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Table of Contents—June

A SUBTERRANEAN ADVENTURE (A Story in Three Parts) (Part 1) By George Paul Bauer	6
<i>They tried to bore a tunnel through the earth . . . but in that underground cavern they fell into the hands of the Inner Ones . . .</i>	
THE INCREDIBLE MONSTROSITY By Walter Kateley	24
<i>Across the continent swept that terrible Juggernaut to extinguish an army . . .</i>	
TRAPPED IN THE DEPTHS By Capt. S. P. Meek, U.S.A.	38
<i>Slow suffocation faced them in the ocean's depths . . . until by a flashing idea there came a saving plan . . .</i>	
THE TIME RAY OF JANDRA By Raymond A. Palmer	46
<i>Backward he flew in time . . . until he stood at the pit of a great catastrophe to an unknown nation . . .</i>	
WAVES OF DEATH By Wesley Arnold	58
<i>Who killed that brave aviator, Lieutenant Wallace, and exploded his plane? Men were arrested . . . war threatened . . . until the truth came out . . . A Real Air Wonder Story.</i>	
THE BAT-MEN OF MARS (A Story in Three Parts) (Part 2) By Wood Jackson	66
<i>Continued from AIR WONDER STORIES . . . our brave explorers come to grips with the Martians . . . Can they overcome the force of the superstitions that dominate the Martians; and escape?</i>	
QUESTIONS AND ANSWERS	77
THE READER SPEAKS—LETTERS FROM READERS	78
NEWS OF THE MONTH	89

ON THE COVER

this month, taken from "Trapped in the Depths," we see our undersea voyagers faced with a new danger, from the great sea beast. But the beast is due for a great surprise, for the "ticklers" that extend around the submarine have been provided for just such moments as these.

NEXT MONTH

THE TIME VALVE, by Miles J. Breuer, M.D. We offer now to our readers the marvelous sequel to Dr. Breuer's "Fitzgerald Contraction." A flight of 200,000 years into the future may seem to us unimaginable, but our author accomplishes it in a vivid and realistic manner. And although he is not a pessimist, Dr. Breuer foresees a human race which is a sad degeneration from our present state of civilization. This is a most thrilling story and one of our well-known author's best.

THE WAR OF THE GREAT ANTS, by Jim Vanny. We humans give our small neighbors, the ants, credit for too little intelligence. Ants are really very clever creatures, and it is possible that they might, as our author pictures, be able to build up great cities, and make slaves of animals that at the present time despise them. Suppose ants could make slaves of us, and have us do their work? As our readers can realize, this is a most intriguing idea and Jim Vanny works it out in a corking adventure story.

A SUBTERRANEAN ADVENTURE, by George Paul Bauer. This story is approaching its most thrilling phases. Our author has an astounding imagination in his ability to picture totally strange worlds beneath the earth's surface. And in the incidents of this story there is both humor and tragedy in the attempts of our poor explorers to get out of the clutches of the Inner People. Don't miss this installment.

THE BAT-MEN OF MARS, by Wood Jackson. This aviation-interplanetary story comes now to its startling and dramatic climax. Overhanging our interplanetary travelers is the superstition of the Martians regarding a strange prophecy. But in the crater of Dir, where the Bat-Men live, lies the basis for sudden and overwhelming disaster. Can it be avoided; will the earthlings help the Martians? Be sure to finish this stirring story of two worlds.

AND OTHERS.

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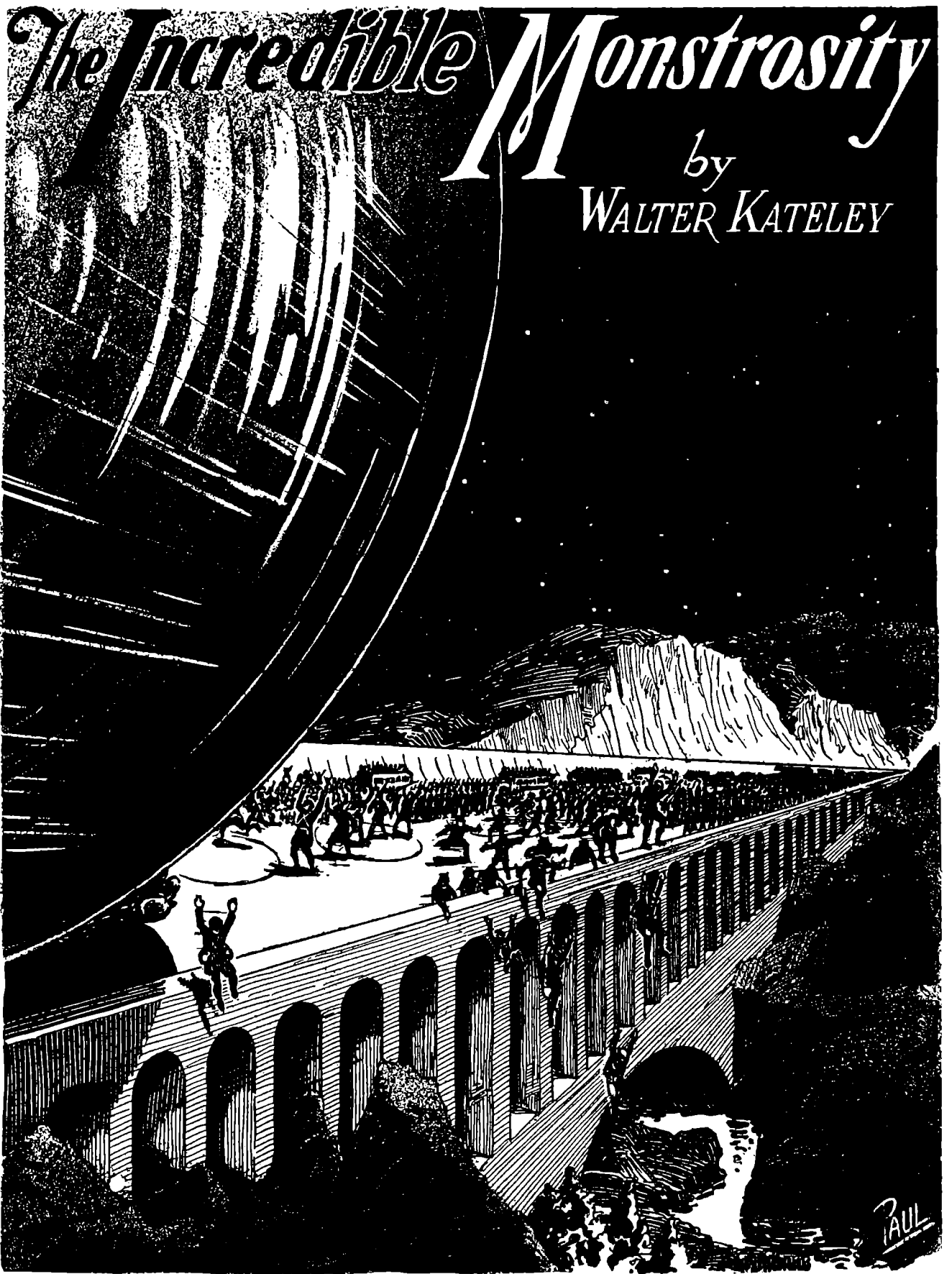
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The Incredible Monstrosity

by
WALTER KATELEY



(Illustration by Paul)

A vast bulk loomed suddenly out of the darkness and towered above the army for a frightful second—thousands of tons of metal rushing down . . .

THE INCREDIBLE MONSTROSITY

By the Author of "The World of 100 Men," "The Gold Triumvirate" etc.

I CALLED you in, Verne, because I want to discuss with you the possibilities of a better transportation system. In fact, this system I have in mind must be something really new. Refinements of our old methods won't do. We've got to have something radically different from anything we ever had before."

Andrew Hardy was speaking. He was president of the largest transportation organization in the United States. He controlled railroads, steamship lines, and aviation companies. If it were not for the anti-trust laws, he and his associates would in all probability have owned a controlling interest in every carrier in the country. As it was, the Universal Transportation Company, while undeniably the most important company in its field, faced a good deal of keen competition.

Hardy was addressing the company's chief consulting engineer, a tall, spare, out-of-doors man who bore on his face the stamp of superior intellect. Benjamin Verne, as will be remembered by those who have read the story of his life, was a world-ranging, restless, mechanical genius who had settled down at last in the most lucrative post he could ever hope to attain. That he had held it for many years was a clear indication of his great ability.

"What we need," continued the financier, "is a much more rapid and much less expensive means of transportation—although I guess rapidity is the most important factor. We can fix the prices later. The point is, Verne, that our transcontinental traffic is especially cumbersome and wasteful, when you compare it with an ideal system, to say nothing of its being exasperatingly slow. Fruits and all perishable foods, as you know, have to be shipped in refrigerator cars. That costs money. Our planes can take care of passengers, but they can't carry freight-train loads. And three hundred miles an hour is beginning to look pretty slow for passenger travel. Every one of our competitors has equalled it. What's worse, shipments that go by way of the Canal must pay heavy tolls, and stand delays. Aside from the airplanes, our whole system is archaic. We're not keeping up with the times."

