

CHAPTER FOUR

TO CONQUER ANOTHER WORLD

It is not necessary for me to describe the manner in which Mr. Edison performed his tremendous task. He was as good as his word, and within six months from the first stroke of the hammer, a hundred electrical ships, each provided with a full battery of disintegrators, were floating in the air above the harbor and the partially rebuilt city of New York.

It was a wonderful scene. The polished sides of the huge floating cars sparkled in the sunlight, and, as they slowly rose and fell, and swung this way and that, upon the tides of the air, as if held by invisible cables, the brilliant pennons streaming from their peaks waved up and down like the wings of an assemblage of gigantic humming birds.

Not knowing whether the atmosphere of Mars would prove suitable to be breathed by inhabitants of the earth, Mr. Edison had made provision, by means of an abundance of glass-protected openings, to permit the inmates of the electrical ships to survey their surroundings without quitting the interior. It was possible by properly selecting the rate of undulation, to pass the vibratory impulse from the disintegrators through the glass windows of a car without damage to the glass itself. The windows were so arranged that the disintegrators could sweep around

the car on all sides, and could also be directed above or below, as necessity might dictate.

To overcome the destructive forces employed by the Martians no satisfactory plan had yet been devised, because there was no means to experiment with them. The production of those forces was still the secret of our enemies. But Mr. Edison had no doubt that if we could not resist their efforts we might at least be able to avoid them by the rapidity of our motions. As he pointed out, the war machines which the Martians had employed in their invasion of the earth, were really very awkward and unmanageable affairs. Mr. Edison's electrical ships, on the other hand, were marvels of speed and of manageability. They could dart about, turn, reverse their course, rise, fall, with the quickness and ease of a fish in the water. Mr. Edison calculated that even if mysterious bolts should fall upon our ships we could diminish their power to cause injury by our rapid evolutions.

We might be deceived in our expectations, and might have overestimated our powers, but at any rate we must take our chances and try.

A multitude, exceeding even that which had assembled during the great congress in Washington, now thronged New York and its neighborhood to witness the mustering and the departure of the ships bound for Mars. Nothing further had been heard of the mysterious phenomenon reported from the observatories six months before, and which at the time was believed to indicate the departure of another expedition from Mars for

the invasion of the earth. If the Martians had set out to attack us they had evidently gone astray; or, perhaps, it was some other world that they were aiming at this time.

The expedition had, of course, profoundly stirred the interest of the scientific world, and representatives of every branch of science, from all the civilized nations, urged their claims to places in the ships.

Mr. Edison was compelled, from lack of room, to refuse transportation to more than one in a thousand of those who now, on the plea that they might be able to bring back something of advantage to science, wished to embark for Mars.

On the model of the celebrated corps of literary and scientific men which Napoleon carried with him in his invasion of Egypt, Mr. Edison selected a company of the foremost astronomers, archaeologists, anthropologists, botanists, bacteriologists, chemists, physicists, mathematicians, mechanics, meteorologists and experts in mining, metallurgy and every other branch of practical science, as well as artists and photographers. It was but reasonable to believe that in another world, and a world so much older than the earth as Mars was, these men would be able to gather materials in comparison with which the discoveries made among the ruins of ancient empires in Egypt and Babylonia would be insignificant indeed.

It was a wonderful undertaking and a strange spectacle. There was a feeling of uncertainty which awed the vast multitude whose eyes were

upturned to the ships. The expedition was not large, considering the gigantic character of the undertaking. Each of the electrical ships carried about twenty men, together with an abundant supply of compressed provisions, compressed air, scientific apparatus and so on. In all, there were about 2,000 men, who were going to conquer, if they could, another world!

