultimately, after the first bent of the scientific had had its way with him, he came down to the urgent matter dealt with in the Venerian's last words. Late that night it was not musings on science that kept him awake, but a sense of peril.

The Evil Doings of the Martians in the Past

EVERY detail of the tragedy of Mars of long ago, as recounted in Macrae's report, came vividly before his mind. There was no mystery about the manner of it. He quite understood the method of the whole unspeakable crime, from its full conception to its ghastly perpetration. He knew better than to look upon it as a fable, or old wife's tale. The earnestness of the Venerian carried conviction.

In imagination he placed himself in the position of the Lunarians. Just as a drowning man will grasp at a straw, so those apparently perishing beings had allowed the instinct of self-preservation to stifle conscience.

He tried to realize the nature and power of the present Martians. His most vivid idea of them, however, he got by realizing the evident terror with which they inspired the Venerians.

If any Martian could gain a footing on the earth by grasping at the personality of one of its inhabitants, and so animating a human form, the whole world, by virtue of his psychic force and intellect, would be at his mercy and that of all his kin who would follow. The more the Professor thought of it the more terribly he felt the weight of his responsibility, knowing the fate that was now threatening the world, and that only he and this far-off Venerian stood between it and catastrophe.

More than once during the night the Professor left his room and paced the little entrance lobby of the station-house, into which both his and the signal-room opened. Each time that he closed his eyes, before a momentary doze had time to merge into sleep, some weird nightmare, connected with the subject of his thoughts, effectually roused him.

Two Keys to One Door

THE night seemed interminable. It came to an end at last without incident.

At the earliest opportunity he asked Lieutenant Hughes if he could be provided with a key to the signal-room. He had noticed that the door was never locked, and seldom shut except in windy weather.

"Certainly, sir," said Lieutenant Hughes, rather mystified by the request.

He was a good-natured young fellow, who stood rather in awe of Professor Rudge, on account of his fame.

"Thank you," said the Professor. "You may have wondered why I have come to this station. The full details will I hope be known in due time, but I may say that it is in connection with an experiment in radio telephony. As you know, this is the most powerful installation that exists, and it is the only one adapted to my purpose."

"I thought it must be something of that sort, sir."

"Let me explain," said the Professor, "what may have seemed an odd request. Macrae, who assists me, is a very good fellow, very competent, intelligent and interested in what I am doing, but you will understand that in some experiments the slightest unconsidered action may be very prejudicial. I wish to make quite certain that he does not, even with the best intentions, meddle with any part of the mechanism in the signal-room when I am not there."

"Certainly, sir," said Hughes; "the door can be kept locked."

"If the keys can be found."

"If not, I will have a couple made at once. That will be no trouble to Jones."

Jones was the radio engineer acting with Lieutenant Hughes.

The Professor was several times on the point of taking Hughes to some extent into his confidence. He saw both the advantages in and objections to doing so. He finally decided to say nothing as yet.

By mid-day a key was handed to him.

"The only other key," said Hughes, "remains with me; so that will be all right."

This greatly allayed Professor Rudge's immediate sense of danger. At the appointed time, accompanied by Macrae, he went to the signal-table to resume the conversation of the day before. His first call was answered.

"Is Macrae with you?" came the question.

"Yes."

"Then we will go on with our discourse of yesterday, but at its termination send him from the room before you put down the receivers, that we may speak of our difficulty respecting him."

Then, the Professor repeating to Macrae, a further long exposition on various branches of science followed. The listener was soon entranced by his interest in, and lost in admiration of the long strides Venerian science had made beyond the bounds of human knowledge. He was carried so far beyond his depth that he found it impossible, while repeating the words, mentally to follow the argument with the same rapidity. Giving up the attempt as confusing and tending to error, he repeated mechanically, wisely deciding to defer thought or study until he could read the communication at his leisure.

At its conclusion there was a short pause, evidently intended to put the Professor on his guard. Then the voice resumed:

"Do not repeat! Find some reason to dismiss Macrae."

"That seems all on the subject for the present, Macrae. I think of asking a few questions, but shall not require your help. You must be pretty tired of it, as the subject is rather beyond you, is it not?"

"I do not understand it at all, sir," said Macrae, stifling a yawn.

"Then take the shorthand notes into your room and write them out for me while it is still daylight."

Macrae left the signal-room.

Re-adjusting the headpiece, the Professor said—

"I am now alone."

"Have you taken adequate precautions against Macrae coming to the instrument?"

"Yes. The door is now kept constantly locked when no messages are being sent."

The Venerians Tell of Impending Danger From Mars

"THAT is well, but I assure you that very great vigilance is necessary, and we do not feel convinced that you are sufficiently alive to the danger that threatens you. Our only hope is based on the knowledge that you are not a man of small mind, or lacking in imagination. If such were the case, we should despair of being able to assist you. You would in that case infallibly regard the danger as remote, almost unintelligible, even unreal. We are

convinced that such is not the case with you, but we doubt if you adequately appreciate the peril and its imminence.

"Although you already know its general nature, let me, at the risk of being wearisome, again speak of it. I am not able to tell you how the baleful influence will act on Macrae, but you must be prepared for every subtle means of gaining its end. Have you seen anything as yet to arouse suspicion?"

"Nothing whatever."

"Three days have now elapsed since the time of conjunction. Mars is now rapidly increasing his angle with the sun. The time of danger is now very near. If there is no sign of the influence we fear within a day or two, all is well, and the evil was not wrought. Remember, whatever the time of day or night, let me know at once of any overt sign."

"I will of course do so," said the Professor.

"On no account let yourself be lulled into any false idea of security by relying on the great physical superiority you may possess. In the event of the occurrence of what we strive to guard against, that would be entirely useless. You, and all your race, would be brought to the means of communication like lambs to the slaughter. We can resume our conversation to-morrow at the same hour, if no previous call is rendered necessary.

Regarding this as dismissal for the time, Professor Rudge removed the receivers and sat for a time gazing at the instrument before him, but not thinking of it. It was with a very worried air that he ultimately rose and left the signal-room.

CHAPTER X

The Venerian's Anxiety

WITH the Venerian's words of warning still ringing in his ears, Professor Rudge left the signal-room and went to his own apartment. He was soon lost in thought, but it was not on general science that his mind was concentrated. He was revolving the matter so urgently pressed on his attention by the Venerian.

He was chiefly impressed by perceiving that however keen his own sense of the danger from the Martians, his informant was much more impressed, and he did not forget that that informant was a being of higher mental status than himself. He remembered words that, although accompanied by some complimentary remark, gave the impression that if the speaker's sense of the danger arose principally from a knowledge of the character of the Martian, it came also partly from a lack of reliance on the character of humanity, even as exemplified by himself.

He was told to be on the look-out for every kind of subtle means that the unseen enemy could possibly seize on to achieve his ends. At the same time, he was unable to conceive of *any* means available, or against which he could set a guard, beyond taking the obvious precaution of keeping Macrae from the signal-table. This he had done effectually, but the Venerian, in spite of the Professor's promise, was evidentally not fully reassured. This gave Professor Rudge an uneasy feeling; for he did not disguise from himself for a moment the fact as to which possessed the better knowledge and judgment.

The Venerians Still Fear the Evil-Minded Martians

THE Venerian had claimed for his race a great superiority over humanity, and had given more than ample proof of it. It was, however, clear that, while having the greatest admiration for the science and mental status of the Martians, the Venerian, when acting in opposition to them, felt his inferiority and danger of defeat. How much greater must man's inferiority be! If the Venerian felt the greater anxiety, it could but arise from a greater knowledge of the foe.

Tax his brain as he would, Professor Rudge could not see what more he could do. He longed for the arrival of the *Sagitta*. He knew the impossibility of any one doing without sleep. If his responsibility meant continual watchfulnes, day and night, he saw that time was fighting against him. Everything depended upon the arrival of the cruiser.

To ease his mind of mere useless worry, he strove to fix his attention on the scientific revelations to which he had just listened. Had they stood alone, he would have been able to think of nothing else. They were epoch-making, colossal; yet it now required a distinct effort of will on his part to give to them the requisite concentration of mind. In this, however, he at length succeeded.

Scientific riches had been poured out to him with an unstinted hand. He saw that this new knowledge meant revolution in the scientific world, for it not only went far beyond the dreams of our greatest thinkers, but was at variance with many theories long accepted. Each branch of science being so interwoven with others on which it impinges, it was evident how deeply even those he had not heard dealt with would be affected. As an instance, he remembered the long dispute between the geologists and the astronomers as to the age of the earth, in which each side claimed to have proved the other wrong by many millions of years. He saw that the whole argument fell to the ground before this new and splendid theory of the maintenance of the cosmos.

Feeling at length that deep thought was not helping him to keep his brain prepared for its possible coming contest with sleepless hours, he decided to drop the subject until next morning and seek the company of Lieutenant Hughes at their evening meal. He realized that the time he had hitherto given to that young man, considering that he was practically the host, was scarcely sufficient for the needs of politeness. He also wished to sound him, with a view to deciding how far it would be possible or rather, desirable, to confide in him.

Professor Rudge found Hughes a cheerful light-hearted fellow, who proved pleasant company. He made one or two attempts to interest him in scientific subjects, but saw that although the young officer gave him polite and even deferential attention, his leaning was certainly not in that direction, and his information in such things was quite superficial.

The Professor was confirmed in his opinion that to say nothing was best.

A Walk On the Island—Professor Rudge's Suspicions

IN passing to his own room, Professor Rudge once more tried the door of the signal-room. It was securely locked. He prepared himself to pass a night of watchfulness. He felt the disadvant-

age of not knowing what form the danger would take, or the direction from which it would come. Its intangibility might have caused it temporarily to fade from his mind, and allow him a few hours' rest, but he was deterred by his knowledge of the anxiety of one better able than he to gauge the possibilities of the situation.

Through such uneasy somnolence as he allowed himself, and however much he endeavored to keep that being in the mental background, there would persist in sometimes looming up before him the menace of the Martian.

The next morning Professor Rudge rose early. In spite of his disturbed rest, he felt his anxiety less insistent than on the night before. His was a spirit that soon rebounded from depression. With the daylight he felt again almost his own sanguine and jovial self. It was not that he forgot for one moment his danger and responsibility, but that the morning brought him greater confidence in his ability to meet the situation.

He roused Macrae, and together they set off to the cliff and inhaled the breeze from the ocean, cool in the early hours.

He took Macrae with him, partly that he might not be left at the station without his supervision, and partly that he might take the earliest opportunity of tactfully probing his mind and thoughts on the subject of his experiences on his first visit to the island. He wished to see if any further light could be thrown on Macrae's desire to return to Station X. Professor Rudge was careful not to let it appear to his companion that he was being examined, or that the talk was with any definite object.