"You're not saying all this because you don't think we measure up to the rest of 1970, are you? Something tells me," added Verne, with a smile, "that you

want to wipe our esteemed competitors off the commercial map."

"Naturally," answered Hardy. "This is business. What we need is a *daily* service from the Atlantic to the Pacific, both passenger and freight—especially freight."

"That would be some speed," commented Verne, caustically.

"It does seem like a pretty big order," admitted his superior, "and I'm aware that with present methods it would be impossible. But sometimes the apparently impossible has been accomplished. You've brought about a few miracles yourself. That's what you're getting paid for."

"Well, I don't profess to be a miracle man," said the engineer. "Someone else might have worked out the problems just as well as I."

"That's irrelevant. We have at present a large surplus of funds which we've been accumulating for just this sort of enterprise. I feel justified in saying that the capital at your disposal is practically unlimited, and we will use it if a feasible plan can be worked out. So the cost, although it may be tremendous, is no worry of yours; you can safely leave that to the bankers. But the engineering problem is a different matter.

"Now I have been hoping that you might be able to suggest some plan. Of course, I don't expect you to think of one off-hand," he added, as he saw a very dubious look clouding the engineer's face. "But I thought that in time you might be able to work out something practicable."

"It's a large order," said Verne. "You know that my own research keeps me pretty well occupied, and then there's the regular routine busi-

ness I have to attend to personally. If I get an idea I'll have to stop work on everything else."

"Suppose you leave the affairs of your construction work pretty much to your assistant, Babcock," answered the head of the firm. "Devote a few months or even a year to the consideration of this problem. Babcock seems to be rather a capable fellow, and you could help him out in case of emergency. I think I can answer for any preliminary expense you may see fit to incur."

Verne hesitated for a moment or two. "This is really a little out of my line," he said, "but it is just possible that I may stumble on something. To-morrow,



WALTER KATELEY

MR. KATELEY gives us now a story of an entirely different type. Imagine a great sphere 1800 feet in diameter rushing across the continent at the speed of sound. Here is truly an instrument of power and destruction such as no man has seen. Yet the use of this incredible monstrosity will be as complete a surprise to our readers as it was to the editors. Mr. Kateley has built about the monstrosity, which may be likened to the terrible Juggernaut of history, a tale of breathless events and intriguing mystery.

This story we believe opens to Mr. Kateley a new field of writing which undoubtedly will serve to increase his reputation immensely.

though, I was planning to go on my vacation."

"Oh, well, that's all right!" rejoined Hardy. "There's no particular hurry about this matter. Take a vacation and rest up. There will be time enough for actual work later on. The world was not made in a day. Just think it over and have it in mind when you return. Take all the time you want. I know you won't take very long. If you make any progress, call me up, or come in here and tell me about it."

Benjamin Verne left the executive offices in anything but a happy frame of mind. He thought this might be the beginning of the end of his very enviable position. He was the highest-paid consulting engineer in the country, and now he had been asked to turn the major portion of his work over to a subordinate, and to waste his time on a seemingly impossible task.

Perhaps the directors of his organization would see fit to dispense with his services entirely when they found him unable to perform the herculean task allotted to him.

Anyway, thought Verne, there was no use worrying about it. He would dismiss the subject from his mind until he had taken a good rest. After vacation, when his system would be toned up and his mind refreshed, the situation might clear up. He remembered that his father had often said that little-souled people spent the better part of their lives worrying about things that never happened. He determined he would not fall into that category.

A Lesson From a Scarab

ONE afternoon a week later, Verne was stretched out in the shade of a huge silver maple tree, reading a book—one that as a boy he had read many times. He had long been in the habit of re-reading one or two of his old books whenever he returned to his farm for a vacation. It was a restful reminder of old times.

At length his mind wandered from the book, and he lay idly dreaming. Then something on the ground beyond the path caught his eye. A little ball as large as a good-sized marble emerged from the edge of the grass and rolled out onto the bare ground.

It came to a standstill only after it had traversed a slight incline for two or three feet and reached the lowest part of the path. At the same moment a black beetle emerged from the grass and came scurrying after the little sphere. He made a couple of turns around it, as though examining the lay of the land; then he put his head down nearly to the ground and, supporting himself on his forward pairs of legs, swung his hind legs high in the air. In their grotesque actions they resembled the arms of an ungainly derrick.

The beetle backed up to the ball, which was more than a dozen times as large as himself, and, setting his hind feet vigorously against it, started to roll it away. The performance was no surprise to Verne, for he had been familiar with it since his boyhood days. But since then he had learned a great deal about zoology, entomology, and ancient history. His reactions were different now from what they had been when he used to watch the funny little tumblebugs standing on their heads and kicking along the big balls of dung in which the eggs had been deposited for incubation.

The beetle had gone a little way down the path; and now he turned and came back, leaving a crooked trail in the dust behind him. The engineer fell to thinking how strange it was that such a tiny creature could roll such a large ball. His feet and legs were so minute in comparison to his burden! "There must be some very efficient mechanical agencies at work here," mused Verne, "when a little bug can transport twenty times his own weight for a long distance, up hill and down dale. Too bad we human beings can't develop such efficiency in our methods of transportation.

"This beetle must be a first class transportation engineer—"

Verne sat up with a jerk. Was this the secret he was looking for?

He approached the tumblebug on hands and knees and observed its actions very minutely. Manifestly, if this great load were of any other shape, the insect would never be able to budge it. Obviously, Nature had imparted to the little scarab, thousands of years before, a valuable secret, one that groping human beings had not learned in all the years of their estate.

Here was indeed a great mechanical principle involved. What could be easier to move than a perfectly balanced ball? Easy—yes—and better yet, there was no machinery to get out of order.

Verne felt physically weak under the impact of a tremendous idea. He went back and lay down under the tree. He wanted to think; to think about a very large ball, a ball that could be moved very easily, and very, very swiftly. Two hours later, when the dinner bell rang down at the old farm house, he was still thinking. As he rose to his feet he said aloud, as if talking to himself, or to an invisible companion: "Yes, that's the solution. A ball big enough to roll across the continent in a single day!"

There followed a week of the most intensive thinking Verne had ever done. In spite of himself his vacation was over. Try as he would, he could not get his thoughts off the schemes that were gradually shaping themselves in his alert mind. This fascinating new idea hypnotized him.

Once back in the city, he immediately telephoned Hardy that he had a partially developed scheme in mind, and that he was going into the experimental laboratories of the company to work on some models. He plunged into his new project with all that vigor that had lifted him above the run of engineers and made him what he was.

CHAPTER II

Verne Demonstrates It

TWO months later Verne called his assistant, Babcock, to his inner sanctum.

"Bill," he said, "I think we can solve the whole thing with electromagnets. The only problem remaining is—what speed shall we attain? I can't have the ball moving with the speed of light, which it is likely to do if I actuate it with an electric current. Magnetic fields, you know, move with almost the speed of light. I wonder if you couldn't try out something else—say, actuating the magnets by sound?"

"Why not? As long as we're going to play around with Hardy's new toy, let's give him a run for his money. Personally, I think the whole thing's only a fad. I'll bet the directors don't even know anything about it." He spoke into a telephone connecting the office with the laboratory. "Wilmark? Rig up something like the telex motor that works by sound and connect it in with the track for the beetle ball. Yes. When I say "Giddap!" the ball will roll. Yes, that's the idea."

As soon as he conveniently could, Babcock left Verne's office and hurried to a television-telephone booth in the building. For some reason he did not use the office equipment. He dialed a number and waited. Presently a man's face appeared and his voice answered.

"Glad I got you," said the engineer. "Verne has a great idea." And he proceeded to give the details of his chief's latest plan. "I'll let you know more when it's been tried out. I really think there's something to it."

"There is something to it," grumbled Kilpatrick, head of the Universal Transportation Company's largest competitor. "A lot of expense. But go ahead, anyway. Hardy isn't going to own the earth—not by a long shot."

When, a month later, Verne and Babcock entered Hardy's office to demonstrate the working of their model, the chief engineer had already decided upon his course of action. His brilliant mind, leaping from one hypothesis to another, projected itself into the future, and called up the picture of a vast trans-continental system of transportation without parallel anywhere in the world. And Verne was no dreamer, but a man of action.

Hardy was waiting for him. "I hope you will pardon my bringing such a large affair into your office," said Verne, indicating the long cardboard carton a porter had brought in, "but you must remember this is a trans-continental affair."

