

The Crystal Ray

BY RAYMOND GALLUN



From the bow of one of America's ships a beam of bluish light stabbed out and struck an enemy craft. It passed thru the vessel as tho it had been made of glass instead of thousands of tons of steel.

By the Author of "The Space Dwellers"



MID-AFTERNOON sun of the stirring war year 2141 A.D. shone upon a small battle flier which was speeding southward at an altitude of fifteen miles. It was a two-seated outfit, cigar-shaped and made of an aluminum alloy. On the shining metal of its body were painted several red, white and blue stars—the insignia of the United States; mounted on its prow were two dangerous looking automatic guns. Beneath the body of the machine was a convex, hollow sheet of metal containing a substance which neutralized gravity when acted upon by the electromagnetic waves sent out by the power stations throughout the western hemisphere; this device, the Whitley gravitational screen, supported the craft in the air. Hissing jets of gas ejected at the stern were driving the machine through the thin atmosphere at a velocity of nearly a thousand miles an hour. A faint wake of bluish vapor trailed behind like the tail of a comet.

In the flier were two men wearing the oxygen masks and metal armor necessary at extreme altitudes; attired in this fantastic garb they looked for all the world like a pair of goblins from some distant planet.

As members of the U. S. Scout Squadron Number Five, both had done their bit in the seemingly hopeless battle of Caucasian nations against the yellow men of Asia. Holding the controls was George Calhoun, the ace who had to his credit more than sixty aerial victories, including the bombing



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of two great battleships of the skies. Joseph Pelton, his companion, who in peace time had devoted all his spare moments to science, was not so successful a fighter; but he had participated in many hazardous struggles.

These men were now on a three days' leave of absence. The United States—the only formidable power of the Occident that had so far escaped being wiped out by the air fleets of Asia, could ill spare either; but science had not yet found a way to relieve the fatigue that comes with constant war.

Above them the aviators could see the deep blue-black sky, sprinkled with stars because of the rarity of the atmosphere. Beneath rolled an ever-changing panorama of earth, seemingly turned up at the edges like an enormous saucer. Now they were over the Gulf of Mexico veiled in its gray-blue mist; now above the verdant agricultural districts of Cen-America, long ago

occupied by the invaders. A little more than three hours after they set out from Chicago, the young men hung over the snow-capped pinnacles of the Andes, which looked like mere ash heaps far beneath. Here was one of the few spots on earth that did not yet resound with the din of war; it was such a place they sought.

Presently the airboat began to descend in a long spiral; a few minutes later it settled gently at the edge of a little adobe village on the eastern slope of the mountains.

The Legend of the Mountain

AFLIER was an unusual sight here and the inquisitive

THE greatest advances in science will come during the next hundred years, when our understanding of the different forms of rays emitted by various strange materials is better developed. The past century witnessed the discovery of X-rays, as well as the emanation rays of radium and others. Only very recently a new ray, the cosmic ray, has been announced as a very potent factor in our lives. That many more materials found to emit powerful rays will be discovered, some of them with deadly and altogether unexpected qualities, is a foregone conclusion. The present story deals with such instrumentalities and, incidentally, the author has built a marvelous stirring story which cannot fail to impress you

inhabitants, men, women and children, crowded around to get a glimpse at the wonderful machine.

There was nothing resembling a hostelry in the village; but, when the worthy Señor Hernando Diaz, its richest citizen, learned that these young men were soldiers like his own three sons who were fighting against the Asiatics in Argentina, he offered his hospitality.

After the evening meal Señor Diaz and his guests repaired to a broad veranda which faced west. For quite a time the three men remained silent. Pelton and Calhoun were absorbed in the grandeur of the mountains over which dusk was settling, and Hernando Diaz knew too well the power of silence and the spell of that majestic sight, to break it with words.

At length Calhoun murmured musingly: "God is up there—God and Peace. Even war couldn't disturb the eternal serenity of those Andes."

He spoke in Spanish. Both Calhoun and Pelton had a fairly complete mastery of that language.

Diaz leaned far forward in his chair: "God in those mountains, Señor? Ah, yes, perhaps in the great peaks far off; but do you see that one which is quite near? It is less than two thousand meters high and at its summit there is a small depression or crater. Madre de Dios—there indeed is the lair of Satan!"