But though few in numbers, they represented the flower of the earth, the culmination of the genius of the planet. The greatest leaders in science, both theoretical and practical, were there. It was the evolution of the earth against the evolution of Mars. It was a planet in the hey-day of its strength matched against an aged and decrepit world which, nevertheless, in consequence of its long ages of existence, had acquired an experience which made it a most dangerous foe. On both sides there was desperation. The earth was desperate because it foresaw destruction unless it could first destroy its enemy. Mars was desperate because nature was gradually depriving it of the means of supporting life, and its teeming population was compelled to swarm like the inmates of an overcrowded hive of bees, and find new homes elsewhere. In this respect the situation on Mars, as we were well aware, resembled what had already been known upon the earth, where the older nations overflowing with population had sought new lands in which to settle, and for that purpose had driven out the native inhabitants, whenever those natives had proven unable to resist the invasion.

No man could foresee the issue of what we were about to undertake, but

the tremendous powers which the disintegrators had exhibited and the marvelous efficiency of the electrical ships bred almost universal confidence that we should be successful.

The car in which Mr. Edison travelled was, of course, the flagship of the squadron, and I had the good fortune to be included among its inmates. Here, besides several leading men of science from our own country, were Lord Kelvin, Lord Rayleigh, Professor Roentgen, Dr. Moissan--the man who first made artificial diamonds--and several others whose fame had encircled the world. Each of these men cherished hopes of wonderful discoveries, along his line of investigation, to be made in Mars.

An elaborate system of signals had, of course, to be devised for the control of the squadron. These signals consisted of brilliant electric lights displayed at night and so controlled that by their means long sentences and directions could be easily and quickly transmitted.

The day signals consisted partly of brightly colored pennons and flags, which were to serve only when, shadowed by clouds or other obstructions, the full sunlight could not fall upon the ship. This could naturally only occur near the surface of the earth or of another planet.

Once out of the shadow of the earth we should have no more clouds and no more night until we arrived at Mars. In open space the sun would be continually shining. It would be perpetual day for us, except as, by

artificial means, we furnished ourselves with darkness for the purpose of promoting sleep. In this region of perpetual day, then, the signals were also to be transmitted by flashes of light from mirrors reflecting the rays of the sun.

Yet this perpetual day would be also, in one sense, a perpetual night. There would be no more blue sky for us, because without an atmosphere the sunlight could not be diffused. Objects would be illuminated only on the side toward the sun. Anything that screened off the direct rays of sunlight would produce absolute darkness behind it. There would be no graduation of shadow. The sky would be as black as ink on all sides.

While it was the intention to remain as much as possible within the cars, yet since it was probable that necessity would arise for occasionally quitting the interior of the electrical ships, Mr. Edison had provided for this emergency by inventing an air-tight dress constructed somewhat after the manner of a diver's suit, but of much lighter material. Each ship was provided with several of these suits, by wearing which one could venture outside the ship even when it was beyond the atmosphere of the earth.

Provision had been made to meet the terrific cold which we knew would be encountered the moment we had passed beyond the atmosphere--that awful absolute zero which men had measured by anticipation, but never yet experienced--by a simple system of producing within the air-tight suits a temperature sufficiently elevated to counteract the effects of the

frigidity without. By means of long, flexible tubes, air could be continually supplied to the wearers of the suits, and by an ingenious contrivance a store of compressed air sufficient to last for several hours was provided for each suit, so that in case of necessity the wearer could throw off the tubes connecting him with the air tanks in the car. Another object which had been kept in view in the preparation of these suits was the possible exploration of an airless planet, such as the moon.

The necessity of some contrivance by means of which we should be enabled to converse with one another while outside the cars in open space, or when in an airless world, like the moon, where there would be no medium by which the waves of sound could be conveyed as they are in the atmosphere of the earth, had been foreseen by our great inventor, and he had not found it difficult to contrive suitable devices for meeting the emergency.

Inside the headpiece of each of the electrical suits was the mouthpiece of a telephone. This was connected to a wire which, when not in use, could be conveniently coiled upon the arm of the wearer. Near the ears, similarly connected with wires, were telephonic receivers.

When two persons wearing the air-tight dresses wished to converse with one another it was only necessary for them to connect themselves by the wires, and conversation could then be easily carried on.