The carton was placed on a large, flat-topped desk, which had been hastily cleared of its usual equipment. Verne and Babcock exposed the model. It consisted of a ball about six inches in diameter, mounted on a shallow trough-like runway perhaps five feet in length. A number of miniature buildings, obviously power stations, were set at regular intervals along the runway; and at much shorter intervals was a series of minute lens-shaped objects mounted on low pedestals.

"Of course," said Verne, as he adjusted the apparatus, "with this I can only give you the merest indication of what my scheme is like. I don't mind telling you that I got my idea from a greater engineer than I am—from a tumblebug."

Hardy laughed. "So you want to build an iron insect, eh? I didn't think you'd get as desperate as all that, and even if you did I never expected you to admit it." He watched Verne's preparations with an amused smile. Evidently he was thinking of a child's mechanical toy being demonstrated in a store.

"We should have someone to play Santa Claus, and let the children see it," he remarked genially.

"If we should decide to try to build this thing," replied Verne, seriously, "it will be the farthest thing from child's play that was ever attempted."

"Now this ball," he continued, "represents the conveyance, the carry-all, so to speak." He placed the object in question at one end of the runway. "These"—indicating the small buildings—"are power houses to furnish the motive power; and these minute discs that you see placed so close to each other all along the route are sound reproducers and magnifiers.

"This very bright belt around the ball is of specially prepared steel, and very susceptible to magnetic attraction; and you will notice a thick band of metal of the same width along the bottom and in the middle of the runway. You will observe that this band of metal is marked off into sections. Besides furnishing the track to support the ball, it is in reality a continuous series of electro-magnets."

"I suppose you have a gyroscope or something inside?"

"Nothing of the sort. The ball is a perfect sphere, perfectly balanced. The bands along the raised edges of the runway are only guides to keep it in place. When the electric current is turned on, the electromagnets are sensitized, one after the other. They exert a tremendous pull on the ring around the ball, in the same way that a different type of electromagnet lifts heavy loads of metal in the steel plants and junk yards."

A Tremendous Scheme

VERNE paused a moment to allow the financier to grasp the idea.

"This pull exerted on the forward portion of the ring," he continued, "draws it downward and causes the ball to roll forward and onto the magnet. Then the current is withdrawn from this particular section and transferred to the next in line. In case the current is not withdrawn from the first magnet, it will act as a brake, and tend to hold the ball stationary. Thus the speed may easily be regulated."

The engineer pressed a button, and the ball rolled with amazing rapidity to the other end of the trough.

"Because of the incompleteness of the model we have no real speed control," continued Verne, "but in actual operation the speed would be regulated by these sound reproducers and amplifiers."

Hardy was now thoroughly interested. "And what speed would that develop?" he asked.

"Well, I can't speak with certainty, but it would be approximately the speed of sound passing through air; that is, 1090 feet per second, or 764 miles per hour. At that rate it would take about four hours to cross the continent. You see," he continued, noting that Hardy looked impressed, "a certain sound or combination of sounds set in motion at one end of the route would be taken up by each of these amplifiers in turn, and relayed undiminished until it reached the other end."

"It's the same principle that we use in making sound waves actuate electric controls," put in Babcock, who was particularly expert in this field. "It is this method that has been employed in so many modern devices, such as the telex traffic signals, where the sound of a horn operates the traffic signals, and in other devices—some of which we are now using on our own lines."

"Yes, I know," Hardy agreed. "I don't suppose that we should encounter any insurmountable difficulties,

so far as that is concerned. But how about going over the mountain ranges? Wouldn't that take a tremendous amount of power?"

"I am no Napoleon," answered Verne, "but since he had the colossal conceit to say 'There shall be no Alps,' I think I may venture to say that there shall be no ups and downs on this line. I mean it literally. I would suggest an absolutely level course—some fill, but mostly cut."

Hardy hesitated, as though he had not heard right. Then he whistled significantly, and stood staring at Verne as though to reassure himself of the engineer's sanity. Then his eye wandered back to the model.

"How large did you say this ball would be?"

"I didn't say," answered Verne. "That is largely a matter of convenience. I had planned, tentatively, on a circumference of about a mile. That would give it a height of about 1680 feet. Two or three such spheres would settle our traffic problem for many years. We could always have two loading and one in transit."

"You want to build a sphere as tall as a skyscraper!" exclaimed Hardy. "If I didn't know you so well, I'd think you had gone crazy suddenly from overwork."

"My idea exactly," chimed in Babcock. "I think we could do nicely with a sphere only 500 feet high. That would give a circumference much less than the other—only about 1600 feet, or less. It would be much more practicable."

"If we're going to have it at all," snapped Verne heatedly, "we may as well have it on a large scale. And what's more," he added, turning upon Babcock, "I wish you'd keep out of this and let *me* do the talking. It happens to be my idea."

Babcock did not answer. This public rebuke was something he had not expected.

"The conveyance itself," continued the chief engineer, turning to Hardy, "offers some problems that we have not been able to work out fully as yet." He took up the ball and removed a large section of the shell. "In a general way, however, it seems possible to construct it after this model.

"These sections in the interior are compartments, fashioned somewhat after the manner of the segments of an orange, except that each original segment is made up of a number of sub-compartments, all parts of which are detachable and removable. These segments can be made identical in size and shape, and their subdivisions can be made into a series, so that those of one segment would fit in a like position in any other segment. For example, compartment five of one segment would be exactly like compartment five of another segment, six would be interchangeable with six, and so forth.

"Some commodities, of course, would have a tendency to shift and knock about in these compartments, and become damaged. But I think it is quite possible to work out a system of stabilizing most of the freight with compressed air, or with some kind of clamping devices."

"That's the least of it," said Hardy. "What I'm thinking of is the construction proposition." He took up the sphere and weighed it in his hand, apparently trying to conceive of the dimensions of a ball a mile

in circumference. "All that excavating for a level cut is impossible, utterly impossible. Why, man, there isn't enough money in the world to finance an undertaking like that! I'm simply referring to the business end—the construction."

Great Plans

"YOU are right—so far as present methods of construction are concerned," replied Verne, unmoved. "Remember that the Panama Canal was deemed an impossibility after De Lesseps failed. That also was a work of construction and excavation—and far more complex than the task we may take upon ourselves."

"But consider the difference between cutting through a narrow strip of land and cutting a straight road across a continent. We may as well stop right here. There's no use in going on."

"You think so? What would you say if I told you I had already devised a plan for the construction of the passageway?"

"I'd say you were mad, and I'm beginning to think you *are* a trifle unbalanced on this subject. Put away this toy and forget about it."

"Do you think I would do that?" asked Verne, in a tone which made Hardy look at him suspiciously. "Here I've stumbled on something that would be a positive blessing to humanity, that would aid enormously in the progress of civilization. Think of the benefits to be derived when this principle is applied to a variety of uses! Think of what the amazingly rapid transportation would mean to industry—think what it would mean to this country in case of a war—and you know as well as I that we have never been so close to war in the past fifty years as we are now!"

"Well, what do you intend to do?"

"If you don't want this," said Verne with finality, "I'll go straight to Washington and offer it to the government—gratis. You'll probably have me fired, but I can always get a job. Here I have worked out for you the invention of a century, and you won't even let me finish telling you my plans for accomplishing it."

"You seem rather certain of yourself. Yet I know that you couldn't possibly do it, even with great improvements in the machinery we have now."

"Improvements is not the word," answered Verne. "We shall require nothing short of revolution in machinery and in methods. I have in mind a scheme partially developed which might amount to something. I would not attempt to use steam shovels, because even if we could build them ten times as large as they are now, they would be but toys compared with the magnitude of the job."

"Then what would you do?"

"I would do the work in two operations. First, I would have a machine that would dig the cut, throwing the soil in a pulverized state out into the trench behind itself, as the gray badger does when digging his burrow. This, in my opinion, could be advantageously accomplished with a machine modeled somewhat after the style of the present trench-digging machine. Then, a system of belt conveyors, unencumbered with heavy excavating units, could very easily carry this powdered soil out of the cut."

"It sounds all right," said Hardy, without the slightest appearance of enthusiasm. "I suppose there might be a possibility of great improvement that way; but even so—well, we will come back to that later. Now, where would you propose to locate this little system?" And he turned to a large, square, map of the United States that hung on the wall.

"Well," replied the engineer, apparently feeling that he was now on firmer ground, "there could be but one logical place." He took from his pocket a large rubber band and stretched it until it snapped. Then, stretching the length of elastic to arm's length, and reducing it to a mere thread in thickness, he held it against the map, one end passing through San Francisco and the other through New York.

"Here," he said, "are four of our liveliest and most populous cities in a perfectly straight line—San Francisco, Chicago, Cleveland, and New York."

Hardy looked amazed. He followed the line carefully with his eye. "I never thought of that before," he confessed. "A perfectly straight line would pass within the city limits of both those central cities, although that would not be necessary. By George!" he ejaculated, "I don't suppose anyone realizes that."