A quizzical smile came over Calhoun's lips. He turned toward the Ecuadorian: "I'm afraid the gentleman you mention has gone north to help with the big row up there. But let's hear the rest of what you were going to say. I'm intensely interested and I think that Joe is perfectly willing to listen, too."

"There is a legend about 'The Devil's Nest' which says that in ancient times the Indians made human sacrifices to the sun there," Diaz began in a low voice, while he toyed nervously with the ends of his curling mustache: "Certainly there is something dreadful about the place still, but no one knows what. In the memory of living men, only two have ventured into it. That was ten years ago. A certain youth named Pedro Menendez was driven by the spirit of adventure, which is the inherent possession of most boys, to scale the heights of 'The Devil's Nest.' He failed to return. Three days later his father ventured up the walls

of the extinct volcano in search of him. No human eye has seen either of them since. Truly, it was as though Satan had swallowed up both."

"Men have gone up into mountains before, and failed to return," said Pelton: "There are places where footing is precarious, and crevices in which it would be almost impossible to find a human body. However, we have a little mystery here to solve—George, what do you say if we take a trip to 'The Devil's Nest' tomorrow?"

"Bully enough, old egg," returned Calhoun laughingly: "We've faced devils before, haven't we? They were real devils hurtling at us from out of the sky and shooting streams of poisoned lead dangerously close to our gills. They will probably get us anyway in a week or two and, if we get killed in the mountains, we will at least have the satisfaction of cheating them."

Seeing that argument was useless against such reckless hot-heads, their host merely muttered softly to himself: "They are rash—these soldiers of the United States."

The last pale light had faded from above the peaks of the Andes, a faint wind souged through the trees. The conversation drifted to other topics.

The Devil's Nest

WHEN the early morning sun of another day had mounted up into a cloudless firmament, the two aviators were preparing for their adventure. Believing that the vigorous exercise of climbing would do their little-used muscles good, they decided to leave the flier behind. Since this was so, they realized that it might be necessary to camp on top of the mountain that night; consequently they packed up a light tent, a couple of blankets and some extra provisions.

Señor Diaz did not urge them to desist from their venture but, when he wished them good luck, Pelton noticed that there was something strangely solemn about his voice and eyes. His attitude was not at all that of a friend bidding him good luck at the outset of a holiday of sport; it resembled, instead, the attitude of a certain fatherly old captain speaking kindly to him when he was about to risk his life in an aerial combat.

When all was ready, Calhoun and Pelton started out up the slopes of the Andes. For a

couple of miles the going was easy; but, as they approached closer to the sinister bulk of "The Devil's Nest," the ground grew steep and sterile and the trail more and more difficult.

Calhoun was outwardly in a carefree mood and he scoffed often about the story. "Just imagine, Joe," he would say, "demons and what-not in these mountains that are nearer to God than anything on earth—beneath this blue sky that is the very symbol of peace and beauty! What a superstitious lot the Señor and all his kind are!"

Pelton said very little. Somehow he felt that his friend's lightheartedness was forced, and over his own mind there was coming a sense of depression that increased as the mountain grew more rugged. Was there really some horror in the ancient, extinct crater far above? "No!" he told himself emphatically. The idea was ridiculous; he was a fool even to think of it.

The two men paused to eat their noonday meal at a small level space nearly three thousand feet above the village. The stillness of the place and his own gloomy mood inspired strange thoughts in the mind of Pelton. Finally he turned to Calhoun who was vigorously chewing the last fragment of a ham sandwich (yes—this ancient food still delighted palates of the twenty-second century.)

"Do you think often of Death, George?" he asked.

The other swallowed hard and then smiling slightly answered: "Death? Well rather. I couldn't help thinking of him now and then, because you see I play hide-and-seek with him pretty nearly every day. He's come to be about my most intimate playfellow, and he's a real sport. He's always 'it' and he never gets sore. So far he hasn't found me, and I will continue to keep out of his way if I can. However, if it's necessary, I'll take my hat off to Death and admit I'm beaten. I'd rather do that than become a slave to those Asiatics."