The point raised by the Venerian, that there was ground for suspicion in the desire of Macrae to return to Station X, where his previous experience had been so terrible, would not have occurred to the Professor, but he now saw the full force of it. He remembered that Macrae had never given him any reason for his wish, and now ascertained, without abrupty asking the question, that he had none to give. This did not come as a surprise to the Professor, who knew more than most men about that obscure subject of the subconscious ego. He saw that the fact went to support the Venerian's opinion.

A Conference With the Venerians

WHEN they returned from their walk, both eager for their breakfast, Professor Rudge was thoroughly satisfied that Macrae had no conscious wish to communicate with the Martian, "the second voice," as he invariably called it. The Professor noticed that whenever Macrae used that phrase, and he never did unless led to it, the same expression of awe crept into his look and tone as had been noticed on that first occasion on board the *Sagitta*.

Short as the contact had been, almost momentary, and few, if any, the words that could have passed, the impression made on Macrae had been enormous. It was something, however, to know that if Macrae were likely to attempt anything that had to be guarded against, he was himself totally ignorant of the fact.

With this partial relief of his anxiety, the natural bent of Professor Rudge's mind asserted itself. His thoughts again reverted to the great acquisition of knowledge so strangely given him. He got from Macrae the written report of the conversation of the previous afternoon. He spent the greater part of the morning on this and in making notes of subjects he desired to speak about on the next occasion.

At the usual hour he and Macrae went again to the signal-room.

The Professor noticed that his first call was answered without a second's avoidable interval. The fact impressed him with the fact of the constant attention evidently now given at the other end. Whatever uneasiness he might feel, he became convinced that greater uneasiness existed there, a circumstance that increased his own. It was not so much his own acquaintance with the facts of the case that maintained his fears at the necessary level, as the evident anxiety felt on Venus. Apart from that, and the daily reiteration of the warning, those fears would inevitably have become lulled by the complete absence of any outward sign to stimulate them.

Promptly to the usual call, "Are you there?" came the reply.

"Do not repeat! Answer with one word, yes or no. Has there been any sign or indications of what we fear?"

"No."

"On what subject, Professor Rudge, do you wish to converse to-day?"

Cosmic History Told by the Venerians

A LONG discourse ensued that ranged over a variety of subjects, all of such intense interest to Professor Rudge, as indeed they would have been to any man of scientific leanings, or even ordinary intelligence, that, for the time, all worry over other matters was forgotten.

These subjects included among others—Nature's general method, always, in the material realm, proceeding in cycles, never toward finality. This was no new theory to Professor Rudge, but now elucidated and exemplified in a way that thrilled him with admiration. The origin of life was shown to be a thing quite outside the bounds of any finite intelligence, whether human, Venerian, or even Martian. The absolute futility was indicated of the human endeavor to find out when and how matter first began to live, the fact being that no matter ever did or ever would live. The mystery of death was shown to be the mere withdrawal of a hand from a machine that would no longer work. The illusion was caused by the fact of our waking consciousness being able only to see the machine.

He was given the geological period, with dates, of man's evolution as such, and a short account of the ancestry of the present human races, going back to remote times, to which our historic period is as yesterday. This was followed by a comparison of the present political and social state of the two worlds. Here again Professor Rudge caught every word with intense avidity. He quickly saw two things; one that in this respect the state of things in the Venerian world was ideal beyond his previous dreams of what any state could be; the other that it would be worse than useless here, spelling absolute anarchy.

At the conclusion of this part of the discourse there was a pause and, remembering the similar pause of the day before, the listener was on his

guard. Then the voice resumed: "Do not repeat! Let Macrae now leave you."

Turning to his companion and displacing the receivers, the Professor said, "Will you take your notes of what has passed into your room, please, and write them out for me. Give them to me as soon as they are ready."

A minute later he turned to the mouthpiece. "I am alone," he said.

Danger Impending—Precautions Necessary

IN due course the voice resumed: "I must come back to the subject of the threatening danger. We have now every reason to believe that the most careful vigilance is necessary. Although there has been no sign, we believe that the influence of the enemy has now the opportunity to make itself felt. If it is as we fear, Macrae may be prompted to do what he would himself be at a loss to give any intelligent reason for. Watch him constantly!"

"I shall be extremely glad when he is out of the island. That will be in two days," said Professor Rudge. "Meanwhile, every precaution shall be taken."

"Every precaution! You speak the words too lightly, Professor Rudge. I cannot describe to you the anxiety on your behalf that is felt here; and when I say your behalf, I mean all your kind. It is necessary to speak plainly. You are not sufficiently in earnest in this matter. Your whole world is now relying upon you alone. If you only had a fuller grasp of the nature of the beings arrayed against you, compared with whom we are children, it might help you, if indeed it did not paralyse you. I charge you, let there be no unprotected moment. But two days!"

Professor Rudge was profoundly impressed by the solemnity of this warning. He did not know quite how to reply to it. At another time he might have felt some resentment. Knowing the care he was taking, and the anxious time he had been having, he could scarcely admit the justice of the Venerian's words. They did, however, make him realize still more fully the concern and solicitude that obviously inspired them, and so they fulfilled their purpose of heightening his own appreciation of the gravity of the situation.

"I feel sure," he said, "that you know better than I how full the position is of peril. Thank you for the further warning. I promise to use the utmost care of which I am capable. Do you suppose our conversation is being overheard on Mars?"

"We are, comparatively speaking, so near, and that planet at present so far removed, and unfavorably placed, that we do not think it can be. But it is uncertain. We only know that, if the positions were reversed, we should be unable to hear. There is one other thing I must request of you—to come to the instrument at once if Macrae shows any overt sign of the influence we fear. If suspicion becomes converted into certainty, then indeed our line of action must be reconsidered. If there is nothing of this nature to communicate, come to the instrument again to-morrow at the same time; but from now on there will always be some one to answer your call. That is all for the present."

Professor Rudge took off the headpiece and passed his hand over his forehead. For a long time he sat lost in thought. With an air even more worried than on the day before he ultimately rose and left the signal-room. He locked the door, and was in the act of dropping the key in his pocket when Macrae joined him.

"You have finished?"

"Yes, sir; here is the report," said Macrae, adding, "if you have no further need of me today, sir, I should like to lie down. My head aches a little."

"Certainly," said the Professor. "I shall not require you. I hope you will be all right again in the morning."

CHAPTER XI

Danger Imminent

THE Professor sat down on the one seat in the little entrance lobby. This had three doors which opened into it; the station entrance, and entrances to the signal-room and to the room which the Professor was occupying. From his seat he therefore commanded all three doors. Sitting here, he attempted to utilize the last rays of daylight in reading over the communication he had that afternoon received, but even before the fading light compelled him, gave it up. He was too worried for mental concentration.

He gave rein to his thoughts. The papers slipped from his fingers to the floor, and lay there unheeded. He recognized that no small part of the trouble that oppressed him was due to the vagueness of its nature. He was acting in obedience to a warning which was in itself as mysterious as the danger indicated. He was warned of an attack, but not informed of its method.

As to preventing Macrae from communicating with Mars, or with any one else, that was simple. The seeming simplicity did not, however, remove the unpleasant sensation of impending danger. If there were but some outward sign he told himself, his nerves would brace themselves to the occasion and he would be easier in his mind. It was like fighting a phantom, or expecting an attack in the dark, but without knowing by what, or from what direction.

After a time Lieutenant Hughes joined the Professor, and they were at the supper-table for a few minutes together. The young man had been puzzling for two days as how this learned scientist had acquired the reputation of being socially of a jovial disposition. His learning was no doubt indisputable, but for the rest, perhaps he had been overrated. Tonight especially, he seemed taciturnity itself.

Professor Rudge's Night on Watch in Station X

AT a comparatively early hour Professor Rudge retired for the night. The monotony of life at Station X conduced to early hours. His room was really that of Lieutenant Hughes, good-naturedly given up to him during his stay. Professor Rudge left the door open, and drew his little camp bedstead to a point from which he could see the signal-room door. He only partly undressed, and decided to keep awake. There was just sufficient light to see objects indistinctly.

The time passed very slowly. Once, a grim sort of smile without any mirth in it passed over his face, as he compared his present situation with his usual

life. That life seemed almost as though it belonged to a distant past. How far away London seemed! How far away everything seemed—except danger!

Knowing that, however great the need of watchfulness, it would be impossible to go entirely without sleep the whole of the time until the *Sagitta* was due, he formed a plan of contenting himself with a comparatively short nap once a day, while the signal-room was officially occupied. As a young man he had been able to sleep just when and where he chose, and he was relying on this faculty now. At first he experienced no great difficulty in keeping awake, in spite of the little sleep he had had since landing.

He rightly attributed his wakefulness to the strangeness of his experience, and the peculiar uncanniness of the danger that threatened. He could not bring himself to expect anything to happen at night. There could be no possibility of wireless communication, for the door was locked and the key in the pocket of his coat, hanging on the peg, within easy reach of his hand. A hundred crowding thoughts passed through his mind. He lost count of time.

Macrae Under Martian Influence Is a Somnambulist

AFTER at least a couple of hours—it may have been about midnight—the soft tread of bare feet, but distinctly audible in the stillness, was heard passing his door in the direction of the signal-room. A form was just visible as it crossed the entrance lobby.

A good deal startled at this unexpected development, the Professor rose. Going quickly to the doorway, he put out his head for a better view of the intruder. The light was just sufficient to enable him to recognize the figure of Macrae trying the signal-room door. Knowing it to be securely locked, Professor Rudge stood a few seconds awaiting events. Several times the handle was turned back, and a quiet attempt made to push open the door.

Speaking quietly, the Professor asked, "What are you doing there, Macrae?"

There was no answer, but Macrae turned and began to come back towards him, passing without taking any notice although within a foot of him. Macrae walked out of the lobby and toward his own apartment. After turning, having such light as there was upon his face, the Professor could see that Macrae was fast asleep.

Professor Rudge knew the danger of awaking a sleep-walker, and allowed him to go without further interference. He felt that he had at last something tangible. Macrae had shown him that the Martians' method was somnambulism. That made much clear to him that he had been unable to understand before. There was no longer the shadow of doubt but that Macrae was under hypnotic influence and suggestion, and was acting during sleep in obedience to another will. There could be little doubt as to whose will that was. Still, now that the Professor knew what he had to fight against—knew the enemy's plan of action—the strain was relieved and he felt safe. With the door locked there was security. To-morrow he would report the occurrence and get advice.

He drew forward a deck chair and resumed his vigil.

How slowly the time passed! Once or twice, feeling a drowsiness, the reaction from the few minutes' excitement he had experienced, he rose and went to the outer door, gazing at the wondrous pageant spread above him. Long he looked at many a familiar constellation jewelling the tropic night, and at others, southward, not so familiar. He watched their ordered ranks, their silent, ceaseless westward march. It brought his thoughts to the mysterious voice that had come to him across the zodiac, faint but clear, like the sound of a silver bell from that silvery star. Soothed by his gaze into the infinite distances, he went back again to await the remaining hours of the night.

The Key Has Been Taken from Professor Rudge's Pocket. He Attacks Macrae.