"For our purposes," said the engineer, "it is really a happy circumstance, for we must have a course absolutely straight if we are to attain the speed of sound."

"Wait a minute," said the financier, inspecting the map closely, "How about these two little sections of Lake Michigan and Lake Erie that come below the line? Bridging them would be an expensive job."

"Well, you see, bridges wouldn't be of much use, because our way will lie beneath their level. We would have to dike them off, and then make our cut."

"And after that," sneered Hardy, "I suppose you would pick the sun out of the sky and light your pipe with it. What you ought to do is to consult a nerve specialist. I said before, and I repeat it now, that you are going dotty."

"Yes," replied Verne. "People do get that way thinking about rapid transportation. One man, who is an old hand at the game, was talking to me seriously, not long ago, about a scheme to make daily trips across the continent."

They both laughed, and Babcock joined in their good-humored mirth.

"Verne," said Hardy, "I think your scheme is impossible—utterly impossible. But I suppose it can do no harm to try a little experiment. Now I think, just to convince you that you are wrong, that we could arrange to electrify one of our old, unused, roadbeds between a couple of small towns, say, twenty or thirty miles apart. These towns, as you know, are no more than names on the state road maps, and it doesn't pay us to keep up service. In that way we could make a practical test of the scheme, and get the ball to rolling on a small scale. In the meantime, you could see about developing the excavating—or rather super-excavating—machinery, such as you have described. Then, if we find it possible to do the impossible, we could start boring with a big auger."

As Verne and Babcock were leaving the office, Hardy motioned the chief engineer to remain behind. When

the younger man had shut the door behind him, the president drew Verne into a corner.

"How much of your plans does Babcock know?" he asked.

"Why?"

"He's a good man, and all that, but I don't trust him very much. How do you know he won't sell this idea to another road?"

"Well, suppose he does? They haven't got the money we have, and they won't dare to try anything. Besides, we can have all my inventions patented, of course."

"Yes, but they can be on to us without imitating us. I didn't get where I am without making a smear of enemies, and if I know Kilpatrick, that old wolf would give ten—or anyway, five—years of *his* life to thwart me in the greatest project of *my* life."

"So that's why you pretended to believe my plan impossible."

"No. I still believe it's impossible. But get Babcock away on some other work. You don't need him for this, anyway. Remember that anyone with inside information can cause no end of trouble. Kilpatrick and his bunch could get franchises on little roads we want to buy up; they can obtain options on land we would have to own to cut through; they could stir up the press to ridicule us, and make us the butt of jokes all over the country; in fact, they could—and they would—do anything, short of murder, to keep this line from getting farther ahead of them than it is. Do you get the idea now?"

"Well," said Verne, "if this is big business, give me the forest primeval, where wolves don't go around disguised as railroad presidents."

CHAPTER III

A Conspiracy!

THE next morning, before Verne set to work to arrange preliminary details for the building of the experimental transportation system, he charged Babcock with a mission, seemingly important, concerning the inspection of the company's western lines. To make a complete report, embodying all the necessary mechanical information, would take months. Babcock understood perfectly well that he was regarded with suspicion in the east, and yet he had his reasons for wishing to go to the Pacific coast for a time. His sudden orders, therefore, he regarded more as a fortunate occurrence than as a hindrance.

Accordingly, while his chief slaved in the east to finish the construction of the dinkey line, Babcock enjoyed himself in a little city on the coast of Lower California, where, in the semi-tropical sunshine, he conferred daily with three urbane individuals on a subject which would have made the reputation of any secret service operative fortunate enough to discover it.

"My good friend," said the engineer, lighting a cigar and blowing out the match in a cloud of fragrant smoke, "why don't you allow me to conduct the campaign in my own way? Already I have enlisted the aid of Hardy's most powerful rivals. I can assure you that the Scarab line will never be completed; or if it is, that it will never be put into operation. When you attack

on the west coast, there will be no swift-moving sphere to carry great guns across the continent in four hours. When you destroy the cities on this beautiful coast"—he allowed a sigh to escape him—"you will arrive at a convenient time when the battle squadron is off somewhere in the Atlantic. When you establish your dominion over the western quarter of this opulent country, your millions will have a place to breathe in, to live in, to prosper in. . . ."

"Which they have not now," finished one of his companions. "It's really too bad," continued the other, whose nationality would be difficult to determine, "that we could not have come to a peaceful agreement on the matter; but then these statesmen are so pig-headed."

"And we will *not* destroy these beautiful cities of the Pacific coast, my dear Babcock," put in a man whose swarthy features might make him appear at first glance an Ethiopian, but whose features revealed the Oriental. "On the contrary, we will make use of them. Our people will move into ready-made homes—after our army evacuates them," he added, with an afterthought.

"Still," said the renegade engineer, "it may be better to terrify them by wholesale slaughter. I, for one, would not object very much—provided you spared a few women."

The four men laughed. "You will get that and the other things we promised," said one. "The day we enter Washington you get ten million dollars and become governor of the Eastern Seaboard."

"But then, it will be so easy," continued the first speaker. "With disarmament as it is now, we have little to fear."

"You forget," said Babcock, "the battle squadron."

"A mere gesture," said the dark man. "Our planes will wipe it off the face of the sea in an hour."

"But there are planes in this country as good as any of yours, and pilots, too. Of course," said the engineer, hastily, "I don't mean there is any possibility of their stopping you, once you have gained your ground, but they are always to be reckoned with. And then, not long ago, that dog Verne predicted with confidence that war was imminent. That was when he rebuked me before Hardy, the fool!" On Babcock's usually impassive face appeared a look of hatred which vanished almost as soon as it had formed.

"That's nothing. A mere personal affront. But it will be well to look into these preparations for war. Did Verne mention the use of his ball-transport in case of war?"

"Why, yes, he did. He was quite emphatic—mainly, I believe, in order to convince Hardy, who is as shortsighted as such men usually are. That was one reason why I suggested a smaller sphere—simply because I know Verne better than Hardy does. Let him build his scarab ball; we shall know how to copy it—before something happens to it!"

A Troubled World

HOW successful Verne was in building his experimental line and his trial sphere is a matter of scientific history, no less than a matter of world history. To the admiring public, Verne was the hero of the hour, in spite of the fact that the tests had been kept

secret. Hardy had been right; Kilpatrick and his associates had stirred up the press, but the press, as usual, preferred to use its own discretion. Yet few knew what lay behind this first triumph of the great engineer. The public is usually informed that a scientist has struggled, suffered the tortures of hell, endured ridicule, triumphed over defeat after defeat, and emerged from his ordeal a changed man, a benefactor to humanity. In the case of Verne, this was not quite true—at first. His success, with the converted Hardy to aid him, was a matter of course. His real trial was to come later.

As soon as the first public acclaim had died down, Hardy set to work to organize a new company to finance the projected transcontinental line. The new organization was, as a matter of fact, simply a pooling of the resources of all the large units in the Universal Transportation Company, in order to accomplish what none of them could have hoped to accomplish alone.

Then began a campaign which, while it was strictly a business affair, began to play an important part in the economic life of the nation. People were asked to buy stock in the company. High-priced publicity experts spread everywhere the gospel of rapid transportation; newspapers were given heavy advertising contracts in return for cleverly worded columns of news publicity and editorial approval; the "class" magazines ran feature articles on the vast possibilities of the new transportation; radio hours were devoted to an explanation of the principles of the new invention; even conservative banking firms, which had invested in the new organization, became enthusiastic over the project, and sent high-powered advertising matter to their clients. Since the company had not completed its plans and was in no position to earn money, its stock was not traded on the exchanges; but there was a good deal of private stock-selling which demonstrated the intense interest aroused by what had once been the dream of a great engineer. In short, a nation which had taken twenty-five years to become "air-minded" took less than three years to become "scarab-minded." Such is the power of publicity and such man's faith in science.

The company became more than a business venture; it became a matter of national pride. The government displayed marked interest in the development of the transcontinental road, and offered its assistance. Agents of foreign powers tried desperately to buy the plans or to steal them. But for once Hardy was more the patriot than the man of business. While he realized the financial advantages of selling his rights to foreign countries, something stronger and deeper than his love of money held him back.

Both he and Verne had decided to keep the system confined to the United States—for some years, at least—and, moved by the same impulses, and realizing the value of allowing the invention to become more desirable as time went on, the board of directors sided with them. It was a curious patriotic fever, even as late as the nineteen seventies, which made these men determine to give their own country something which would set it apart and above the rest of the world.

Of all this Babcock was quite aware. While he had

been transferred to another division of the vast system, still retaining his title of assistant to Verne, he kept his fellow conspirators on the Pacific coast constantly informed of the latest developments. What they read in the newspapers was one thing; what was really taking place was another. Even Kilpatrick, who had lost all hope of ever imitating the vast project, still did his best to hinder the progress of the excavating and building. The diabolical cleverness of Babcock was nowhere more apparent than in his success with the rival of Hardy. He was assisting Kilpatrick to work against Hardy, and at the same time to work against himself—not knowing, of course, that the delay in the building of the sphere might mean a great deal in any international conflict to come.