Careful calculations of the precise distance of Mars from the earth at the time when the expedition was to start had been made by a large number of experts in mathematical astronomy. But it was not Mr. Edison's intention to go direct to Mars. With the exception of the first electrical ship, which he had completed, none had yet been tried in a long voyage. It was desirable that the qualities of each of the ships should first be carefully tested, and for this reason the leader of the expedition determined that the moon should be the first port of space at which the squadron would call.

It chanced that the moon was so situated at this time as to be nearly in a line between the earth and Mars, which latter was in opposition to the sun, and consequently as favorably situated as possible for the purposes of the voyage. What would be, then, for 99 out of the 100 ships of the squadron, a trial trip would at the same time be a step of a quarter of a million of miles gained in the direction of our journey, and so no time would be wasted.

The departure from the earth was arranged to occur precisely at midnight. The moon near the full was hanging high over head, and a marvelous spectacle was presented to the eyes of those below as the great squadron of floating ships, with their insignia lights ablaze, cast loose and began slowly to move away on their adventurous and unprecedented expedition into the great unknown. A tremendous cheer, billowing up from the throats of millions of excited men and women, seemed to rend the curtain of the night, and made the airships tremble

with the atmospheric vibrations that were set in motion.

Instantly magnificent fireworks were displayed in honor of our departure. Rockets by hundreds of thousands shot heaven-ward, and then burst in constellations of firey drops. The sudden illumination thus produced, overspreading hundreds of square miles of the surface of the earth with a light almost like that of day, must certainly have been visible to the inhabitants of Mars, if they were watching us at the time. They might, or might not, correctly interpret its significance; but, at any rate, we did not care. We were off, and were confident that we could meet our enemy on his own ground before he could attack us again.

And now, as we slowly rose higher, a marvelous scene was disclosed. At first the earth beneath us, buried as it was in night, resembled the hollow of a vast cup of ebony blackness, in the center of which, like the molten lava run together at the bottom of a volcanic crater, shone the light of the illuminations around New York. But when we got beyond the atmosphere, and the earth still continued to recede below us, its aspect changed. The cup-shaped appearance was gone, and it began to round out beneath our eyes in the form of a vast globe--an enormous ball mysteriously suspended under us, glimmering over most of its surface, with the faint illumination of the moon, and showing toward its eastern edge the oncoming light of the rising sun.

When we were still further away, having slightly varied our course so

that the sun was once more entirely hidden behind the center of the earth, we saw its atmosphere completely illuminated, all around it, with prismatic lights, like a gigantic rainbow in the form of a ring.

Another shift in our course rapidly carried us out of the shadow of the earth and into that all pervading sunshine. Then the great planet beneath us hung unspeakable in its beauty. The outlines of several of the continents were clearly discernible on its surface, streaked and spotted with delicate shades of varying color, and the sunlight flashed and glowed in long lanes across the convex surface of the oceans. Parallel with the Equator and along the regions of the ever blowing trade winds, were vast belts of clouds, gorgeous with crimson and purple as the sunlight fell upon them. Immense expanses of snow and ice lay like a glittering garment upon both land and sea around the North Pole.

As we gazed upon this magnificent spectacle, our hearts bounded within us. This was our earth--this was the planet we were going to defend--our home in the trackless wilderness of space. And it seemed to us indeed a home for which we might gladly expend our last breath. A new determination to conquer or die sprang up in our hearts, and I saw Lord Kelvin, after gazing at the beautiful scene which the earth presented through his eyeglass, turn about and peer in the direction in which we knew that Mars lay, with a sudden frown that caused the glass to lose its grip and fall dangling from its string upon his breast. Even Mr. Edison seemed moved.

"I am glad I thought of the disintegrator," he said. "I shouldn't like to see that world down there laid waste again."

"And it won't be," said Professor Sylvanus P. Thompson, gripping the handle of an electric machine, "not if we can help it."