HE sat in the silence, thinking more or less coherently of this and that, his head nodding, heavy with sleep.

All at once he started up, wide awake, not knowing for the moment how, or in fact, why, he found himself thus suddenly upon his feet. He would have repudiated the suggestion that he had, even for a moment, lost consciousness. That is a thing on which it is so easy to be mistaken. It was now between three and four o'clock, and except for the starlight, still dark. For a second he stood tensely listening. Then came a sound, an unmistakable sound of some one *in the signal-room.*

His mind instantly turned to Hughes, as the only other person who had a key—but what could he be doing there now? Either he or his assistant, in one or the other of their little apartments, was supposed to be awake, lest the gong of the call-signal should be sounded from one of the communicating stations. But it certainly had not sounded.

The Professor stretched out his arm to take the key from his jacket pocket. He was delayed a moment by the fact that it had by some means come off the peg, and was lying on the floor. He found it and searched for the key. It was gone!

With one bound he was out into the lobby, with a second into the signal-room, the door of which was wide open, and reached the signaller's seat to find Macrae in it, with the headpiece above his head, just fitting the receiver over his ears.

To seize the headpiece with one hand, and to hurl the lank figure of the somnambulist sprawling headlong on the floor with the other, was the work of a moment. He found that his own knees were shaking under him, and the perspiration pouring from him. He sank down heavily into the seat he had so lately emptied.

Macrae lay for a second or two where he had fallen. Then he began to pull himself together, and finally rose and stood, lifting his hands to his head and looking round him with an air of fear and bewilderment. The little moan that escaped him instantly brought Professor Rudge to his assistance. He had already realized that in the excitement of the moment action had preceded judgment. He regretted the roughness he had displayed, telling himself that to have seized the headpiece would have been enough.

Macrae Is Awake. An Interview

BY the time he reached Macrae's side, the latter, now thoroughly awake, said, "How did I come here? What is the meaning of this?"

The Professor noticed an air of rising nervous excitement about him. He decided to make as little of the affair as possible.

"You have been walking in your sleep, my lad," he said soothingly, "and the fall to the floor woke you rather suddenly. You were in here when I found you. There's no harm done, I hope. Did you ever walk in your sleep before?"

"Never, sir!"

"And how do you feel now?"

"My head seems completely dazed. I'll go back to bed. Perhaps I shall be better in the morning. I shall be glad to leave this dreadful island." He then added, "Why I ever wished to come to it is a mystery!"

The Professor again noticed a slight rising inflexion of excitement. He therefore took Macrae's arm and led him towards his room.

"To walk in your sleep is no very uncommon experience. It is the shock of the sudden awakening that upsets you. Lie still now and get to sleep again." The Professor remained with him for some time, still feeling rather conscience-stricken. "I might have killed him," he thought, and after all, it was my fault. After this I can never trust myself again."

While waiting until Macrae should drop off, he reflected on the powerful influence that had acted on him the second time that night, and, this second time, to take the key from where the waking Macrae had seen it placed. He shuddered as, finally, he rose to leave the room, noticing, as he did so, that dawn was beginning to break.

He decided to go at once back to the signal-room to redeem his promise, and to place, if possible, the affair in hands more competent than his own had proved. As he took the headpiece in his hands, again he experienced that uncomfortable shudder. Who would answer his call? Suppose—no! Refusing to follow that train of thought, and calling his courage to his aid, he placed the receivers. "Are you there?" he asked.

A Welcome Voice from Venus

THE interval of waiting was not longer than usual, but it had never seemed so long. Then came the well-known, welcome voice, "I am here. What has happened?"

The Professor gave a full account of the night's experiences. Recounting them brought more vividly than anything else would have done, his own remissness. He remembered that he had, at a repeated special request, promised to report *at once* anything that proved Macrae to be under other influence, and, in his foolish feeling of security, he had not done so. As he related the events that proved he must have fallen asleep, he felt utterly unworthy of his responsibility. He was glad when the story was ended, including his unnecessary violence to the sleeper. He expected reproaches. He was prepared to take with humility anything that might be addressed to him. He waited. The interval was longer in reality this time than he had ever known it. Six minutes passed. Ten minutes. At last came the answer. There were no reproaches.

"Write a note to the officer in charge, requesting him not to disturb you for two hours in the signal-room. Place that outside the door, and then remain in the room, locking the door on the inside. Remain with the headpiece on until called."

The Professor did as he was ordered. He sat patiently awaiting his further instructions. At the end of a quarter of an hour a voice said, "Are you there, Professor?" He replied, and coloured when he found that no remark followed. Every quarter of an hour the question was repeated, and every time, in a tone that betrayed no resentment, the Professor replied, "I am here."

At about the seventh call, the voice further said: "We have called a council, as the matter is too serious for my sole decision. We have come to a conclusion, and I now ask you to place yourself in my hands entirely. I wish you to yield your will to mine, and to pass into the second, or unconscious, phase, and fear no harm. Rest forward on your arms and yield to my suggestion to sleep. I cannot succeed in spite of you, but earnestly request you to assist. Banish all questionings, and, as it becomes possible, all thoughts from your mind. Sleep."

The voice continued in quiet insistent monotone, urging sleep. At the first request Professor Rudge shrank back from the suggestion. He wanted to ask questions. He remained silent, however, while the voice continued. Finally he decided to acquiesce. He yielded to the request made him, put his head on his arms, and tried to think of nothing but the suggestion made him by the being under whose influence he already was. Very gradually consciousness faded entirely from him. An apparently sleeping figure rested on the signal-table.

CHAPTER XII

The Martian Triumphant

IN telling Professor Rudge of the power of the Martians to force their spiritual possession on beings of less strength than themselves, the Venerian had mentioned that it was within their, the Venerians', power to effect this psychic exchange with the assent of the other being concerned. It was the overwhelming force of the Martian, enabling him to dispense with such assent, that gave him his terrible power for evil.

In the request and directions addressed by the Venerian to Professor Rudge at the signal-table, it was such an exchange that he intended.

That a foreign or outside spirit could possess or take possession of the personality of a human being was well kown to man long before the beginning of modern civilization, a fact of which there is abundant scriptural and other warrant. Such foreign intruder might either impose itself on, or cast out and replace, the spirit in rightful possession.

When the two hours had expired, Lieutenant Hughes went to see if there were any sign of Professor Rudge coming out. There was no special need of the room for official use, but Hughes was curious. He was also puzzled. The whole affair was a mystery.

The more he thought about it the more remarkable it seemed. A man of eminence, usefulness and known industry such as Professor Rudge would not be wasting his time at Station X without some very important object. Surely it was not for the purpose of spending a short time each day in conversation with another station. If that had been the only purpose of his visit, why was the engineer-operator brought? If, as it was natural to suppose, the latter had come for the purpose of making some change in the system of wiring, or in some other part of the apparatus, under the Professor's instruction, why was there no sign of it?

If there were a mystery, Hughes had no intention of trying to pry into it. He was anxious to do nothing to obstruct, but he asked himself why he was being kept so completely in the dark, even if he could not assist.

Such were the thoughts that occupied Lieutenant Hughes's mind as he waited for the door to be opened. It is probable that even then the problem would not have occupied a minute of that easy-going young man's thoughts, but for a short conversation that had just taken place with Jones, his assistant at the station. The man told of a sound he had heard in the signal-room the previous night, first a scuffle and then a moan; afterwards voices. He had put his ear to the wall and was prepared to swear they were the voices of the Professor and Macrae.

The Story of a Fight in the Operating Building

"YOU must have been dreaming," said Hughes. What could they be doing there at that time? Had they a light?"

"There was no light from the window, sir; the place was in darkness."

"That's a queer story, Jones. Why did you not go and see about it?"

"Well, sir, I didn't care to go," replied Jones.

"Why not?" queried Lieutenant Hughes.

"I didn't care to interfere when I heard that scuffle in the dark. They do say there was a couple of men murdered here not long ago."

"There were two deaths here, certainly."

"I don't know if it's true, sir, but there's a yarn on the *Sagitta* that those two men killed each other."

"But we were talking about it last night," said Hughes.

"Well, sir, I didn't care to interfere when I heard that scuffle and groan," said Jones, with hesitation.

"Why?"

"Talking now, sir, in broad daylight, it sounds silly, but last night I remembered reading in tales about murder scenes being acted all over again and——"

"That will do, Jones! I gave you credit for more sense."

"I am sure now that it was only the two I said. But I'll find out," said Jones.

"How?" inquired Hughes.

"While off duty I'll go down for a bit of fishing, and I'll ask Macrae to come with me. He seems to have nothing to do about this time. I'll lead round to the subject when I get a chance."

"There must be no cross-questioning!" warned Hughes.

"Oh, no, sir; if he seems unwilling; but I'll be able to see."

With that they separated. Lieutenant Hughes waited some time longer. As the hour approached for the daily exchange of signals, he decided to hint to the Professor that the time asked for had more than expired. Before knocking, he went over to a seat he often occupied, just outside the window, so placed that it commanded a view of the interior, and made the hearing of a signal call certain.

From here, he caught sight of the Professor standing in the middle of the room. He was regarding everything in turn minutely, the signalling apparatus, table, chairs, even the floor, walls and ceiling, as though he had never seen the place before. More remarkable still, he seemed to be even studying himself!

"Hang it all!" grumbled Hughes, "the Government service can't wait for this kind of thing;" and he went round to the door and knocked. Evidently the Professor had reached it at the same moment, for even as he knocked the key turned and the door opened. The Professor stood before him, and for a second it seemed to Hughes that he was being scrutinized in the same inquiring way; but if so, it was only momentarily.

Professor Rudge Under Martian Influence

ON his part, Hughes now observed something unfamiliar in the manner of Professor Rudge. He noticed that the pupils of the eyes looking into his own were unusually dilated, and that their quiet, intense regard made him feel curiously uncomfortable. They seemed in some strange way to grasp and hold him, mentally and bodily, and he literally had to force himself to make the simple remark that he feared he must now take possession of the signal-room. He noticed that in replying the Professor seemed to fumble over his words, as a man might who is speaking in a tongue he knows, but has not used for years.

"I am sorry if I have remained in it too long," he said. "Can you tell me where Macrae is?"

"I think he has gone down to the beach with Jones, fishing," said Hughes. "Yes," he added, "there they are," pointing to two figures, half a mile distant, just disappearing over the edge of the cliff.

The professor thanked him, and as he caught his eye for a moment at parting, Hughes was again conscious of a queer sensation; involuntarily he shivered. Whatever else was in that quiet but penetrating look, it conveyed to him the uncomfortable impression that not only were his words heard, but his inmost thoughts read.

Hughes went to the signal-table to give the call, and the Professor moved from the door, allowing his eye to wander over the island, as he slowly walked over its jagged, rocky surface. The intense blueness of the sky above seemed to claim his admiration. He presently increased his pace, and walked off toward the point of the cliff where the two men had disappeared.

