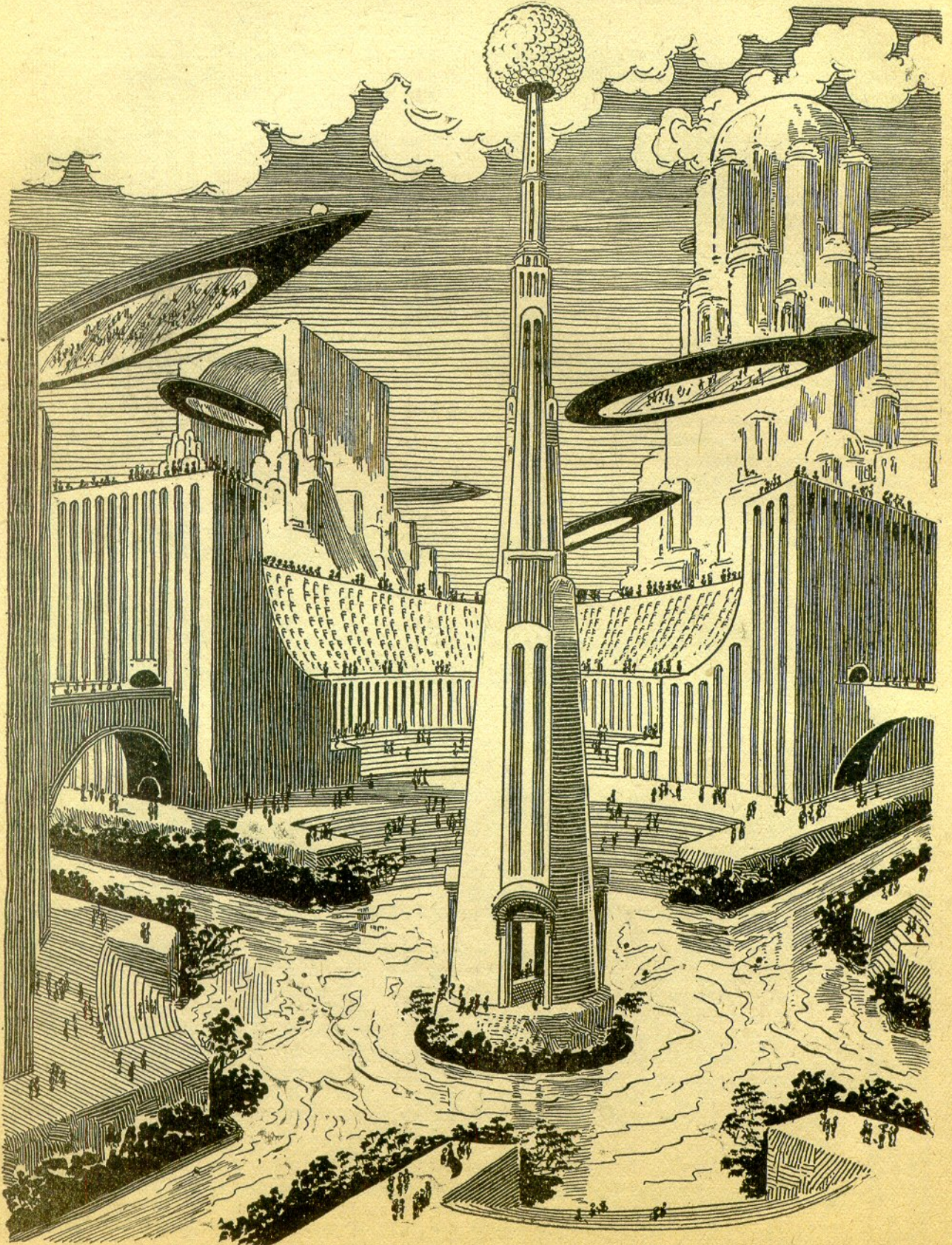


The INFINITE VISION

By Charles C. Winn



They were looking down upon great buildings a thousand feet in height, above which swarms of enormous airships darted gracefully through the air. And the decks were covered with tiny figures!