"I don't fear death in the physical sense any more than you do, George," said Pelton, "but, Lord! How I hate to be forgotten! I'd like to survive this war and live long enough to work out some of my scientific theories. Since I was just a kid I have dreamed of doing something really big and that idea has grown to be almost an obsession with me. You are lucky; even our enemies will

remember you as one of the cleverest aerial duelists that ever fought."

"Pshaw!" returned Calhoun; "If there isn't anybody left on earth to remember me but those disgusting Asiatics, I'd rather not be remembered. But listen here, old fellow, I don't think it is the least bit nice of you to make this holiday disagreeable with your glum talk. Just forget it and stow some food and then let's be on our way. The top of the mountain is still about three thousand feet above us, and if we want to reach it before sunset we had better get a move on."

A few minutes later the adventurers continued with their ascent. Now they began to encounter real difficulties; there were rugged, almost perpendicular crags, offering but the barest hand- and foot-holds. These almost baffled the amateur climbers. Here and there were narrow shelves where they could stop to get their breath.

The Blue Crystals

IT was during one of these rests that Pelton noticed crystals of a bluish, semi-opaque mineral clinging to the rocks about him. These crystals appeared to become more and more plentiful as they neared the summit of the volcano. Pelton knew something of mineralogy, but never in his considerable experience had he encountered such a substance. Curious to know its nature, he thrust several pieces into his pack; hoping that some day, if luck was with him, he might analyze them.

Just as the two Americans were starting on the last hundred feet of climbing that lay between them and their goal a large cloud came over the declining sun and, an ominous gloom settled over the world.

And now the youths peered eagerly over the rim of the crater into "The Devil's Nest." Five minutes later they had descended fifty feet to its floor.

They found themselves in a small, circular valley about a thousand feet across. Everywhere, topping the walls of multi-colored stone that surrounded it, were pinnacles of the strange blue mineral, pointing toward the sky like the thin minarets of a city of goblins. On the summit of the rocky barrier at the western side of the crater was

a huge mass of the crystal that gleamed darkly under the shadow of the obscuring cloud which hung persistently before the sun.

"This place has more weird beauty than 'The Island of Death'," said Calhoun. "It would make a fine painting. Somehow, there's something about it that gives me a creepy feeling."

There were a few patches of hardy grass and several bushes scattered here and there over the floor of the crater. Suddenly Pelton's searching eyes fell upon a circular spot of bleached earth, not more than ten feet across, lying thirty paces away at the center of the valley. For a moment he scrutinized it intently and then he grasped his companion violently by the arm. "Look, George!" he cried.

A moment later the two youths were bending over a pair of human skeletons whitened by years of exposure. With them there lay several coins, two tarnished brass buckles and the rusted remnants of a few metal buttons. The owners of those bones had obviously been dead for a very long time.

"These are evidently the men that Diaz spoke of," said Pelton, "but what in the name of Heaven could have killed them, George?" There was a look almost expressive of fear in his face.

"Volcanic gases, probably," essayed Calhoun.

"Impossible, man!" returned Pelton; "This volcano has certainly been extinct for ages."

Calhoun knelt down beside the skeletons and began to examine them. "Let's see if there are any marks of violence, fractured skulls, broken ribs, or anything," he said.

Pelton stepped back from the ghastly patch of earth. Never afterward was he able to tell exactly why.

And then a miracle happened—a miracle and a tragedy. The setting sun at last escaped from the cloud that covered it and its ruddy rays, coming over the summit of a nearby Andean peak, fell upon the mass of crystal at the western edge of the valley. A beam of bluish light, like the reflection from the glossy scales of a black serpent and more evilly gorgeous than the slumbering fires of a thousand opals, leaped from it. The ray struck Calhoun squarely. He staggered to his feet, uttered a choking cry, and crumpled lifeless to the earth! A few moments later the sun dropped behind the

mountains and "The Devil's Nest" was again in shadow.

Ready for Battle

SIX more weeks rolled by and now the Asiatic Air Fleet advancing up the Mississippi Valley was only five hundred miles from Chicago. Should this last big city of the Occident be destroyed, all hope for further resistance would immediately crumble; for here were situated the munition factories and here was the government that kept the dwindling energies of the United States organized.