Having exchanged signals, and learned that there was nothing further required, Hughes came out of the room, and, taking a book, sat on his accustomed seat so as to be within hearing of the signal call

during the time that he was on duty. Soon he began to doze.

The two figures that Hughes had seen disappearing in the distance, and which he had informed Professor Rudge were Jones and Macrae, were in fact Jones and the attendant. Not having recovered from his shaking-up of the night before, Macrae had felt no inclination to join Jones in his sport, preferring to rest quietly on his bed, where he almost at once dropped off to sleep.

Presently he rose, evidently not fully awake, and walked past the sleeping Hughes. Quietly and slowly he entered the signal-room and made direct for the instrument.

Lieut. Hughes Controlled by Martian Hypnotic Influence

WHEN the supposed Professor Rudge came to the cliff edge, and looked down on the sea and beach, he saw no one. It was evident the two men had walked round on the shingles, one way or the other. As either way would almost immediately take them out of sight round the curving cliff, the question was, which way. As, in the absence of footmarks there was nothing to guide him, the Professor promptly turned to the right, but first glanced over the island, as if to make sure neither of them was returning to the station.

He moved much more rapidly now, as if already dissatisfied with the position, and having gone some little way, and seeing no sign of those he sought, he turned, not to retrace his steps but to ascend the cliff quickly at the place he then was, and again looked over the island. He was evidently determined that neither should return to the station without his knowledge. Seeing no one, he walked quickly across, without again descending, to a point as far on the other side of the place of his descent, and, looking over the cliff, at once saw the two young fellows. He called to Macrae.

Hearing the call Jones looked up, saw the Professor, and supposing he must be short-sighted answered, "Mr. Macrae is not with us, sir. We left him at the station."

The figure above instantly disappeared, and if Jones could have seen over the cliff edge, he would have been astonished to see the burly figure of the Professor making a pace for the station-house that he would not have given him credit for. Before the latter quite gained it, he saw through the open door of the signal-room something that seemed further to lend him wings—some one sitting at the signal-table, while Hughes was sitting outside.

Lieutenant Hughes glanced up from his book at the sound of rapid footsteps, saw the hurrying figure coming quickly toward him. The peculiar something he had before noticed in the eyes again fixed on him was no longer a mere suggestion, that left him uncertain if it were real or imaginary; it blazed forth. He literally shrank upon his chair as the other passed, and at the words addressed to him: "Sit where you are! Be powerless to rise until I give you permission!"

At the sound of the words, at that terrible glance, all power and volition seemed to ooze from him. He found he could not even will to get up from his seat.

The other had already entered the signal-room. He crossed the room toward the signaller's chair. Macrae was removing the headpiece. At the sight the Professor paused, while Macrae rose from his chair as he put down the headpiece, and swinging round, in contrast to Macrae's usual manner, with a quick lithe movement instinct with energy.

"Come here," he said, indicating the chair from which he had just risen, and speaking in a ringing level tone of assured command.

The figure before him did not move. He looked up. Their eyes met.

A Violent Contest Between the Opposing Powers—Hughes and Macrae

ON the instant of the Martian's recognizing his unexpected enemy, and that a physical contest alone could decide the mastery, his plan was laid. It was to wear down his opponent in a fight, neutralizing his greatly superior strength in one continuous struggle while he was already short of breath through running, and playing for all they were worth the points in his own favour, youth and agility.

He sprang forward, but was promptly knocked down. Scarcely seeming to touch the ground, with panther-like elasticity, he was up again and attacking. There was no pause or respite in the ferocious struggle that followed. It was a fight to kill.

To and fro the bodies swayed. Chairs and whatever happened in the way were hurled aside and smashed. The bungalow shook with the impacts of the two bodies.

The Venerian saw his enemy's plan and its danger. He regretted too late his race back from the cliff in such haste. His endeavour to save the situation threatened now to be the means of his undoing. He tried to use his superior physique to smash his opponent once for all while some breath remained. But that opponent seemed on all sides of him at once. He was like the spirit of a Fury in a body of steel wire.

Locked in a momentary hold, they hurtled through the doorway, past the terrified Hughes, and the fight was continued in the open. The Martian knew that he now fought in view of other witnesses, his kin, far off across the void. He fought as a protagonist, not for himself alone, but for all his race, whose existence also depended on the strength of his single arm. The knowledge added to an energy already super-human.

With eyes bulging, Hughes, powerless to intervene, watched the contest. It was the most frenzied duel that had ever been. He felt almost physically sick at the sight of a fight where there were neither rules nor respite.

Blows were fast and furious.

The Venerian's hope of a quick decision faded.

Gasping and sobbing for breath, he felt the end was near. The indomitable invading spirit that had seized Macrae's body was driving it to victory, but not without paying the price—a price that would have lain Macrae himself helpless in the dust.

Macrae Wins

IN the end his science won, his superior knowledge of the human frame, how obtained who knows? He got in a blow on the solar plexus, evidently knowing the exact spot of that ganglion, and man's champion was down, his fight lost.

The Martian knelt over his prostrate opponent, and, whispering something to him while still in his agony, forced his will at last.

Presently the two rose together, physically and psychically the conquerer and the conquered. The Venerian was taken to the wireless operator's chair, and he put on the receivers.

To Hughes the mystery of it was insoluble. For some minutes he watched the form of the Professor and noted how it bore itself erect and with an indescribable, and in the circumstances wonderful, calm and dignity even in defeat.

He looked at the dark inscrutable features of him standing over the chair like a tall sinister spirit of evil, and for a moment caught a flash from those eyes. Then the scene quivered and faded before Hughes. Sagging sideways in his seat, he fainted.

A minute later the figure in the operator's chair also wilted, seeming about to fall, then pulling himself together somewhat, sat up, but limply now.

Professor Rudge put up trembling hands to remove the headpiece. He found himself in the operator's chair at Station X. He staggered to his feet and, turning round, looked into the eyes of the Martian.

CHAPTER XIII

The "Sagitta" Arrives

FOR one awful moment victory and despair gazed at each other.

The aura of the Martian was rendering his victim powerless to oppose his will.

He motioned the Professor to re-seat himself at the instrument. He assisted to put the receivers on the head of the dazed and horror-struck man. While doing so his hand faltered and he staggered.

At the same moment the Professor felt as though a weight had been suddenly lifted from his mind, as though a spring that had been pressing his will into subservience to another had suddenly snapped.

He looked up. The Martian's face was deathly white. He tottered. In another moment he collapsed on the floor. The spirit might be dauntless, but the human body it had invaded, and by which alone it could act on the material plane, had for the moment given way under its late ordeal and present burden and fainted.

The Professor rose from his chair and for a moment stood motionless. Then, realizing what had happened, hope once more re-asserted itself.

"Hughes," he shouted, "come and help me bind this—er—madman, before he recovers!"

Hughes jumped up with alacrity, relieved to find himself free from the inexplicable influence that had bound him. He ran for cord, and in a few seconds returned. The sailor and the scientist made a very thorough and complete job, that looked as if it could safely be trusted to defy any efforts on the part of the Martian to free himself. They then carried him into Macrae's room, and deposited him on the floor.

"I'll wait here until he comes to," said the Professor. "No doubt you wish to make your report of what has happened."

As soon as Hughes had left the room, Professor Rudge proceeded to gag the Martian as effectually as he had bound him. He had not made up his mind how much to tell Hughes of the real state of affairs. He wanted a quiet moment to think.

He waited until there were signs of returning consciousness. They were to be felt as well as seen. He then hastily withdrew, locking the door behind him.

He passed into the signal-room and listened to the report Hughes was making to the Admiralty. He made no attempt to interrupt or suggest in any way. He wished it to be Hughes' report, made from the view point of his present knowledge.

While giving half his attention to the report, Professor Rudge was debating with himself how much or little of the true position he should tell Hughes. Finally he decided to tell him all.

A Wireless Report to the Admiralty in London. Rudge Out of Martian Influence

WHEN Hughes had finished sending his message, the Professor told him he had something to say. He began at the beginning, with Macrae's first coming to the island and all that had, step by step, followed.

Professor Rudge was prepared for surprise from Hughes, even for his look of incredulity. As he proceeded he saw the surprise heighten and the incredulity disappear.

When he had finished, it was with great satisfaction that the Professor heard Hughes' assurance that he would stand by him in any course he might have to adopt, even the most drastic.

Even the most drastic—for that was the way his thoughts were tending.

"And now, Hughes," Rudge said, "the question of all others is—what are we to do next?"

Hughes was silent, not venturing to make a suggestion.

"I thought it best," said Professor Rudge, "to let you make your report before explaining matters. It had to be made, and for you to have entered on the actual facts as now known to you would have been useless and undesirable. The knowledge would have hampered you."

"Most certainly it would," said Hughes.

"If it has to be gone into now," said Professor Rudge, "it must be by me. The question whether to do so or not is worrying me."

"Had I known all I know now," said Hughes, "I don't know how I should have been able to make a report at all!"

"I feel that time should not be lost," said the Professor. "I know what I consider ought to be done, but as it entails what the courts would call murder, I hesitate to assume the responsibility, especially as the *Sagitta* is due."

"It's a good thing that Captain Evered knows so much about it," said Hughes. "He will be the better prepared for what has happened now."

"I wish he were here," said Professor Rudge. "I used to think, with the Venerian's warning ringing in my ears, that once I knew the form of danger that threatened, then my anxieties would be relieved. I never anticipated a situation like this."

"At all events we've got him trussed like a turkey," said Hughes. "We're safe for the present."

Professor Rudge's anxiety was not lightened by these words. A live Martian and safety were ideas

that did not easily assimilate in the Professor's mind.

"I only hope to heaven," he said, "that Captain Evered will listen to me when he does come, and will kill that fiend."

"He'll be sure to make his report first," said Hughes, with conviction.

"By heaven, Hughes, you are right!" cried the Professor. "If he goes first to the signal-room, we are done for. That decides me. I'll take the bull by the horns and make my own report now, if I can get the First Lord at the other end. He is already half prepared for what I have to tell him."

Should Macrae Be Killed

HE asked Hughes to call up the Admiralty and say that Professor Rudge at Station X wished to speak at once to Mr. Mansfield, the First Lord of the Admiralty.

Although the call came two hours before his usual hour for rising, in one hour Hughes was able to report that Mr. Mansfield was waiting to hear Professor Rudge's communication.

Rudge had passed this hour, during which darkness had descended on Station X, with a restlessness he could not restrain. He went more than once to the door of Macrae's room and listened, but there was no sound from within. Thinking this absolute silence might be only while he was listening, he walked away and, after an interval, returned to the door noiselessly. Still profound silence.

Was the Martian dead?

The Professor was not troubling himself about whether or no he had killed the Martian. The question with him was, what was he doing if alive? Not for a moment did he believe his prisoner dead. But, although bound quite securely, some movement on the floor was possible, if he were struggling to be free and, although gagged, an inarticulate moan could be emitted. But there was not a sound.