TELL you, gentlemen, this is a pretty pass of affairs. Here all the other branches of science are open to practically an unlimited development, while Astronomy is nearly strapped because of one thing—that we have apparently reached the limit of development of the telescope, as evidenced by these plates here. Something must be done. Can't any of you suggest anything?" and the speaker paused and glared around the table.

It was a meeting of the *International Astronomical Society*, gathered to discuss the results of the trial of the giant forty foot mercury reflector telescope which had recently been completed in the great Holton Observatory, situated high up among the South American Andes.

Evidently the results had been none too satisfactory, as evidenced by the grave and thoughtful expressions of the company. Holton, the chairman, with his none too good ordinary humor, was fast working up to a literal tirade of rage.

"Possibly zee mercury reflector might be satisfactorily eemproved," mildly suggested Flambeau, the noted Frenchman, in response to Holton's heated demand.

That individual gave a snort of disgust, and his wiry red hair fairly bristled, as he spat out his withering reply.

"What, that d—— thing! Why that thing is perfected as far as it lies within the power of mortal man to do it. But look at this plate—magnified enough, but as far as detail goes——! Looks like a striped pancake to me. Vibrationless action, H——! You can't entirely eliminate vibration in any machine. And look what microscopic ripples did in this case. Yes, I'd like to see you do anything with that crazy thing. And if you are fools enough to try it, after spending a million dollars with these results, why I absolutely refuse to have anything to do with it. I quit."

An uneasy silence followed this outburst. Not a man was present but who realized that, in spite of his eccentricities, Henry F. Holton was the greatest astronomical authority of the day. Consequently, no one had the temerity to oppose his views.

All through this stormy session, a tall dark man of about thirty-five sat patiently listening to the discourse. Glenn Faxworthy was, in all probability, the greatest scientific genius present at the meeting that day. Not only was he proficient in Astronomy, but to an even greater degree in Physics and Chemistry. He had disclosed some remarkable things in his day, this quiet forceful man. Curiously enough, however, he had chosen to keep them to himself, biding the day when their revelation might be doubly effective.

Finally when the tenseness of the silence was becoming acute, he arose and addressed the meeting.

"Gentlemen," he said, "put a million dollars avail-

able at my hands and I will build you a telescope which will reveal the molecules of the rocks of the moon."

THE PREPARATION

A COLD moon was rising over the snow-capped summits of the Andes Range. Upon one of the highest peaks stood the gigantic Holton Observatory, situated in the most favorable location of the world for making observations.

On the steps of the huge concrete building two men stood in earnest conversation. One of them was short and red-haired, with bright blue eyes that snapped belligerently behind thick horn-rimmed spectacles. His companion, tall and dark, had about him an indefinable atmosphere of quiet force and dignity.

For ten years these men had been engaged in intensive labor, the one preparing the huge structure for the reception of the delicate apparatus which his companion was laboring to perfect in a great laboratory far off in the States.

Six months ago he had arrived with it. From that time, with the assistance of a small crew of men, they had worked almost night and day installing it. Only that day had they made the final adjustments which rendered it capable of the mighty function it was to perform.

For some moments the two stood, silently regarding the great looming bulk which contained all their hopes. Then the tall dark man, raising his eyes, glanced at a great red star, which shone threateningly, unblinkingly in the zenith. He spoke shortly to his companion, and together the two entered the structure.

Two hours later they emerged, their faces transfigured with the light of great revelation. What they saw that night only ten others have seen, from that day until this.

* * *

Twenty-four hours later the same men entered the building again. This time, however, they were accompanied by ten others, the greatest scientists of three continents. Harlton, the English physicist, was there; Coron, the American chemist; Flambeau, the Frenchman, together with the heads of the four greatest observ-

atories of the world, and others.

In the center of the room to which they were conducted, stood the massive mercury reflector, the subject of the torrid discussion of ten years before. But now it was strangely altered. No longer was it set immovably upon giant pivots, pointing unalterably, to a single spot in the heavens. Now it was fitted into a ponderous equatorial mounting as delicately balanced as a precious chronometer. And its shining surface no longer needed rapid rotation to maintain its perfect parabolical form. The liquid

AT THE opposite extremes of the investigations of scientists are the studies of the electron and nucleus and quantum which have crowned such scientists as Milligan and Bohr and Rutherford with reputations which will never die. But on the other end of things we are surrounded by the Stellar Universe where miles are too small to be taken into account, and where the light-year, which is an inconceivable number of miles for the ordinary mind, is the unit of distance, and into this great Stellar Universe the observers of the "International Astronomical Society" are striving to penetrate with their gigantic telescope mounted on the great observatory on the summit of the Andes Mountains. What did they see? What secrets were revealed to them? We have no more to say. Read the story.

metal was now set as rigid as steel. The master hand of the physicist had given it eternal solidity.