The foreign powers, while still preserving a surface friendliness for the United States, regarded the refusal of the rights to the invention as a distinct international insult. Babcock and his agents discreetly encouraged this rising feeling. Emissaries of the conspirators, in close touch with the world's diplomats, openly discussed the obvious plan of the United States to rise superior to other nations by means of an epoch-making, a tremendous, advance in the science of transportation. The result of all this maneuvering was precisely what Babcock desired. The other nations of the world could be counted upon not to interfere when the United States was attacked. This country, with only a small standing army, and the ghost of a navy, with an air force no larger than that of a second-rate nation, would be left isolated long enough for the invaders to accomplish their purposes. After that the complete subjugation of the richest country on earth would not be a matter of extraordinary difficulty.

The world was prepared for the change. Sick with envy and jealousy, the other great powers, unless their own interests were in danger, would not send a man or a gun or a ship to aid the greatest nation in the western hemisphere.

Verne's new excavating system, after a preliminary trial, and with the addition of several improvements, had amazed even Hardy. Either invention alone would have been enough to give undying fame to its creator; Verne had the distinction of having created the rolling ball method of transportation and of having devised an engineering system to make it possible. Hardy, shining in reflected glory, assumed credit for having set off the train of thought which brought about this revolution in transportation.

CHAPTER IV

Ready to Start

NOT many believed that the greatest engineering feat attempted could be completed in ten years.

Yet, as the end of Verne's task approached, public interest, which had died down somewhat after the first flush of enthusiasm, began to boil once more. The United States was about to demonstrate its position as the greatest nation in the world.

But in those ten years Babcock and his fellow-conspirators had not been idle. Little by little, in spite of the strict immigration laws, the Pacific coast had

been converted into a stronghold of enemies. They were smuggled in from Canada and Mexico; they slipped ashore from incoming ships among the quays of San Francisco; they posed as laborers in Lower California, passed into California, and concentrated in her most important centers.

The great terminal of the Scarab line, already built, was one of the show places on the outskirts of San Francisco. Occupying a square mile of level territory just outside the city, it enclosed at one end the largest power generating station in the west. Stretching in a perfectly straight line across the magnificently planned field, and extending to the horizon in a northeasterly direction, was what appeared to be a runway of brilliant metal, which gleamed with an intolerable radiance under the California sun. Millions had been poured into the construction of this broad belt. On either side, for nearly an eighth of a mile, extended the level ground, bounded by elevated rails of extraordinary thickness, which ran parallel to the runway. At regular intervals along the route, and set directly next to huge electromagnets placed beneath the metal band that seemed to span the earth, were sound amplifiers and reproducers. These were of little more than ordinary size, but of such sensitiveness and strength that the most perfectly built instruments of their kind which existed in the first half of the century seemed like toys in comparison with them. Most people had only a vague idea of what these were for; the workers whom Babcock had managed to get on the payroll of the company knew even less about them: What these men did know was that they were to hold themselves in readiness to destroy them.

By the end of 1979 Verne had completed his great sphere. It stood in its terminal in New York, on what had been an airport: An incredible, monstrous creation, looking like a miniature moon which had fallen upon the earth. On its vast surface an entire sector seemed to have been cut away, and derricks had been drawn to the opening, ready for loading. The interior of the sphere, spacious as a cathedral, was illuminated with innumerable jets of cold light. Privileged visitors were allowed to climb inside, and to observe the compartments, all identical, with their freight elevators, their compressed air stabilizers, their spiral staircases, and their adjustable freight spaces.

Those who imagined that the terrific rotation of the sphere would draw chaos from order inside the ball were reassured by the powerful electromagnets *inside* the immense shell, which, charged from the belt upon which the sphere was to ride, would hold the metal-cased freight securely against the sides of the monster, or along the steel partitions. It was even rumored that Verne was contemplating a passenger sphere, in which an interior shell, stabilized by gyroscopes, would not rotate with the outer surface. This, however, could not be confirmed.

The electromagnets along the three-thousand mile path of the sphere were to be actuated by the spoken word "scarab," according to the newspapers; and the announcement, made on June 4th, scheduled the first run for a month later, on the celebration of Independence Day, 1980.

Babcock, reading the announcement, laughed aloud. By that time, if his plans succeeded—and there was no reason why they should fail—the words “American independence” would be the laughing-stock of the world.

Threats of War!

IN order to avert any possible suspicion, Babcock was to be in New York at the time of the attack, and he had promised himself the pleasure of ruining the Scarab Transportation Company with his own hands. Several hundred thousand yellow-skinned and brown-skinned men, fanatical in their hatred for the United States, were already stationed at strategic points in California. The opening of the line provided an excuse for their massed numbers. Yet each had his part to play in a vast scheme of conquest.

Behind the walls of dingy shacks no one could guess what deadly machine guns were hidden; in the underground caverns dug beneath abandoned houses and in the private homes of a few rich conspirators no one would imagine arsenals capable of wiping out a city. Directly across the Canadian and Mexican borders were massed great amphibian planes which could be converted into bombers at a moment's notice; and the airports of California, Oregon, and Washington contained any number of pleasure craft and business planes which, with their automatic stabilizers, their super-charged motors, and their radio control, were potential and deadly engines of war. The government flying fields on the vast plains of Texas were to be the central strategic points for the subjugation of the southwest.

Transpacific airplanes and dirigibles had brought deadly cordite bombs across the ocean to their haven. In the mountains that ran down the center of California; in the high ranges of the Sierra Nevada, were established chemical plants for the reduction of metal-bearing ores; and government inspectors had failed to remark how well equipped these plants were for the production of poison gases. Four thousand miles from the coast of California a vast armada prepared to steam slowly eastward. When the Pacific ports had been captured, an army could be landed within a week.

The American newspaper correspondents were informed that the concentration of the Asiatic battle fleet was simply for the purpose of maneuvering in the mid-Pacific. Washington, however, became suspicious when hundreds of great submarines, capable of crossing the ocean as fast as any destroyer, were sent at intervals to accompany the fleet. Verne, talking to Babcock in New York, mentioned casually that his immense sphere was quite fitted for the transportation of coast-defense guns.

“Simply remove some of the sections,” he said, “and you have an ideal ordnance transportation system. We're loading several hundred small planes as part of the first shipment. The army is going to increase its aviation activities on the coast. Why, I don't know. Maybe they're afraid of an invasion.”

“Invasion! That's a good one,” laughed Babcock. “The Pacific coast is as safe as it was three hundred years ago. Who could attack across four thousand miles of ocean?”

“Still, I wonder,” said Verne. “Things aren't what they should be. I don't like this fleet moving toward us. It may not mean anything, but I wish our own battle squadron were somewhere around there. Nothing like a little protection, you know.”

“War is impossible,” answered his assistant dogmatically. “This may be a quotation from our leading statesmen, but it's true, nevertheless.”

“I feel as though we were sitting on a powder barrel,” answered his superior. He turned the knob of the radio receiver which was always tuned to the news broadcasts, and caught the announcer in the middle of an utterance.

“. . . and a fleet greater than any ever before assembled is performing maneuvers in the Pacific,” the voice was saying. And then, after a moment or two: “We have just received word of a slight explosion in the terminal of the Scarab Transportation Company at San Francisco.”

“What!” cried Verne, leaping from his chair.

“Too soon!” slipped from Babcock, who bit his lips a moment later.

“What did you say?” asked Verne, who had heard perfectly well.

“I said ‘So soon?’” replied Babcock. “It's a wonder it hasn't happened before, with the ignorance of those imported laborers.”

Verne did not reply, but endeavored to get a long-distance connection on his television apparatus. Presently he was speaking to the agitated manager of the western terminal.

“It's not serious,” reported the man in San Francisco, attempting to smile. “A few of the amplifier connections have been destroyed. We have not yet ascertained the exact extent of the damage.”

“What was the cause of it?”

“We aren't sure, but we think it was carelessness.”

“You do, eh? Well, repair that damage at once, and see how far it extends. Examine every inch of that line for twenty miles out of the terminal. Understand? And call upon the state for a military guard. We aren't taking any more chances! Something tells me such accidents don't happen by themselves—not with what I know of my own system!”

“Do you really think a military guard is necessary?” asked Babcock, in an off-hand manner, when Verne had severed the connection. “I think you're taking a lot of trouble for nothing.”

“Ten years of labor isn't nothing,” snapped Verne. “How do I know it isn't Kilpatrick up to something?”

“Oh, I'm sure it isn't. When the ball goes through on July Fourth,” he added, with a curious smile, “you'll see your suspicions had no foundation.”