The Professor once put his hand in his pocket for the key. The action recalled the occasion when another hand had taken a key from that pocket. The memory caused him to desist.

He went and stood at the star-lit entrance of the station-house. He recalled the words of the Venerian: "You are not nearly sufficiently in earnest, Professor Rudge." Would he say the same thing now, was the uncomfortable thought. Perhaps!

If the Venerian were speaking to him now, Rudge knew in his heart what the advice would be. He could in imagination almost hear the Venerian's stern words: "Kill, kill!"

After a time some impulse prompted him to return and use that key. Some impulse, for he had no clearly defined object in going to the room where the Martian lay.

When Macrae's hand had taken a key from that pocket it had been a moment of crisis indeed; perhaps not greater than this one in its possibilities. The hand was different, but the directing mind was the same. On the first occasion it had acted from afar; now it was perilously near.

A few seconds later Professor Rudge was again at the entrance to the signal-room, with white face, seeking the company of Hughes. At that moment the message came through that the First Lord was at the instrument.

The Professor assumed the headpiece. He gave a detailed account of all that had happened at Station X from the time of his arrival down to the time of speaking. He reminded Mr. Mansfield of their conversation in London, when he had requested permission to come with Macrae to the station, and made sure that the account he then gave of his interviews with Macrae, resulting in his complete assurance of the latter's *bona fides*, was clearly remembered by Mr. Mansfield. He found that the contents of Macrae's diary, and the evidence he had given before his examiners at the Admiralty, was better remembered than he had expected by the First Lord.

Professor Rudge was satisfied so far, and with the fact that Mr. Mansfield seemed a good deal startled at the assertion that a Martian was now at Station X, a being with powers of unknown extent, but certainly vastly superhuman. He answered a great many questions, and ultimately himself asked the plain question, if Mr. Mansfield himself accepted the fact of the Venerian communication and his, Rudge's, evidence as to the present position.

How the Admiralty Took the Message

THE answer was disappointingly non-committal, and some further conversation that ensued left Professor Rudge with the conviction that it would be worse than useless to ask authority for Captain Evered to hold an inquiry with plenary powers for the Martian's execution, should the evidence satisfy him of its necessity. Better make his appeal to Captain Evered with the question open than meet with a direct refusal binding Evered's hands.

Professor Rudge left the instrument depressed with the feeling that he had done very little if any good, for the ultimate decision had been that Captain Evered's confirmation and advice must now be awaited. The real purpose of his going first to the instrument had not been accomplished.

Mansfield was interested in what he had just heard, and in the whole "Macrae affair," as he called it, and curious as to the *dénouement*. He had sufficient knowledge to see that the alleged communication contradicted no law of science. Knowing that the etheric waves on which wireless depended would travel from the centre of propagation throughout space indefinitely, he realized that the reception of a radio message from a neighboring planet was a mere question of the competence of the receiver to detect it. As to its having been done in this instance, he wished to keep an open mind.

This attitude was to Professor Rudge as useless as would have been entire incredulity. Those who were not with him were against him. The Martian peril had not sufficiently impressed Mr. Mansfield to make him see the need for instant action. He lacked the penetration of mind required. Sitting amid his comfortable surroundings in London, he was incapable of realizing that an event now happening on a remote islet of the Pacific could constitute a menace to the whole world.

This attitude did not prevent him from speculating as to Captain Evered's account of affairs when he arrived. Knowing that, accident apart, this must be within a very few hours, he gave instructions before leaving the Admiralty radio room that he

was to be called so soon as Captain Evered's arrival at Station X was reported.

As the day passed and he received no call, his curiosity deepened into concern. By evening he felt the necessity of seeking further information, and returned to make inquiries of Station X as to the *Sagitta's* whereabouts. He knew that the vessel, whether delayed or not, must for the last twenty-four hours have been within radio signalling distance of the island.

He gave instructions for Station X to be called up. After the space of a quarter of an hour he was informed that there was no reply.

Meanwhile, at Station X, as the night wore on, neither Professor Rudge nor Hughes could rest. Sometimes they talked together in the signal-room; at others, singly or together, they paced up and down under the stars. Never had hours passed so slowly, so anxiously, as those preceding the arrival of the *Sagitta*.

They were walking to and fro together outside, when the Professor said, "I think perhaps we are better and safer outside. The place may not be healthy for us."

"Not healthy! What do you mean, sir?" said Hughes.

By way of reply, Professor Rudge began to speak on auras, emanations of telepathic nature and kindred subjects where Hughes could follow him only with difficulty.

The "Sagitta" Is at Anchor Off the Island

BY way of showing you that the things I speak of are not only real, but of practical importance for us to remember, I will tell you of something I foolishly did while waiting for you to get through to Mr. Mansfield. I had been thinking on what the Venerian would do if in my place. I went to look at our bound enemy. I have little doubt now where the thought emanated from. I unlocked the door and went in. By the starlight I could see the figure on the floor. Suddenly an influence assailed me, attacking my power of will and resistance to impulse.

In an instant I realized where this must come from, and its import. Only just in time I managed to get outside, beyond its range apparently. Now listen! This was the thing, the thought, if thought it can be called, that assailed me, in which my own volition in another moment would have been submerged—if I had remained I should have *unbound the Martian.*"

Hughes gasped. This was uncanny beyond his weirdest dreams.

They were still speaking of it as they paced to and fro before the station-house, when the signal bell rang. It was the *Sagitta*.

According to the instructions he had received, Hughes at once proceeded to report the late occurrences on the island. Professor Rudge then added considerably to the official statement, so that by the time the *Sagitta* was near the island, Captain Evered knew everything.

When the cruiser had anchored, Captain Evered sent a boat and radioed that Professor Rudge and Hughes should come on board, with Jones and the attendant.

They at once left the signal-room, and Hughes gave the necessary orders.

As they were passing Macrae's door their attention was caught by sounds from within as of someone tumbling violently about the room.

Both had been convinced that no man living could free himself bound as they had left the Martian. But as they now exchanged a startled glance, the same thought struck both—the Martian was partially unbound!

They stood as though paralyzed. Crash! The body was precipitated violently against the door at which they were standing. Panic seized them, and they ran for the cliff, calling loudly for Jones and the attendant to follow them. Suddenly Professor Rudge stopped, and darted back to the signal-room.

What he went to do was soon done, and he was out again, running after Hughes.

When half the distance to the boat had been covered the Professor looked over his shoulder. No one was visible, not even the other two men. Unaware of the urgency of the call, they had not obeyed it with alacrity.

A few minutes later the Professor was tumbling into the boat, and the order was given to shove off. When near the *Sagitta*, a searchlight was thrown in their direction. It illuminated their track and the point of the shore from which they had started.

A figure was plainly visible under its beam, standing on the cliff, watching them.

The professor gave one glance. It was the Martian—FREE.

CHAPTER XIV

Captain Evered's Decision

WHEN Professor Rudge reached the *Sagitta's* deck he found Captain Evered eagerly awaiting him.

The Professor knew that to convince Captain Evered of the full meaning of what had happened was of the greatest importance. Adequate precautions and prompt action were vital.

It was significant that, when the searchlight showed up the figure of the Martian standing on the cliff, he gave orders that, as soon as the boat was hoisted on board, the *Sagitta* should stand off from the island.

But the sight of that unbound figure had also suggested to him a flaw in the account he had received. Captain Evered decided to hear the report of Lieutenant Hughes first. He listened attentively and asked many questions as to the life and mutual harmony, or otherwise, between Professor Rudge and Macrae while at the station.

He satisfied himself that there was nothing there that could in any way account for the conflict that had taken place. He then sent and asked Professor Rudge and Dr. Anderson to join them.

"I am very sorry, Professor Rudge," he said, "for the way you have been served, but glad that you bear your injuries with so little concern."

"My dear Evered," said the Professor, "I have no time to think about them, no thought for any-

thing so trivial in view of the urgency of the matter before us."

"What's to be done?" asked Captain Evered. "I have heard all Hughes can tell me."

"You accept, then," said the Professor, "my account in general of what has happened, and of where we now stand?"

"It would never occur to me," said Captain Evered, "to doubt your sincerity or competence to judge of this matter better than any man alive."

"It is a great relief," said Professor Rudge, "to know that you are with me."

"It was because I was certain of you that I first had the matter brought to your notice. At first I set it all down as a delusion of Macrae's; but Anderson converted me. Are you convinced that it is within the power of these beings to force themselves on human beings and act for their destruction?"

"I can speak from experience," said the Professor, "that, with mutual consent, this is within the power of the Venerians. There is now, alas! proof that the Martians can effect this transference without any such consent of their victim."

Telling the Captain of the "Sagitta" the Story

"YOU mean that it has happened in Macrae's case, and that his body is now animated by a Martian spirit?"

"Undoubtedly," said the Professor.

"Why," asked the Captain, "have they not made us all their victims?"

"Because," said the Professor, "the first part of the procedure appears to be something in the nature of hypnotism. To establish the necessary *rapport*, some channel of communication with the victim must exist. In the case of these powerful beings, the sound of their voice even on the telephone, wireless or otherwise, is sufficient."

"Still," said Captain Evered, "I do not understand——"

"I see your point," said the Professor. "Our security is this. In the normal state, our sense of hearing is not acute enough to enable their voice to reach us. It is rendered so only in the abnormal state of receptivity set up by previous *rapport* existing between the speaker and listener."

"And this *rapport* was established between the Martian and Macrae——"

"In some way," said the Professor, "through the Venerian, even to his surprise. The explanation of that lies far outside our present knowledge of the subject. While the method is a mystery, we have this isolated instance to prove that one mind can be made a sort of stepping-stone between two others, at least when one of them is a Martian."

"You consider, then," said Captain Evered, "that this difficulty of initial communication, which appears to be our only safeguard, is in consequence of the inter-planetary distance only."

"No doubt," was the reply.

"You maintain," said Captain Evered, "that at this moment there is a Martian within two or three miles of us, and in command of the greatest radio station existing?"

"I am glad," said Professor Rudge, "that you have seen this. It is convincing proof that you appreciate our peril. If the Martian were in absolute control of the Station X installation we should not now be sitting here. After Hughes and I had already started to make a bolt thither, it flashed across my mind that running would be useless, so I rushed back to the signal-room and detached the vacuum tubes from both instruments—and there they are!"

Disabling the Sending Set

THE Professor produced from his pocket the two vacuum tubes and put them on the table.

"They are," he added, "at once indispensable and irreplaceable from any material on the island."

Captain Evered looked at Rudge with frank admiration. Then after a pause he said, "I am not going to attempt any communication with Station X; we'll leave it alone. I hope to God its present occupant will leave us alone."

"I think he'll have to," said Professor Rudge.

"Well, as to that I rely on you," said Captain Evered.

"You remember, Professor Rudge," said Dr. Anderson, "what the Venerian said—that the Martian's performance always surpasses anticipation."