The party gazed in silence and wonder for a moment at the colossal creation of the human mind, and then turned and followed their guides up a long flight of stairs to a large room under the center of the huge dome.

It was a marvelous room, filled with an intricate complication of ingenious apparatus. Upon one side was banked series after series of vacuum tubes, mounted upon long panels of shining bakelite. Another wall was completely hidden by a huge switch-board, studded with a seemingly endless array of switches, control knobs, rheostats and levers.

In the center of the floor was mounted a shining silver screen about six feet square. Looking down upon it, the men could see the reflection of a strange piece of apparatus pointing directly down upon it, from the ceiling above.

For some moments the party stood gazing in mute wonderment at their surroundings. Then Faxworthy, as you may have guessed the identity of the tall dark man, spoke to them in his quiet level voice.

THE TELESCOPE

“GENTLEMEN,” he said, “here before you lies the results of ten years of intensive labor by Mr. Holton and myself—the product of the million dollars with which you so kindly provided me. Whether you have received an ample return on your investment, only you can judge to-night. However, I do not expect you to be disappointed.”

Then walking over to the board, he threw one of the switches. Instantly the low hum of an electric motor was heard from below.

“The power comes from a good-sized hydro-electric plant down on the other side of the mountain,” he explained. “It was Holton’s idea. And,” he added, smiling gently, “Holton was an invaluable factor in the construction of the mounting for the reflector and other requisite auxiliary apparatus. If we are successful tonight, he shares all honors.”

Then, turning to the board again, he moved a lever which brought the aperture of the huge dome around to the east. Another switch, and upon the very apex of the dome, mounted upon a small steel tower, a weird piece of apparatus, much resembling a huge X-ray tube sprang into life, unseen to the watchers below. Then, guided by the master hand, it swung upward until it pointed full upon the rising moon.

Faxworthy spoke again. “Gentlemen, I now have the reflector in the room below trained upon the moon. Watch the screen closely.”

He threw another switch. A low hum came from above, which speedily grew in pitch to a piercing whine, which soon became inaudible to the listeners below.

He turned a control knob, and two of the vacuum tubes lighted up. Simultaneously a strange beam of luminescence shot downward from the apparatus above.

Gazing down upon the screen the men saw an object that riveted their immediate attention. There, as though floating upon the silvery depths, was a beautifully detailed image of the moon.

Rapturously the group looked upon it. Then Faxworthy, with a dexterous twist of his wrist,

snapped two more of the tubes into the circuit. The first image faded away, and was replaced by one, filling the entire screen. Then, as bulb after bulb flashed in, the screen showed only portions of the golden surface, and the image grew more and more detailed. Now only one great mountain was visible to the watchers; now only a portion of that mountain; now only a half dozen rocks upon its surface, and finally the surface of one rock.

Then the scientist, with an admonition to his companions, threw in a switch which brought the last bank of tubes simultaneously into light.

The former vision faded away, and in its place appeared a whirling mass of transparent spheres, visible only by the opalescent light reflected from their surfaces.

MOON’S MOLECULES

“GENTLEMEN,” said Faxworthy, his usually quiet voice trembling slightly with emotion, “here you see the quartz molecules of one of the rocks on the surface of our satellite. I can only hope that the sight will repay you for the money, which you so kindly provided.”

A subdued murmur of approbation was the only reply he received from the enchanted group of scientists, as they rapturously watched the fitting shapes before them.

For some moments they stood, struck with the wonder of it. Then Faxworthy abruptly pulled open the switches, and the image faded from the screen.

“Perhaps you would like a brief explanation of the apparatus, before we engage in the final test of the evening,” he suggested, at the same time glancing at his watch.