Surrender was useless to the Americans. The blood lust of their foes had grown to such proportions that they had proclaimed that only the complete extermination of Occidentals would satisfy them. In a few more days, when the needed reinforcements had arrived from China, there would be a battle surpassing in magnitude and horrors all previous struggles. Then the men from the East would dump tons of chemicals upon the American metropolis; her twenty million inhabitants would suffer a moment of intense agony and, in a few minutes, she would be left silent and empty. So, at least, thought Tsu Tsin Ho, "The Wizard of the East," and many another wise head among the invaders; for the air fleet of the United States was outnumbered three to one.

But there was one thing that the brilliant Orientals did not know of. In Whitley Park, Chicago's most important pleasure ground, an unusual engineering operation was in progress. Four slender, two-thousand-foot towers of steel, seemingly as frail as spider web, were rising as if by magic. They were arranged in a square and between them skillful workmen were fastening a maze of fine wires.

In the center of the rectangle formed by the towers two enigmatic machines were being assembled. One was a huge apparatus, very similar in appearance to a gas engine of the twentieth century. Fully a hundred feet its eight bulky cylinders reared, gleaming with a glossy black sheen. There was something sinister and awesome about it—a suggestion that within its slumbering frame there lurked sufficient power to send the earth hurtling from its orbit. Beside the engine a great drum-like contrivance was slowly

taking form beneath the hammers and riveters of the construction crew. It was a generator that would soon supply energy to the mass of wires overhead.

What was the sinister purpose of this gigantic wireless power plant? Only a few men knew, and these often smiled grimly.

With feverish haste Chicago's factories were turning out new and strange devices by the thousand—things the purpose of which even their builders did not know. They were tubes of varying sizes, from one foot in length to twelve, made of black enameled steel.

The report that the impending battle was very near came sooner than was expected. In the midst of a glorious June day, the sunny serenity of which was mocked by the awful contest that was going on, a lone air scout raced over the city from the south. He brought news that the enemy was preparing every available ship, evidently for the final struggle.

Ten minutes after the arrival of the messenger, a hundred and fifty battleships, America's only reserve force, arose majestically from the landing stage to join the main fleet.

What appeared to be Chicago's last day of life was drawing to a close when they reached their destination. With this reinforcement the American fleet numbered about 2,000 large battlecraft. They hung stationary, supported high above the earth by their gravitational screens, awaiting the attack.

To the south of them, at a distance of perhaps twenty miles, the ships of the enemy were being arranged in battle formation. From deck, port and bridge, keen eyes watched their movements, through powerful glasses. There were at least five thousand of them—all first-class fighting machines of the largest size. Accompanying them was a countless hoard of small fliers.

Now the Orientals began to advance in a great V-shaped arrangement. A thousand feet above them, the one-man craft moved like a swarm of hornets.

Suddenly the position of the Asiatic fleet seemed to change from south to a little west by south in a way that would have made a man of the twentieth century doubt the evidence of his senses. But these latter-day Americans knew well what was happening. It was merely a weird

illusion—another creation of Thomas Whitley's master mind. Soon after he invented the gravitational screen, he had found that, under the influence of certain electromagnetic waves produced by a special generator, air could be made to refract light enormously. This discovery was of tremendous advantage in war. Both the Caucasians and the Mongolians used it to prevent each other from knowing the exact position of their forces. It practically eliminated battles at long range since, without knowing exactly where the enemy is, a gun crew cannot fire with any degree of accuracy. At a range of less than five miles the Whitley "mirafactor," as the device was called, was useless; and consequently within these limits the great contests were fought. At such close quarters the guns shooting projectiles filled with the new radioactive explosive, *terrorium*, could be used with dreadful effect.

The Last Stand

THE Asiatic fleet was quite close now. In order to meet their onslaught the Americans had arranged their ships into three vast rings, one above the other.

Suddenly a light puff of smoke broke from the side of one of the Mongolian aircraft. For a fraction of a second a high, plaintive whine was heard above the roar of rocket-motors. Then, with a report that sounded like the crack of doom, the forward end of an American greyhound of the air was bent into a twisted mass of scrap. Upon the wreckage was spattered a greenish slimy fluid that gave off a gas which turned the shattered flesh of men black, the instant it touched them, and ate into bright metal like a powerful acid, covering it with half an inch of grayish compound.