What Verne Saw

VERNE walked from the room without replying. He had suspected Babcock all along, and now he was certain of something. Babcock, he thought, was in league with Kilpatrick. Then he acted with his customary decision. He gave orders to his private detectives to have his assistant watched; and meanwhile he took the precaution of tapping the wire from Babcock's office, although he expected to learn nothing from

that source.

On the evening of the twenty-ninth of June Verne received a report that Babcock had been in constant communication with San Francisco; that he had made several calls; and that his operatives had succeeded in tapping the last. Babcock seemed to be worried about the progress of some affair of his own in California, Verne was informed, although from the words used it was impossible to determine what it was. The most enlightening of his sentences was "Don't wait any longer; use the runway!"

Verne went home, undecided what to do next. His radio television apparatus, which for a week past he had concentrated exclusively upon the San Francisco terminal, gave him what amounted to a talking picture of what went on in the vast enclosure. It was not necessary for anyone to broadcast, as it had been fifty years before. One of his own devices, set high up on the wall of the terminal, gave him something of a bird's-eye view. Very few knew of its existence.

Through the radio came what sounded like the noise of a struggle. It was ten o'clock in the evening in New York, and consequently seven on the coast. The workmen had departed. What, then, could this mean?

Then he saw! As though a veil had been ripped from before his eyes, he realized the meaning of it all—he saw the watchmen lying apparently brutally murdered! This was no robbery. This was a conspiracy! And then, as he watched, his face pale, his heart pounding, the work of his life at stake, he saw men in uniform—a uniform strange to him—pouring from a tunnel which opened into the terminal, of the very existence of which he had been ignorant.

Without confusion, and with perfect military precision, they formed into platoons, in squads of sixteen, eight abreast. There were commands in a tongue he recognized, with a sickening sensation. The soldiers, each armed with a heavy automatic pistol of the silent type, each fourth man carrying a small machine gun, began to march down the runway—his own runway, upon which his scarab sphere was to cross the continent.

Fascinated, a cold fear gripping him, he watched. This was not the work of Kilpatrick. These men were no ordinary ruffians. He noted, with a wave of something like relief, that they damaged no equipment. Apparently they had some use for it, then. He moved the focussing equipment a trifle. Into the great entrance of the terminal, which was now in view, rolled a closed car. An officer ran up and saluted the man who descended from it—apparently the commanding officer. There was a slight delay, and some hesitation; then the chief got back into his car. His chauffeur drove him to the head of the column. The march proceeded.

Verne though he had gone mad and was the victim of hallucinations. What earthly use would it be for men to march on his runway? Then, like an inspiration, the words of Babcock came back to him: "Don't wait any longer; use the runway."

The engineer knit his brows and centered his brilliant mind on the problem before him. Then, as though moved by springs, he leaped to the telephone and called the War Department in Washington.

To the subordinate who answered, he almost shouted: "Get me the Commander-in-Chief! Quick! This is Benjamin Verne, of New York!"

"Sorry, sir. The President is on his yacht."

"I don't want the President! I want your commanding officer, chief of staff, whatever you call him! This is a matter of saving the country!"

"He isn't here, sir," answered the young officer, who apparently thought he was dealing with a madman. "I am here only for emergency. General Winfield is at a social function."

"He would be!" ejaculated the engineer. "Will you call him at once and tell him to call me at once? This is imperative!" He gave his number.

"I'll try," promised the young man.

Verne cursed aloud.

CHAPTER V

Drastic Action

TEN minutes later—minutes during which he looked at the television screen in agony and realized only too well what was taking place—his telephone rang. The distinguished head of General Winfield appeared in the screen, surmounting a stiff white collar and appearing to grow from a radiant shirt front. The general in evening dress was not as imposing as the general in uniform.

"Listen, General," said Verne, casting formality to the winds, "you must rush every available man to California at once—tonight! The country is threatened with invasion; the maneuvers of the fleet in the Pacific are a blind, an army is crossing the ocean to attack us on the Pacific coast."

"Impossible, sir! Have you gone mad?" The general's great respect for Verne as an inventor did not include respect for his military knowledge.

"I tell you we are being attacked! I have been watching my private television screen. Several companies of foreign soldiers have come through a secret tunnel and taken possession of the San Francisco terminal of my Scarab line; they are now marching steadily down the runway! The watchmen have been murdered! Are you going to sit there and listen to the music while a military invasion is being carried out?"

"What are you telling me?" demanded the general. "Why should anyone wish to march down your runway?"

Verne almost cursed the general aloud. "Don't you see," he cried, "the advantage of that? They have a perfectly safe and level route to follow; they know just where it is taking them; they are hidden from view; they can stop wherever they wish and attack wherever they choose; they are armed with machine guns and—he glanced at the screen again—"with field pieces! They have swift trucks for the guns. Every man has a gas mask at his belt—ready for instant use. Does that mean anything to you?"

"By gad!" exclaimed General Winfield. "I wouldn't have thought it possible that they could do all this and escape our detection!"

"That's because we've been too sure of ourselves; we've reduced our army and navy; we've laid ourselves

open to attack. I don't blame these Orientals! They're stifling for room to breathe and we don't let them in; I'd do it myself if I were in their place and saw a rich and pleasant country lying ready for the taking. Now do you understand why I've been suspicious all this time? Do you see any relation between the large fleet in the Pacific and this attack on San Francisco? I suspect it was all accomplished through inside work. I think I know just who's responsible for all this. But in the meantime, what are you going to do?"

The engineer's face, in the general's television screen, was distorted with mental anguish. Verne feared the loss of his invention and his life-work more than he feared this invasion; the one could be repelled; the other, once destroyed, could never be replaced.

General Winfield hesitated a moment. Apparently he was convinced. Then his measured, deliberate tones took on a parade-ground quality.

"We must depend upon our aviators to observe and to stop this fleet," he said. "We must destroy every vessel approaching. I will confer immediately with the Secretaries of War and the Navy who are empowered to act in the absence of the President and while Congress is not in session. Otherwise, I take the responsibility myself, and I know Admiral Clark will support me. Unfortunately our own fleet is too far away to be of any use; and besides, it's too small. We must depend upon army bombers and upon navy sea-planes. But unfortunately we have very few in California. We were awaiting the shipment to be made by your Scarab express. The nearest large field is at Kelley Field, Texas. I will telephone there immediately."

"What can I do?" asked Verne.

"You can send those planes in your sphere before we bomb the runway," answered the general.

"Oh, my God! Don't destroy the runway! It's the pride of the nation; the world's greatest engineering feat!"

"I'm afraid we may have to do so! Undoubtedly the enemy has a large number of planes already on the way to attack. This concerted invasion by land, sea, and air is too sudden to admit of any but the most drastic measures. Our planes must fight the invading planes, and they must destroy the enemy fleet. A large assignment!"

"Can you have a regiment at the terminal to unload the Scarab and to repulse any armed force that tries to prevent them from doing so?"

"I can and I will," said the general, once more the man of action. "Colonel Ardsley's regiment can get there in time; I will order every available aviator to report to San Francisco at once. How soon will the sphere arrive?"

Just in Time!

I CAN have the power turned on at once. Let's see—it's ten-thirty now; that's seven-thirty on the coast; expect the sphere by twelve o'clock, Pacific time; and if you hear the word 'Scarab' from the amplifiers, and the ball has not appeared, don't wait for it, for it won't come—it will probably have been mined." Verne almost sobbed, but he was a man of steel and ice when

the occasion required. "I will telephone my assistants on the coast to give you every aid. They know the technical side of the thing."

"Lucky you saw all this," said the general, preparing to ring off. "What are they doing now?"

Verne looked at the screen again. "They are still coming from the tunnel. I don't know how it was ever built without my getting wind of it. This is Babcock's work. . . ."

"What?"

"Never mind! They haven't been discovered as yet! I think they mean to open the ports to the fleet. If we wipe them out, we can still have the advantage. Have we any coast defense guns on the Pacific?"

"Not one," groaned the commander. "Can you send us some?"

"No," said Verne, with a smile of desperation. "But if the sphere ever reaches the coast, have it unloaded and sent back at once. I—I may have an idea."

Ten minutes later, Verne, having telephoned his instructions to his own men, caught up a silent Colt and dashed out to his car. Over the uncongested roads that led out of New York he tore silently at more than a hundred miles an hour. From a distance he could distinguish the vast bulk of his creation, which appeared to rise before him suddenly and blot out everything else.

The Scarab was loaded with battle planes, which could be assembled very quickly, in addition to other freight. The engineer stopped at the power-house and ran in.

"Was anyone here?" he panted to the night engineer.

"Mr. Babcock, sir. He's in the yards right now. Said he had orders to take a look around."

"Listen!" said Verne. "I have telephoned every power-house along the line to put on the juice. Now you do the same. I'm going out to the yards to start the Scarab; and—if I don't come back, and she doesn't start, come for my body and start her yourself! Understand?"