There was a general nodding of heads in assent and he began. “As you probably know, I have been engaged in research work in Physics and Chemistry, from the age of twenty. During that time I have made some discoveries on these subjects, certain of which have proven very useful in this present undertaking. Up to this time I have revealed their nature to no one except Holton, who has been completely in my confidence. If you will excuse me, gentlemen, I will soon be back with you.” And he disappeared up a ladder, leading to a room higher up in the center of the dome.

In a moment he returned, holding something tightly clasped in his hand. Opening it, he disclosed a small flat tube, filled with a reddish viscid liquid, in the extremities of which were sealed several fine platinum wires.

“This tube, gentlemen,” explained the scientist, “is the very heart of the apparatus you see about you. Without it, all would be entirely useless. It contains a quantity of a previously unknown element, which I call Lucium. It took me and my laboratory assistants twenty years to isolate the amount of Lucium you see in the tube.

“The essential fact is that this element has the same properties as selenium, only in a million times more sensitive a degree. In absolute darkness it is an absolute non-conductor of electricity, but let the tiniest ray of light strike it—though that ray came across the universe—the substance immediately becomes proportionately conductive. Within the light-proof room above, the light from the mercury reflector comes to a focus upon this tube. I shall not

attempt to explain the process by which the electrical impressions are generated, amplified, translated again into light, and finally projected to the screen below. It is far too intricate, and would require hours to explain satisfactorily. Due to the lack of time, neither shall I relate the circumstances of the discovery of this element further than to tell you that I was curious as to the cause of a bright violet line, which occasionally flashed into the spectrum of a rare ore that I was analyzing."

OBSERVING MARS

THEN drawing his watch from his pocket, he continued impressively: "In twenty-five minutes, the planet Mars will have reached its closest possible approach to the Earth. Then we shall learn her secret. If you will pardon me a moment, I will return the lucium to its proper place."

He was soon back, and even as he returned, the sound of distant thunder became plainly audible in the clear mountain air.

"One of the summer thunder storms common among these mountains is coming up," he explained simply. "I will adjust the reflector now, lest it give us trouble when it arrives."

"But, Monsieur, it will spoil the observation! Even when it recedes, zee air currents will be atrocious!" cried Flambeau in the first words he had spoken that night.

Faxworthy made no verbal reply, but motioned them out upon a small balcony on the east wall of the structure. He pointed his finger to the moon, which was being slowly obscured. Following his motion, the others gazed in the same direction. What they saw was a ghostly cylinder of faint luminescence issuing from the small tower on the roof, and reaching outward into space as far as the eye could see!

"The dispelling ray," briefly explained their guide. "The ether waves of the fortieth octave which have the property of expelling all matter from their path. The range of this ray in the atmosphere is about six hundred miles, and as long as the telescope aligns in its path, it effectually eliminates all interference from atmospheric or meteorologic conditions."

The wondering silence that followed was broken only by a stifled "Mon Dieu!" from Flambeau. That one man could have produced so many wonders seemed almost incredible to the group of distinguished scientists.

The silence was not broken, even as their guide led them back to the control room. Swiftly he brought the colossal telescope to the zenith, where the great red star still steadily gleamed. Synchronically the unearthly band of light on the dome swung upward until it came to rest in the same direction.

Again the first two vacuum tubes flashed into light; again that strange beam of luminescence shot down from the ceiling, and there came into being upon the screen the image of a great red star, magnified to the diameter of a baseball. Two more of the tubes, and the image doubled in size. Now a complicated network of delicate lines could be discerned upon its dull crimson surface.

Two at a time, the vacuum tubes were switched into the circuit, and ever the image increased in size and detail. Soon it covered the entire screen. Now only sections of the surface were visible, and

slowly the sections grew less in extent, as they grew plainer and plainer in detail. Now the view was from the apparent distance of a million miles, now a thousand, now five hundred.

And slowly the delicate lines had grown in breadth, until only two of them, now broad ochre bands two feet wide, intersected in the middle of the screen, in the form of a large circular spot. The center of this spot was thickly strewn with small black dots, which glistened sharply as they reflected the sun's rays.