The titanic struggle had begun—a thundering, hissing maelstrom of destruction. Again and again the Asiatics rushed upon their intended victims and, as often as they did so, they were beaten back by the revolving rings of American aircraft that poured broadside after broadside into their midst.

Losses to both contestants were awful, but among the invaders they were greatest. Time and again a monster dreadnaught gaudily painted with orange suns would crumple up under well-

directed *terrorium* shells and take the ten-mile dive to earth, almost completely burying itself in the soft soil. Gradually, however, the Asiatics were getting the upper hand by force of numbers.

After night had fallen the scene of battle was brilliantly illuminated with searchlights and magnesium flares.

In the purple sky the stars glittered as calmly as ever. Though the fates of the human races of the world hung in the balance, nature's serenity was unruffled.

And now the slow retreat of the Americans toward Chicago had begun. Every mile of the way was contested with dogged courage. Time was what the United States needed, and the commander of the fleet meant to gain time if it were humanly possible. "Hang on, men—for God's sake—hang on!" were his constant orders, "If we can delay long enough, victory is ours!"

Set in the revolving turrets at the bow and stern of each American dreadnaught were strange thick cylinders; at the end of each was a mass of glassy crystalline substance, looking like a staring ray. What was the purpose of these queer devices? Many Asiatics wondered. Why was it that they did not flash forth some new kind of dreadful death? Their silence was enigmatic.

Now the contending fleets were a hundred and fifty miles from Chicago, now a hundred, and now only twenty-five. "How much longer must we hold them?" the American commander queried anxiously by radio.

"Fifteen minutes," was the reply. "By then we think that we can be ready. There has been some unforeseen delay of operations at Whitley Park."

And so the Americans continued to fight for time with all the reckless pluck they had to offer.

Chicago stood as dead and silent as though the Asiatics had already dumped their poisonous vapors upon her. Her unlighted skyscrapers loomed up wanly under the blinking stars and her streets were gorges of Stygian shadow. Scarcely a speck of radiance was left to betray her location to the enemy. The inhabitants had shut themselves indoors. A few wept quietly, but otherwise there was no inordinate display of emotion. These people had lost much of their terror of war by constant contact with it.

The Crystal Ray

IN the glow of floodlights, a thousand workmen were laboring like demons on some giant machine that gleamed dimly in the faint radiance. Far, far aloft, supported by four slender towers, was a vast network of wires.

Plainly the finishing touches to the engine were in progress. A hundred men were fastening cables to a two-hundred ton cylinder-head which would in a moment be hoisted into place by an electric crane. Other workers were inspecting and oiling the giant machine.

At one end of the strange titan was a control board bearing many levers, switches and dials; and before it stood the gaunt figure of a man who shouted orders through an amplifier system. It was Pelton; but how greatly changed from the plump young aviator of two months before! His hair was wildly disheveled, and sweat streamed down his shrunken face which, in the wan light, looked almost like a parchment mask hiding the visage of a skull. Lack of sleep and endless hours of labor had wrought this startling change. In spite of his worn condition, there was something magnetic about him that could not help but inspire confidence.

"Crew One, see to the lubrication of the cylinder valves and other parts," he cried; "use the L. F. liquid. Crew Two, examine all the connections of the Z wires. Crew Three, fill the main fuel tanks with the liquid *terrorium* preparation; Crews Four and Five will take care of the cylinder-head. Are all the cables securely fastened? We can't afford another mishap, you know. Good! Now start the crane."

Every man realized that it was vitally important that he should perform his task to the best of his ability in the shortest possible time; and every man responded to the will of his chief with the promptness of a well-oiled machine. In a moment the mass of aluminum alloy soared upward and settled into position.

To the south, and high in the air, a vast oval patch of white light, looking like the head of some enormous comet, had appeared. It had drifted ominously near and from it there came a subdued roar. In it thousand of insect-like specks flitted, and from them tiny points of radiance leaped as though they were fireflies. It was the battle.

As they fought the two contesting fleets had done their best to get above each other, to gain the advantage of position. As a result their altitude was prodigious. They must have been fully twenty miles above the earth.

"See! They are almost upon us," shouted Pelton. "Hurry! Ten minutes more of delay and we will be too late! Doubtless they are already bombing the outskirts of the city."

With all the speed they could muster the workmen bolted the cylinder-head into place.