"Yes," said the Professor gravely; "there is no knowing what the Martian may be able to do in the way of replacing the lost tubes. His chemistry may be capable of transmuting the elements."

"Suppose," said Anderson, "our wireless operator received a call from Station X."

Captain Evered looked swiftly from Anderson to Professor Rudge.

"Just now," said the Professor to Captain Evered, "you referred to taking measures for the Martian's extermination. Would you take those measures now?"

"Would you advise a landing party?" asked Captain Evered.

"No," said the Professor, "the risk is too great. The Venerian warned me that compared with the Martians we are as children. Further, there is this that we have to reckon with. There are three men on the island, and *any one of these may now be the Martian.*"

The Professor's words seemed to bring vividly to his hearers' minds the tremendous power and subtlety of the enemy.

"But," continued the Professor, "you have good guns on board." He looked at Captain Evered.

"They would scarcely do our business so far as the Martian is concerned," was the reply. "One of the reasons why this island was chosen is that owing to its contour, nothing but the surrounding cliff is visible from the sea. Perhaps if we had an observation balloon—but we haven't. Is that your solution, Professor?"

"The guns, yes," was the reply. "Suppose the Martian can replace the missing tubes. Our only hope is to blow the whole installation to atoms!"

The suggestion seemed rather to stagger the two men. For a few seconds Captain Evered looked at Professor Rudge without speaking, evidently revolving the idea in his mind.

"Well," he said at length, "so far as I am concerned, I have crossed the Rubicon. They say one may as well be hung for a sheep as a lamb. Having taken the responsibility of acting without official authority, the only logical course is to follow where-

ever it leads." After a full minute's silence, he added: "And I'll do it!"

He then left the cabin. When he had gone Rudge heaved an immense sigh of relief.

Danger Still Imminent

"I THINK, Anderson," he said, "the world has you to thank for Captain Evered's present attitude. It is due to your having taken advantage of your opportunities that we have not now to convince him of the danger."

"I hope he'll act on your suggestion," said Anderson. "It would be a great relief. I don't feel a bit safe."

"As to the Martian repairing the damage?"

"Yes."

"I should be the last," said Rudge, "to underrate his powers, but without vacuum tubes, and I have taken all, there can be no radio. This is no ordinary installation. Its efficacy consists in the balance of two elements in the vacuum tubes of mutually opposing force, mercury and arsenic. These and tantalum for the detector tube are absolutely indispensable for this instrument, which, by the way, is my own invention. Neither of the three elements exists on the island; so that unless he can create them by transmutation overnight, he is powerless."

"Yes," said Anderson again, but his tone did not indicate any great conviction.

So soon as the light of dawn was sufficient, the *Sagitta* took up a position off the island to enable her to shell the signal-house and installation generally. When her 6-inch guns had done speaking, nothing but the ruin could have remained of the installation of Station X.

While Captain Evered had been watching the working of the guns he was himself under the observation of Anderson, who was standing on the cruiser's deck in company with Professor Rudge.

The doctor could read his superior's face like a book, and note the signs, slight as they were, of the mental disturbance that the business in hand caused him.

Presently Anderson said to his companion:

"The way the chief has risen to the occasion is splendid. Only one who knows him as well as I do can realize the wrench it must be. He knows it must mean court-martial."

"In all probability," said Professor Rudge, "he will never be called to account for it at all."

"Why not?" asked Anderson.

"Because if the world escapes the fate that threatens, it will be because it accepts our reports and evidence and takes the necessary measures before it's too late. If it does not escape—and I am much afraid that is after all the most probable outcome—then there's an end to all of us."

"Do you really think that the chances are against us?"

"I am afraid they are," was the grave reply; "but we have certainly a fighting chance yet."

"I'm rather surprised at your view," said the doctor. "Last night it was I who was most afraid of him."

"Your fears," said the Professor, "were of what he might do on the material plane. You thought he might reinstate wireless overnight. I did not think so. There are impossibilities even to a Martian. We know the few material elements he has, and that nothing short of transmutation would give him what he requires. This reaction is beyond man's power with all the means we can command. I did not think that even he could do it overnight in the circumstances."

"You are right," said Anderson. "To succeed under such limitations is inconceivable."

"You have, however, left out the principal limitation," remarked the Professor.

"What? The principal limitation?" queried the doctor.

Discussing the Contest to Be Waged with Macrae, Now a Martian

"TIME! If he does succeed, it will be through too much time being given him. All depends on our being able to convince our fellow men of the danger that threatens before it is too late. But it is on the psychic plane I fear him most. If he can attack again there, he wins. We are powerless to hit back. We have only escaped so far by a succession of miracles."

"We have certainly had wonderful luck," said Anderson.

"Yet mark this," said the Professor, "although missing his aim every time through some narrow chance, he has on each occasion gained something. First when Macrae was in *rapport* and conversation with the Venerian, he reached out in that incomprehensible way and almost grasped his victim. Although thrown off, he implanted an order that served its purpose later. Secondly, when he actually seized Macrae, only to meet the Venerian, he, by doing the apparently impossible, came face to face with me. Here again, although he just missed success through physical collapse, he progressed. He has gained the island, and it is we who are turned out. He has at last a *pied-à-terre* where he will be difficult to deal with. One more such failure, and our ruin will be certain."

A few minutes after the noise of the guns had ceased, Captain Evered went below without giving the expected sailing orders. Almost immediately word was brought to Professor Rudge that he was wanted in the Captain's cabin.

As he entered, Captain Evered said, "I have done what I have done because I believe the circumstances required it. I do not profess that it has been easy. If I had had to do with an enemy more—what shall I call it?—more obvious, and got back shot for shot, I should be quite content. But this is different."

"I congratulate you on having done a finer thing," said Professor Rudge. "You have risked everything for what you felt to be your duty. If we succeed against our terrible enemy, humanity will owe its escape and thanks to you."

"At all events," said Captain Evered, "one step outside precedent appears to call for another. I want your approval of what I now propose. Having done what will be certain to end in a court-martial, I want to make for the nearest point where I can report. Is there any objection to this?"

"I thought of it last night," said the Professor, "while we were waiting for daylight. I knew what

(*Continued on page* 476)

A Columbus of Space

By GARRETT P. SERVISS

(*Continued*)

we saw, but beyond the fact that the objects were aerial he could learn nothing definite.

A Language of Colors of the Spectrum

AS we approached the coast we saw other airships heading toward us from various directions. We guessed at once that some kind of a greeting was in preparation for the returning explorers, but we could never have imagined the magnificence which the reception would assume. It was not long before our eyes were opened.

When we were, perhaps, ten miles off the coast, a vast flock of airships seemed to rise like birds from the land. In a little while they became innumerable, and it is impossible to depict the beauty of the spectacle which they presented.

The aerial vessels of our little fleet were all of one type, and, while they were excellent travelers, they were quite unpretending in their build and ornamentation. But those that were approaching showed a hundred different shapes and sizes. Chinese kites could not for an instant be compared with some of them in grotesqueness.

Many soared in vast circles at a great height, sweeping around and over us like eagles. Others flanked us on either side, and timed their progress with ours. Still others, probably a hundred in number, advanced to meet us in a great semicircle, where each kept its place with the precision of marching soldiers.

Suddenly, at a signal apparently, the air was filled with fluttering colors. To this day I have never been able to understand how that effect was produced. The colors were not on or in the airships only, but in the atmosphere all about. They were exquisite beyond all description.

It was as if the air had suddenly turned to crystal, with a thousand rainbows playing through it, their arches constantly shifting and interchanging. Presently from the craft that carried us answering shafts of color were shot out. Then I began to notice that there was a remarkable rhythm in the swift changes.

I do not know how to describe the impression better than by saying that it was as if a piano or organ should send forth from its keys harmonic vibrations consisting not of concordant sounds, but of even more delicately related waves of color. The permutations and combinations of the chromatic scale was marvelous. The shades of color seemed infinite in their variety, and the effect was magical. It thrilled us with awe and wonder.

A Threatened Collision Averted by Killing a Venustian Air Pilot

"THAT is a *language*," cried Edmund. "They are conversing in this way. They have the whole gamut of the spectrum of light at their command, and every varying shade speaks to them as musical notes do to us; only the meaning conveyed to their minds is as definite as that of spoken words."

"But that cannot be possible!" I objected.

"It is perfectly possible," he replied. "It simply shows how far they exceed us in the delicacy of their nervous organization."

Soon we were all convinced that Edmund was right, and that we were looking upon a display of aerial telegraphy more wonderful than that of Marconi.

After a while the fluttering colors ceased to play. The communication was evidently ended for the time being. Most of the airships now turned and circled toward the land, escorting us.

But half a dozen continued to approach, and in a few minutes one of them, which had got very near, and which was moving at great speed, suddenly turned directly upon us. I expected to see it come to rest, but it kept bearing down with undiminished velocity.

"By Heavens," said Jack, "that fellow is going to run us down!"

There was no doubt of it. On came the ponderous vessel, its prow aimed straight for us, and a long projecting beam threatening to rake our little vessel like the tongue of a runaway fire-engine. There was a momentary excitement among our people.

Surrounded by a Fleet of Airplanes

ALA gave an order, and a quick attempt was made to alter our course, But it was too late. Ala had advanced near the bow, and the projecting beam seemed about to strike her.

We turned pale with excitement, and my heart quailed.

A tall, handsome fellow stood near the prow of the approaching craft, and seemed to be making terrible efforts to manage some machinery.

"Blank the fool!" said Edmund. "Will he never get out of the way?"

An instant more and a cracking report broke upon the air. Edmund had fired his automatic rifle.

The effect was amazing. The prow of the approaching airship swerved instantly to one side, the threatening beam grazed the shrinking form of Ala, and she narrowly escaped being thrown overboard. But the danger was over in a flash, and the craft that had seemed certain to run us down shot harmlessly past our quarter.

For a few minutes none of us could speak. We could hardly think, so imminent had been the peril and so instantaneous the deliverance from it. At last I found voice.

"Edmund," I said, "how in Heaven's name did you do it?"

He was as pale as the rest of us, but his self-command was perfect. To my astonishment, there was a tone of deep regret in his voice as he replied:

"Have I come here only to kill? Look, I have slain another innocent creature!

It was true, for the fellow I have spoken of had dropped at the shot at the very instant when his craft swerved from its course.

"I had to do it," Edmund continued, mastering his emotion. "He would not get out of the way."

"What do you mean by that?"

"Cannot you understand—" He began with a little impatience, and then added: "But, of course, you know nothing about it. I knew, from my examination of the machinery of this craft, that the only way to prevent a collision was to burst a large safety-valve which was directly behind that fellow.

"That would cause the airship to lose way and swerve from its course. He ought to have managed it himself, but he was too stupid or too excited. There was nothing for me to do but to send a shot through him into the machinery. Heaven knows I had to do it, or *she* would have been killed, and all of us would probably have gone to the bottom."