MARS AT 10,000 FEET

THEN without warning, Faxworthy snapped on all but two of the remaining tubes in the bank. Instantly the image on the screen faded into obscurity, and in its place appeared a wondrous scene. There, as though from a ten thousand foot bird's-eye view, stretched a great city.

They were looking down upon great buildings a thousand feet in height, above which swarms of enormous airships darted gracefully through the air. And the decks were covered with tiny figures!

The last two bulbs flashed into life, and the view came to the apparent distance of fifty feet. *The tiny figures were men.* Perfect men of wonderful physique, with finely chiseled faces. They were clad in a raiment resembling that in which Caesar's legion were dressed centuries ago. There were women also, all of glorious form and feature, robed in exquisitely colored gowns, which gleamed in the sunlight with a myriad opalescent tints.

The last two tubes again faded into darkness, and the view receded to the original ten-thousand foot scene.

With an almost imperceptible movement of his hand upon a lever, he brought the landscape flashing across the screen in a glorious panorama.

And while they viewed the surface of the dying planet from pole to pole, the storm that had been rising came up and settled over the top of the mountain. Lightnings flashed, and thunder shook the observatory, but so engrossed were they in the wondrous scene before them, and so protected from interruption by the silent, ghastly ray without, that they were completely oblivious to the disturbance.

Now a vast, red, sandy desert was sweeping across the screen, now a waterway, now another city (always situated at the intersection of two canals), and so from the distance of thirty-three millions of miles, they viewed the surface of the planet from ice clad north to ice clad south. Suddenly the lofty summit of a great mountain capped with an enormous black blotch swept across their vision.

With skillful hand, Faxworthy brought the image back to the center of the screen. The black blotch was a huge building completely covering the top of the mountain, and towering five hundred feet into the air—an almost exact replica of the building in which they stood. *And from its top an enormous ray of unearthly luminescence shot sharply out into space!* Again the last two bulbs flashed into light, and they looked down into the polished bowl of an enormous concave mirror two hundred feet in diameter.

"You see," said the scientists significantly, "unseen eyes are ever watching us from space, and they have been doing so for countless ages."

(Continued on page 147)

Martyn has made the calculations. I shall appear to her no more than a few hours after the departure of that person who is following all my adventures. It will, of course, be in the next cycle of time, and there will be changes. But surely my Vinda will be there, and I shall be able to take her in my arms and tell her of all the love I have for her. I cannot believe that it will be another woman. No—just as this Martyn is the same Martyn I left, so will that Vinda be my Vinda. Surely it is the soul that counts, and the soul is the same.

There is one thing that sometimes worried my leaping mind. There is this other Kirby—this double of mine, this other *me*. Perhaps he will have

(THE END.)

more perception than I have had (for does not each cycle bring a finer civilization, and is not the man the basis of civilization?). Perhaps he will have the intelligence to remain with Vinda, and I shall meet him there—meet myself! How impossibly it savours of Poe and *William Wilson*! For if we meet, and we both love Vinda, there will be only one way to settle it—we must fight, fight to the death perhaps, for this love is very great. And, if we are the same man, will the death of one mean the death of the other too? It does not matter. At least I shall be able to say at least once to Vinda that I love her. . . .

The Infinite Vision

By CHARLES C. WINN

(Concluded)

Then the storm outside broke into its full fury. Lightning played in rapid streams, and thunder echoed and re-echoed with mighty din.

Suddenly a bolt of blinding light reached down from the sky to the tower upon the dome. The partially fused metal gave to the weight, and the great ray slowly fell in a wide arc to the earth. There was a series of frightful reports, as it tore the mountain asunder with its mighty force.

In the room below the image no longer showed sharp and clear upon the screen, but was entirely obscured by a mass of whirling grayish green. Then as the awful crashes rent the air, Faxworthy gave

a terrible cry. "THE RAY!" he shrieked and leaped toward the far end of the switchboard! But it was too late!

With a sudden lurch, the thing on the roof had fallen completely to the perpendicular. There was a second frightful din as it rent asunder all within its path, ripping out the very vitals of the delicate apparatus that gave it life! Then it grew dark.

And above in wild cadence the thunder drums of Nature rolled out a pean of victory, over the shattered fragments of the rash mortals who fain would know her innermost secrets.

THE END

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