"But—but—"

"But—but—"

Verne did not hear him. But he heard the low, deep hum of the dynamos. In the faint moonlight the great sphere threw a black and almost impenetrable shadow.

The engineer advanced into the gloom. Grasping his pistol, he walked toward the starting switch and the sound reproducer. A shadow seemed to detach itself from the gloom and glide away. "Babcock!" shouted Verne.

There was no answer. Perhaps his eyes had deceived him. His breath coming in gasps, he ran at full speed toward the switch, his long legs carrying him with incredible swiftness for a man of his age. As Verne approached the switch the figure of Babcock straightened up. In the younger man's hand glittered a heavy wire cutter which he dropped to snatch up a pistol. "Babcock!" gasped Verne.

"Glad I came here," said the other, endeavoring to conceal his weapon. "I found the ground wires cut, and somebody's been fooling with the sound mechanism."

"You—you—" sputtered his chief.

"Too late!" laughed Babcock, triumphantly, and without a moment's hesitation he raised his right hand and pulled the trigger of his pistol.

There was a faint hiss. Verne felt as though a weight of many tons had struck him in the left shoulder. He spun around and almost fell; then he clutched his own weapon with his right hand, and, turning around again to simulate the contortion of a dying man, he fired from the hip. Without a sound Babcock plunged forward on his face and lay still.

"I wish I could have saved you for something worse, you rat!" muttered Verne, between his teeth.

He attempted to walk to the switch and fell, almost beside it. Supporting himself on his right arm, he raised his head and shouted "Scarab." There was no response. The vast sphere did not move; its band of glittering metal shone in the moonlight as before; the great ball remained, apparently as immovable as Gibraltar.

Verne attempted to call to the man in the powerhouse, but his voice failed him. Beneath his hand he felt the severed strands of the heavy wire Babcock had cut. His left arm was numb. His right hand guided his left hand to the wire; he seized the ends and leaned his entire weight upon his hands, in a desperate attempt to unite the strands. He stretched forth his neck. His dry lips opened. The faintest whisper came through them. "Scarab!"

There was a sudden rush of wind. Verne realized that a vast bulk had disappeared. The moonlight now fell upon him unobstructed. And, lying on the ground, his hands on the two ends of the wire, Verne saw the enormous sphere diminish as quickly as a punctured balloon. From the rails came a clear, ringing sound. "I must hold these ends until she passes the next powerhouse," he gritted, between set teeth.

When the station attendants came to the switch, a few moments later, they found the Scarab vanished; Babcock dead, with a bullet through the heart; and Verne almost unconscious, his cold hands holding together the ends of a severed wire with a grip as stony as that of death.

CHAPTER VI

Thundering Westward!

WATCHERS in lonely districts that night were struck dumb by the apparition of a monstrous, ghostly sphere that hurled itself through the darkness with incredible velocity, with a roaring of wind like that of a tornado. Guards patrolling the runway shrank to one side as a loud, metallic sound came down the magnetic belt. Then, as they sought for the cause of it, a vast body loomed suddenly out of the darkness, and carried them off their feet with the rush of its wind. And they heard the amplifiers droning "Scarab—scarab—scarab." Night mail flyers between New York and Cleveland looked down in amazement at a giant object almost directly beneath them which drew away from them as the hare from the tortoise. One plane, caught in the wash of the whirling sphere, was drawn forward into the vast vacuum with such

speed that the sudden acceleration made the pilot lose consciousness for a moment.

Like the earth in its orbit, whirling on its axis as it advanced, the huge sphere, higher than the tallest skyscrapers, longer than the greatest ocean liners, fled toward its Cleveland terminal. People sitting on porches overlooking the perfectly flat lands of Ohio sensed something like a celestial body streaking across the horizon. Already the rail was humming in Cleveland with the approach of the monster. The noise of the clash of metal on metal traveled ahead fifteen times as fast as the word "Scarab" could be transmitted from one reproducer to another.*

Expectant workmen at the first westbound station strained their eyes eastward. Suddenly, a trifle more than half an hour after the time the Scarab had left New York, the glittering magnetic belt, stretching as far as the horizon, seemed to gather itself and leap upward. A second later it appeared as though the broad track, shining in the moonlight, were being wound around an enormous drum at a terrific speed. Then, as the Scarab drew near, the optical illusion gave way to realization that the rising track was only the magnetic band around the sphere itself. Yet even as the station superintendent and his engineers watched in fascination, the sphere seemed to gather itself and leap toward them. As it whirled past their observation platform, a rousing cheer went up from the little group of watchers. A great upward rush of wind almost swept them from their places; then the inward draft almost pulled them off their perch. Before they recovered themselves, the enormous ball had become a mere round dot in the west, which diminished rapidly and faded from sight.

Two minutes later the Cleveland engineer spoke to the wounded Verne as they stood face to face across the television. "The Scarab has just passed through here," he reported, "and from the way she was going, you could shut off the juice and she'd broad-jump to Frisco!"

Verne managed to smile. "Examine the runway and report to me," he said. "I want to know how it stood the strain." In spite of the fact that he had gone over every inch of the magnetic belt with his own eyes, Verne had his doubts concerning the strength of the roadbed. A weight of thousands of tons concentrated even for a fraction of a second into one small area might cause a decided bend. But nothing of the sort occurred. Certainly his construction of the transcontinental line was the greatest engineering feat of all time.

Even as the sphere raced toward Chicago, Colonel Ardsley's regiment was racing toward the city of the Golden Gate. Already two observation planes had started westward across the Pacific to ascertain the actions of the approaching fleet. At the general's personal order, every airport was to be under the command of an aviation officer; every plane was commandeered and equipped for battle. By this swift stroke the conspirators lost the use of the planes they had prepared for the attack; and they themselves pro-

* Sound travels fifteen times faster in steel than it does in air.

vided the machines which would be used against their own fleet.

"Scarab—Scarab—Scarab" intoned the reproducers. Verne, lying with closed eyes, was following every mile covered by his hurtling giant. It was a hundred miles less from Cleveland to Chicago than from New York to Cleveland; he would receive his report sooner. He had eight minutes less to wait.

The test would come at Lake Michigan. Would the immense dikes withstand the terrific vibration? Would the waters of the inland ocean close over the gap created by impious man? In his tortured, fever-drawn fancy Verne could already hear those waters rumbling over his heart and brain. Would the dike be mined? Babcock! Why hadn't he had him watched sooner?

Then came the comforting thought that, no matter how much of a renegade Babcock might have been, he was too good an engineer to destroy a great work of engineering. But his accomplices might have done it. . . .

Nearing the Coast!

VERNE started at his television screen with unseeing eyes. Across the flickering sheet marched no armed men; he saw only a glittering mass of metal, like a ball from some fantastic cannon, shooting across the northern sections of Ohio and Indiana. Every five seconds it approached a mile nearer that fatal thirty-mile cut through Lake Michigan. . . .

The little group of white-faced men in Verne's room felt the swelling of a magnificent pride in their achievement. No matter what might happen at the end of the trip, they had shown the world what American engineering genius could do.

"I wish we'd have let these damned Orientals in," said Hardy, earnestly, if ungrammatically, as he mopped his brow. "If they do anything to my Scarab I'll—I'll tear them apart, one by one, with my bare hands!"

"I hope it runs them over!" exclaimed a newspaper man, to whom the invasion was still a joke. "Did you say they were marching down the runway?"

"Shut up!" snapped Hardy. "Can't you leave a sick man in peace?"

The telephone whirred. "Well?" said Verne.

A jubilant face appeared in the screen. "Somebody said 'Scarab' and there she was! Congratulations! Chicago has had the biggest thrill of its checkered career!"

"The dikes—did they hold?"

"They haven't changed any since yesterday," reported the western engineer. "All I want to say is that the Windy City has become twice as windy since she went through. What a breeze!"

"Gentlemen," said Verne, "it's 1855 miles from Chicago to San Francisco as the crow flies. That means we'll see the Scarab arrive"—he waved his hand at his private television screen—"in two hours and a quarter, or a trifle more. If we don't heaven help us all!"

If it was a terrific strain to the others, it was absolute torture, mental and physical, for Verne. "Illinois, Iowa, Nebraska, Colorado, Utah, Nevada—California!" he repeated. "I won't live till she crosses all that territory!" His shoulder was throbbing fearfully. A

lesser man might have forgotten everything else in the agony of a shattered shoulder blade. Verne was one of those granite, thinking machines who go down in history as the men who snatch victory from defeat.

Over the flower-dotted prairies, crossed first by the ox-cart, then the pony express, then the railroad, then the airplane, past populous towns that had had their beginnings in the days of the first white settlers, through vast level stretches of territory still undeveloped, roared the glittering, globed expression of man's genius. Through the grain center of the nation, westward to the cattle and mining states, onward, onward, to the coast! It is difficult, now that Scarab transportation has become part of everyday life, to describe adequately that first epochal trip!