So intense had been the excitement and fear among our companions on account of the impending collision, that the report of Edmund's shot did not produce the effect that it would otherwise have had.

But as it echoed up from the sea and reverberated in the sky, the other airships hurried in great alarm toward us, and soon we were the center of a fluttering crowd, which filled the atmosphere like a multitude of butterflies scared up from a roadside puddle.

Then the prismatic language broke forth again, and the air for a while was like a crazy-quilt whipping in the wind.

When everything had quieted again there came a great surprise for us. It was in some respects the most disheartening episode that had yet occurred.

Edmund, as you will have understood from what I have just related, had unquestionably saved Ala, and probably all the rest, from instant destruction. In doing so he had killed a man—for these people can only be spoken of as men and women, generally superior in physical beauty to those of the earth. But we thought that it should have been evident to everybody that his act was imposed by the necessity of the situation.

One of the Terrestial Visitants is Made Prisoner

YET, instead of thanking him, they made him a prisoner on the spot!

The thing was done so quickly, and so unexpectedly, that there was no chance to interfere. And before we knew it, Jack, Henry, and I were sprawling on the floor of the airship, each borne down by half a dozen stout fellows, any one of whom would have been a match for us in single combat.

Jack tried to draw his pistol, the rifle having fallen in the sudden onslaught, but it was knocked from his hand. Before Henry and I could attempt to resist, Edmund called out to us:

"Don't try to shoot! That's not the way to get out of this. Depend on me."

"A pretty pickle you've got us into with your wonderful people who are 'not given to fighting'!" growled Jack.

"Keep cool," Edmund replied; he was perfectly cool himself, although almost choked by those who held him.

"I tell you that we'll get out of this all right. But conceal your pistols."

The rifles they took, but I thanked Heaven that they didn't know what to do with them. I observed Edmund smile, in his quiet way, when he added a moment later, addressing Jack:

"What's the good of changing your tune so quick? A little while ago you were thanking me for bringing you here. You'll have occasion to thank me again."

"I doubt it," grumbled Jack.

Henry, after his manner, said nothing, but his thoughts were on his face, and I whispered to him:

"For pity's sake, remember how these people read us. Don't look as if you were scared out of your wits! Brace up and trust to Edmund. He's brought us out of tighter fixes than this."

(*To be continued in the September issue*)

Scientific Adventures of Mr. Fosdick

By JACQUE MORGAN

(*Concluded*)

Mr. Fosdick made no reply. With the aid of the block and tackle he lifted the protesting Mr. Stetzle back into the trough.

"Sufferin' snakes, but this water is cold!" gasped Mr. Stetzle, his teeth chattering.

The battery was now reversed. The copper shell was made the anode and the small remaining slab served as the cathode. And then Mr. Fosdick calmly locked up the shop and departed for home for a much-needed rest.

Sad State of All the Subjects of Mr. Fosdick's Experiment

IT was noon before Mr. Fosdick awoke. Quickly making up a bundle of soap and towels he hastened back to the tinshop where he arrived just in time to see the martyr to science slowly crawl out of the plating bath, the now fragile copper shell falling from his body in flaky showers.

"Splendid!" exclaimed Mr. Fosdick. "See what science will do?"

Mr. Stetzle turned on him with a glare of unutterable hatred.

Seeing a film of copper hanging down between the shoulder blades, Mr. Fosdick grasped it and gave a sharp pull.

"Yow!" Mr. Stetzle leaped a couple of feet into the air and wheeled about in a rage of fury. "The dodgasted stuff sticks like a porous plaster!" he shouted. "I've been all night a' pullin' of it off."

At last, after the expenditure of much patience on the part of Mr. Fosdick and of a great deal of profanity on the part of Mr. Stetzle, the coating was removed—all except that around the toes which gave much trouble.

The most vigorous application of soap and water, however, failed utterly to make the slightest impression upon the glistening black skin.

At this unexpected phenomenon Mr. Fosdick was both astonished and interested.

"Castaphoresis!" he exclaimed after a moment's study. "The current, Eben, has driven the black pigment, graphite, into the skin. You may never be white again," he added cheerfully. "And that gives me another idea."

"Another idea!" bellowed Mr. Stetzle, "Well, if you ever hook me again into another one of your dodgasted ideas—if you ever interest me again in any electrified cats or idiotic copper-plated undertakin' schemes—why, then they can lock me up in the foolish-house. Good b-y-e!" and grabbing his coat and hat Mr. Stetzle rushed out of the tinshop, leaving a trailing wisp of profanity in his wake.

Mr. Fosdick watched the retreating form meditatively. "I wonder what made Eben so angry?" he muttered.

THE END

Station X

By G. McLEOD WINSOR

(*Continued*)

your wish would be. I want you to stay here."

"My action," said Captain Evered, "has been largely owing to my faith in you. I don't see what more I can do here at present, but in an affair of this kind I recognize you are the best judge."

"I have reasoned it this way," said Professor Rudge. "As soon as they find at the Admiralty that Station X is for some unknown reason cut off, and there is no news of the *Sagitta*, they will send a cruiser, the nearest available, to investigate; that is to say, straight to Station X. If she gets here, all that has been done has been done in vain."

"By the Lord Harry, yes!" said Captain Evered. "But do you see where that leads to?"

"It leads to the necessity of our taking counter measures," said Rudge.

"In other words," said Captain Evered, "to await that boat's arrival and prevent her, if possible, by physical force if necessary, from carrying out her mission. The height of mutiny!"

Professor Rudge hesitated before replying. He thought he detected a suggestion of hesitation in Captain Evered's tone. He confessed to himself that it would be a terrible position for him. He therefore decided to avoid if possible following that line of thought. For his own part, he knew it would be a thousand times justified to sink the whole navy if only by that means mastery was to be gained over this deadly enemy. He could not for a moment forget that the fate of the whole world was in the balance.

"If we meet the vessel a considerable distance from the island we may be able to dissuade her commander from communicating with the station. That gives us at least a chance which leaving now would lose us. We cannot afford to lose any chances, Evered! As to what to do if the commander is not amenable to reason, we shall have a further opportunity of discussing it. We need not decide for the moment."

"Very well," said Captain Evered, at length. "So be it!"

Professor Rudge heaved a sigh of relief. "Thank God!" he muttered.

(*To be concluded in the September issue*)

Dr. Ox's Experiment

By JULES VERNE

(Concluded)

ıte Schut going arm in arm with ustos the doctor, Frantz Niklausse alking with equal familiarity with mon Collaert, each going tranquilly, iselessly, without even being conious of what had happened and havg already forgotten Virgamen and eir revenge. The general returned his confections, and his aide-deamp to his barley sugar.

Thus everything had become calm gain; the old existence had been reımed by men and beasts, beasts and ants; even by the tower of Oudende gate, which the explosion—these plosions are sometimes astonishing had set upright again!

And from that time never a word as spoken more loudly than another, ever a discussion took place in the wn of Quiquendone. There were no ore politics, no more clubs, no more ials, no more policemen! The post of ıe Commissary Passauf became once ore a sinecure, and if his salary was ot reduced, it was because the burgoaster and the counselor could not ake up their minds to decide upon it.

From time to time, indeed, Passauf tted, without anyone suspecting it, rough the dreams of the inconsolle Tatanemance.

As for Frantz's rival, he generously ndoned the charming Suzel to her er, who hastened to wed her five or years after these events.

And as for Madam evan Tricasse, e died ten years later, at the proper me, and the burgomaster married Iademoiselle Pelagie van Tricasse, ıis cousin, under excellent conditions —for the happy mortal who should ucceed him.

CHAPTER XVII

In Which Dr. Ox's Theory Is Explained

WHAT, then, had this mysterious Doctor Ox done? Tried a fantastic experiment—nothing more.

After having laid down his gas pipe, he had saturated, first the public buildings, then the private dwellings, finally the streets of Quiquendone, with pure oxygen, without letting in the least atom of hydrogen.

This gas, tasteless and odorless, spread in generous quantity through the atmosphere, causes, when it is breathed, serious agitation to the human organism. One who lives in an air saturated with oxygen grows excited, frantic, burns!

You scarcely return to the ordinary atmosphere before you return to your usual state. For instance, the counselor and the burgomaster at the top of the belfry were themselves again, as the oxygen is kept, by its weight, in the lower strata of the air.

But one who lives under such conditions, breathing this gas which transforms the body physiologically as well as the soul, dies speedily, like a madman.

It was fortunate, then, for the Quiquendonians, that a providential explosion put an end to this dangerous experiment, and abolished Doctor Ox's gas works.

To conclude: Are virtue, courage, talent, wit, imagination,—all these qualities or faculties only a question of oxygen?

Such is Doctor Ox's theory; but we are not bound to accept it, and for ourselves we utterly reject it, in spite of the curious experiment of which the worthy old town of Quiquendone was the theatre.

THE END

Aspiration

By LELAND S. COPELAND

OVER the dark, thin nebular drift,
Waiting the warmth and light;
Over the writhing, blazing sun,
And planets, half day, half night;
Comets that race with a trail of fire,
Asteroids whirling along—
Something is brooding, impelling;
Something that cannot be wrong.

Up from the unseen germ and cell,
Potent with glory unborn;
Up from the fish of the Devon sea,
And saurians feeding at morn;
Jungle glooms where the lion lurks,
And dark-eyed cave girl's song—
Something is moving, compelling;
Something that cannot do wrong.

The Talking Brain

(Continued)

—and they were as before. He defended himself through the speaking tube, but it was useless. Again and again he tried. Alterations in the position and temperature of the head—soothing or even narcotic solutions gave no relief. In his intervals of sanity Vinton had complained that he was being tortured; had bewailed his helplessness. Days went by—weeks—months. Colleagues, accustomed to regard Murtha as a solitary, saw his strangeness and a few even offered sympathy or aid; but he put them off. He grew gaunt, could neither eat nor sleep, was equally tormented in his laboratory or away from it, and lived near to madness with his grisly guest. I think the placid waxen features must have been worst of all—with their staring, indifferent eyes behind which his victim and his judge spoke out in endless alternate prayer and invective—the face without feeling, hiding hell. One thought alone sustained him and stayed his hand from making an end—he would wait for my return. Somehow I would solve the problem.

Speaking to the Dead Vinton

HE rose and led me to the laboratory. The banked apparatus lined the wall. At one end was the figure, from which wires and capillary wicks and tubes led outward. He strode over and lifted the top of the head, so that I saw the gray mass soft within. I turned away. The wax lid, with its well-combed hair, closed down. I wiped my forehead, which was cold and wet.

Murtha put the speaking tube into my hand, and I asked hoarsely, "Vinton, are you in pain? What can I do for you?" The instrument chattered, and Murtha translated in a low voice, "Thank God you have come. He promised to release me now. This place is more terrible than you can know. Set me free. Kill me or let him kill me. Now. Now. Now. Now. Now. Now.

Murtha's notebook was out, and as he spoke he took down the words. Later I learned that he had there every word the telegraph key had uttered—the most cruel indictment any man ever wrote of himself. He was a scientist still, through all the strange workings which through habit he still regarded as his great experiment. No emotion could shake him utterly out of his old self.

The whole thing stunned me. I tried to imagine how it would seem to be a disembodied mind, apart from the obedient creature of bone and muscle that served me. I tried to understand the man whose passion for his work, whose curious callousness, whose inherent cruelty—which was it?—could let him use this boy so, and keep him so. It was too much.

"He asks me for thought!" the machine was saying. "How can I think?" He told me before he put me here that in my body I should suffer so that fancy would be impossible. I *am* suffering, I *have* suffered so I cannot think. He is a devil. Let him kill me." The letters ran together into meaningless rattle.

Then I roused at last. "Finish what you started," I said. "Kill him!" He raised his arms over his head as if to ward off my look. "I will—I will," he cried, "But—that will be murder!"

It was ten times murder to keep him there.

Is It Murder?

HE stumbled across the room, grasped a laboratory bottle, raised the sleek cover of the head and poured the contents in. The telegraph key fell silent.

We looked at each other. He walked past me to the laboratory door, and then fell into the chair beside the fireplace. I followed slowly, and sat a long time looking at the flames. We were both relaxed. He seemed visibly to grow larger, stronger, now that the fearful load was gone; but when next he spoke it was in a whisper, and I answered him the same way.

"Well—what are you going to do?"

"I don't know, Murtha. Of course you must be insane——"

"No, I'm not," he interrupted angrily, "I *should* have gone crazy if I hadn't told you—but now I have it is all right. I understand what that means—it is a familiar enough psychological phenomenon. No one can forgive himself—we have to have help, even the strongest. But now I am better. I am as sane as you are." He was in fact marvelously recovered.

"But Murtha—why in God's name did you keep him so long? Why did you wait for me?"

"I wanted a witness to science—a man who knew my work and would vouch for my notes. I wanted you to

back my word. Everyone knows *you*, but I am too young a man to have any statements accepted."

"Why didn't you call in some of the others?"

He looked at me coldly. Then, "Harvey, I'm *not* crazy. When I did this thing I realized that I was risking my life, putting myself on the wrong side of the law. When I spoke to you just now I was frantic, but I understood none-the-less that I was gambling again with the revenge the herd takes on those who offend its projudices."

"But if you were afraid to tell the others, or to tell me, how could I be your witness to science? How could it ever be told? Sooner or later you must suffer for it."

"I hoped you would wait until I die. I hoped you would put your name to documents. I may outlive you—I may grow greater than you are—but I am one man alone."

"You think I will keep still, while you know the rest would bring the law on you?" I reached across the table and opened his Shakespeare to "King John." "You demonstrated scientifically once, Murtha, that I am very responsive to appeals. Where do you suppose my sympathy is in this case?"

"But Harvey, haven't I suffered too?" Haven't I been tormented?"

"You deserve it—Vinton doesn't, and his mother doesn't. Have you suffered more than those two together. You are paying her for the boy you killed. I wonder if she is pleased with her bargain? You don't know what they mean—you have no children ——"

"But he was hopelessly hurt. Can't you understand?"

I sat in silence. What was the use of talk? I might better go. He was crouching over the fire, wringing his hands rather horribly. Was it fear, or some worthier anguish? Who can tell? He spoke again.

"Is it nothing to you, a scientist, that I have proved once for all the nature of the neural current? Men a thousand years from now will look back to this work as the final word on the subject. Harvey——?"

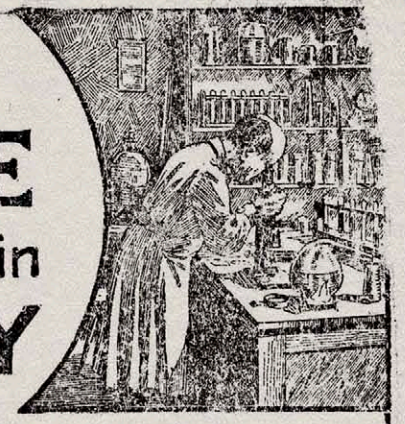
I rose and moved toward the door. He was after me, half kneeling, clawing at me. "Harvey—you won't take —any—action——"

I shook him off, and went out. The last I saw of him was a wild figure, his whole body quivering in silhouette against the light of the open door.

The papers told how he was found next morning.

THE END.

BURIED TREASURE can still be found in CHEMISTRY



Good Chemists Command High Salaries

and you can make yourself independent for life by unearthing one of chemistry's yet undiscovered secrets.

T. O'CONOR SLOANE, A.B., A.M., LL.D., Ph.D.
Noted Instructor, Lecturer and Author. Formerly Treasurer American Chemical Society and a practical chemist with many well known achievements to his credit. Not only has Dr. Sloane taught chemistry for years but he was for many years, engaged in commercial chemistry work.

Do you remember how the tales of pirate gold used to fire your imagination and make you want to sail the uncharted seas in search of treasure and adventure? And then you would regret that such things were no longer done. But that is a mistake. They *are* done—today and everyday—not on desert islands, but in the chemical laboratories throughout your own country. Quietly, systematically, the chemist works. His work is difficult, but more adventurous than the bloodcurdling deeds of the Spanish Main. Instead of meeting an early and violent death on some forgotten shore, he gathers wealth and honor through his invaluable contributions to humanity. Alfred Nobel, the Swedish chemist who invented dynamite, made so many millions that the income alone from his bequests provides five $40,000 prizes every year for the advancement of science and peace. C. M. Hall, the chemist who discovered how to manufacture aluminum made millions through this discovery. F. G. Cottrell, who devised a valuable process for recovering the waste from flue gases, James Gayley, who showed how to save enormous losses in steel manufacture, L. H. Baekeland, who invented Bakelite—these are only a few of the men to whom fortunes have come through their chemical achievements.

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

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

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

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

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

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

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

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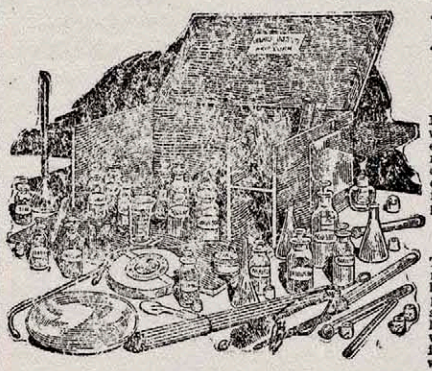
Thanking you for your lessons, which I find not only clear and concise, but wonderfully interesting. I am—ROBT. H. TRAYLOR.

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



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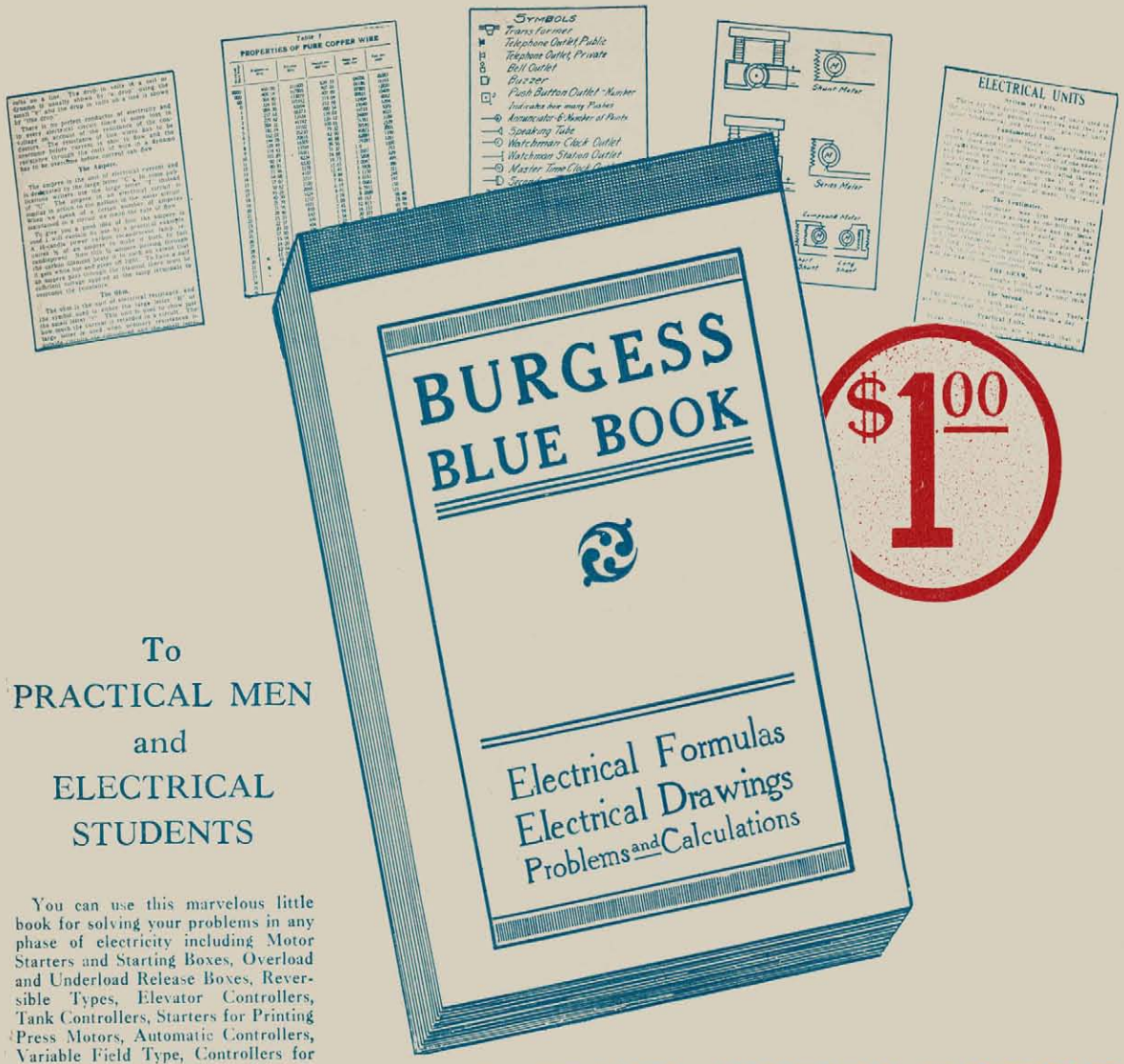

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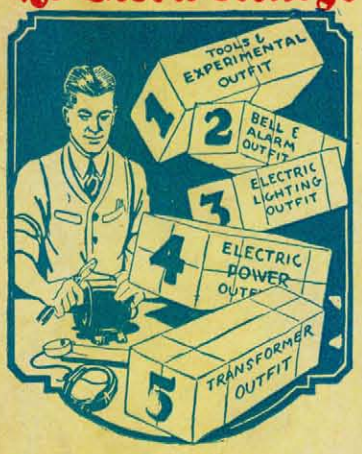

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