Under the star-studded sky, gleaming pale in the moonlight, cutting a coruscating path across a dark continent, like a comet across the black heavens, flew a senseless mass of metal that had been set off on its journey by a word and a touch. As though it were repeating its own name in a frenzy of speed, shouting it aloud in its victory, it seemed to shriek "Scarab—Scarab—Scarab!" as it plunged onward. An observer from another planet, able to keep pace with this meteoric monster, might have imagined it was fleeing from a word which followed it like a shadow, or was attempting to overtake a mocking, murmuring phantom which fled before it.

CHAPTER VII

The Great Massacre!

AND then the incredible happened. Looking back on it, sober historians have attributed to destiny what no man would have dreamt of doing.

Twenty miles out of San Francisco, the regiments of invaders, marching securely along in the runway, became suddenly aware of a ringing in their ears and a quivering beneath their feet. Trained officers thought of another California earthquake; marching men assumed the tramp of their own feet was shaking the roadbed. The Commander-in-Chief, secure in his pneumatic-tired car, heard and felt nothing. His mind was on the first attack. With the dawn the gas would come down from the mountains; the airplanes would fly down from Canada and up from Lower California; the ostensibly private machines in the coastal states would terrify their own cities. . . .

He got no farther. A wild scream of fear cut short his train of thought. Looking back, he saw his trained soldiers attempting to scatter to the sides of the runway, abandoning field pieces, trucks, and equipment. Some sank down in their tracks and called upon their gods. Some remained frozen in their tracks, staring with eyes starting from their heads above and before them. Some turned and ran, wildly, anywhere, gibbering like madmen. The commander endeavored to look from the window of his car. His chauffeur leaped out and scurried for the side of the cut. And then—

"Scarab, Scarab, Scarab!" A voice rose, triumphant, exulting. But the commander never heard it. The last sound he heard on earth was the horrible crunching of his automobile as a tremendous weight descended

upon it, and passed, leaving it a heap of dust, and him a broken mass.

Like a wall rising before the eyes of the invaders, like the spirit of the outraged nation, a vast bulk had loomed suddenly out of the darkness and towered above the army for a frightful second. Inexorable as the Kismet of the Mohammedans, more frightful than the fabled dragons of the Chinese, a million times more terrible than the Juggernaut of the Ganges, thousands upon thousands of tons of metal, rushing and whirling at deadly speed, descended upon a mass of helpless men. More monstrous than any weapon they could conceive of, this messenger of peace crushed the life from a thousand men at every revolution. Bodies smeared over its polished exterior were flung high into the air by the terrific surface speed. Like the feet of the wine maidens who crush the grapes for their delicious blood, the metal monster swished through an ocean of spouting gore that daubed its glittering sides and shot away in every direction, like the foam of a breaking wave. Men, trucks, field guns were demolished, crushed, pulverized, like flies, like bits of wood and tin, like the shapes in a nightmare that vanish in some incredible fashion.

The horror of it all lay in the terrible swiftness with which this wholesale slaughter was brought about. In five seconds the onrushing Nemesis had wiped out an army, leaving a handful of raving maniacs who had witnessed the destruction. Then, to the accompaniment of its fiendishly shrilling "Scarab—Scarab—Scarab!" that smote upon their ears like the diabolical laugh of their own evil spirits, the great insensate sphere shot away and diminished in the distance, exactly as though nothing had happened.

Less than ten minutes later Verne and his associates saw the empty terminal fill with panting, sweating soldiers in the uniform of the United States. Colonel Ardsley's regiment had, fortunately for itself, arrived too late to follow the invaders. In another moment a loud, grating, clashing noise, as of metal on metal, came from the screen. Then the vast bulk of the Scarab filled the terminal, blotting out everything else from view, and, with a harsh shriek, came to rest as the power was reversed.

"I would think the momentum would carry it right into the Pacific!" said the newspaper man.

"That's because you don't know anything of electro-mechanics," said Hardy, loftily. Then he looked more closely at the screen. A group of men was approaching the sphere: mechanics, who knew how to open it for unloading. And then he suddenly stiffened and stared.

"My God!" he shouted, "it's covered with blood! Look!"

Even in the half-tone effect presented on the screen great scarlet stains were visible. It was as though the Scarab had run through a great pond of dark-colored water, which had clung to its surface and was running down in little rivulets. But this was no water.

"It is blood!" exclaimed the reporter. "What did I say about running over an army? And there's a hand mashed on it, like a fly on a wall—there's something that looks like a piece of uniform! Verne! Your Scarab has wiped out any number of them! The fools!

They marched in the runway!" And he burst into hysterical laughter.

Hardy and the others turned to Verne, to felicitate him on the first great run of the Scarab. But Verne had fainted! He had seen the arrival of his sphere, and the shock of the great wave of gladness that had swept over him had reduced him to unconsciousness.

America Triumphant!

HOW the invasion was put down in an amazingly short time is common knowledge. The two observation planes sent out at night had sighted the fleet just after dawn. One had been brought down at once by anti-aircraft fire; the other radioed the news just before it was struck. From the aircraft carriers of the fleet rose a flock of battle planes, which headed east. But they were no match for the vast squadrons that came to meet them. Every plane in the Scarab was manned by a pilot and gunner, some of whom had been sent all the way from Texas, others of whom had flown in mail planes from the east. Every armed airplane prepared by the invaders was turned to excellent use. When the attacking planes fled back to their carriers, they were pursued by fighters and bombers, who mixed with them in innumerable dog fights to keep the ships from using their anti-aircraft guns. Then, one by one, the expert bombers of the American forces disabled the swift destroyers, which dodged and twisted beneath them; blew away the superstructures of the great fighting ships and dropped depth charges near the submarines that accounted for many of them.

The factories designed by the enemy to manufacture poison gases began to pour forth vapors of greenish, floating poison at dawn, as they had arranged. Little towns nearby were decimated; the gases floated down over the valleys and wiped out all life as they settled. But in two hours the student flyers of the California flying schools, volunteering in the absence of the regular pilots, swooped over the plants and joyously blew them to pieces.

With the destruction of the main column which had advanced down the runway, the internal conspiracy collapsed as the tentacles of an octopus relax when the head has been severed. Not receiving the co-operation they awaited, and still ignorant of what had happened, the owners of the private planes tried frantically to get in touch with Babcock. But Babcock was beyond all calling. When, finally, they determined to get their planes and join the attacking squadrons from Canada and Mexico, they found their machines had been commandeered. Martial law in California made the slightest suspicious movement unwise; their numbers were not great enough to risk a concerted attack upon the regiments which guarded the airports; moreover, their leaders themselves had experienced a sudden loss of morale.

The most serious problem that faced the nation, therefore, was that of the planes in Canada and Mexico. Whatever other uprisings might take place could be put down by the state militia forces. Already the secret service, acting on the telephone calls made to Babcock, had tracked down the remaining leaders of the conspiracy. The United States, it seemed, was not so

(Continued on page 76)

The Incredible Monstrosity

(Continued from page 37)

weak or so defenseless as the invaders had imagined; or else they themselves, trusting to events which had never transpired, and placing faith in men who were among the missing at the critical moment, had been entirely too confident of their own ability.

With radio communication from the fleet coming in fragmentary messages, the pilots waiting to bomb the cities to the north and south hesitated—too long for their own safety. Anti-aircraft guns were established at strategic points along the borders. Those planes and pilots that managed to return from the hard-fought battle with the fleet were more than enough to defend against an attack by air.

And across the continent, now from west to east, to the accompaniment of its ceaseless "Scarab—Scarab—Scarab" rushed a blood-stained engine of destruction, no longer an agent of commerce but a weapon of warfare upon which centered the hopes of a nation. Pilots thinking to bomb the great target could not reckon with its speed; when their cordite struck, it tore up parts of the runway, but the Scarab flew on, apparently unharmed, like a messenger of destiny.

Of course, the war, or what might have been a war, was not over in a day. It is not the intention of this

chronicle to recount the final steps in the conclusion of hostilities, or to dwell upon the destruction of the only remaining menace—the invading planes. A new America emerged from the conflict. Every schoolboy knows to-day how friendly are our relations with the Orient; how greatly we are respected by the rest of the world.

And the Scarab Transportation Company, started first as a selfish commercial venture, has come down in history as one of the chief causes for the sudden cessation of hostilities. Today there is scarab transportation in every important nation of the world; and those who are carrying on the work of Verne are at this moment cutting a level runway across the vast level plains of Russia.

Undoubtedly the greatest engineering feat of all time, the construction of the first scarab runway still remains as a marvel. But, as Verne remarked to Hardy, after the return of the Scarab: "It's funny! The whole country was waiting to see her run through on her first trip, and she went at night with not a soul to send her off but a wounded man. And the first reception committee wasn't so pleased to see her at that! Wonder how *you'd* feel with a quarter of a mile of murder dropping on you from the clouds!"

THE END.