"Is everything ready?" cried Pelton.

"Everything is ready," echoed Jerry Armstrong, his chief subordinate.

"Then, stand back, out of danger!" Pelton twirled a few dials on the control board; and then, grasping the big black switch at its center, he pulled it far down. There was a series of ponderous throbs that rapidly grew into an easy humming. The engine and the generator to which it was connected were in operation. Leaping in the network of wires far above were many bright flashes like the lightning of a violent thunderstorm.

And now all eyes in Chicago had turned fearfully and expectantly toward the monstrous sea of light that was dropping plummet-like from the sky upon the city. The ships were only four or five miles above the ground now, and they could be seen quite plainly in the glow of their searchlights and magnesium flares. The American formation had been broken up and scattered. Apparently there was nothing that could prevent the Asiatics from completely crushing them within the next few minutes. Then they would destroy the city. Already an occasional bomb was falling, like the big raindrops that herald a summer thundershower. They contained the green chemical that gave off the gas which ate into human flesh like sulphuric acid.

With mingled doubt, fear, and hope gnawing at his very soul, Pelton stared at the sky. Had he calculated correctly? For a few seconds nothing happened; then his heart leaped with a mighty exultation! From the bow of one of America's ships a faint beam of bluish light stabbed out and struck an enemy craft, sweeping it from stem to stern! It passed through the vessel as though she had been made of glass, instead of thousands of tons of metal. Immediately the dreadnaught began

to blunder oddly as though completely out of control. What had happened to her occupants? A grim smile passed over Pelton's lips, for he knew!

Presently, other beams of blue light awoke—hundreds of them!—thousands of them! And other Oriental craft rushed about crazily, crashing into each other or hurtling earthward. At the very threshold of complete success, the alchemy of fate was changing Asia's victory into crushing defeat.

Pelton Explains

NOW Pelton felt a hand upon his shoulder. Turning he saw that Jerry was standing beside him. The man's face was pale with awe and when he spoke his voice was husky: "Congratulations, Capt. Pelton—here, shake! When it looks black as night, along you come and put those invaders in their proper place. I can't see through this at all. What wonder is it that you have created?"

The fulfillment of his ambition beyond the wildest dreams of his school days had wrought the young scientist up to a pitch of excitement more intense than ever before, "It is the thing that killed Calhoun, the ace," he almost shrieked; "The crystal ray!"

"You mean that your weapon inflicts death with just a beam of light? That sounds impossible."

"But it isn't! I'll tell you about it." Pelton's eyes were glittering and his face was flushed: "Not more than a month and a half ago I was in Ecuador with Calhoun on leave of absence. We explored an extinct Andean volcano of particularly ghastly reputation. There I found a peculiar crystal, which, on analysis proved to be a complex compound of silicon, iron and the hitherto supposedly inert gas, krypton—I call it *andite*."

"It was just by chance that I discovered what terrible things *andite* could do. There was a big block of the material at the crater's western edge. The sun had been obscured by a cloud and, when it came out, its light struck the block, passed through it, and came out as a bluish beam. It hit my old friend and sent him on the long journey west. Thank God, it was not in vain!

"After a lot of effort I learned more about the

wonderful properties of the crystal. You know that light is the vibration of an all-pervading medium sometimes called the ether, just as are radio waves. When a beam of light passes through *andite*, its rate of vibration is enormously increased; so that it exceeds by many thousands of times the vibratory rate of even Hadley's Q-ray which is used as an anaesthetic. This super-vibration is the crystal ray. It will penetrate four feet of solid lead and a much greater thickness of any other metal. When it strikes a man it produces within his blood a poison that is instantly fatal. The process is comparable with that which goes on in the leaves of a plant when starch is produced by the action of sunlight.

"The projectors of the crystal ray are merely specially constructed radio lamps, equipped with a receiver of wireless power, and fitted with a piece of *andite* which modifies the light.

"After I had learned what my discovery was capable of, I staged a demonstration before the best minds of America. They gave me the cooperation of the whole country and this is the result."

"But what was the necessity of building this enormous power plant?" inquired Jerry: "Couldn't the old stations supply the needed energy?"

"No," said Pelton; "The light produced in the ray projectors must be many times as intense as that produced by ordinary lamps, in order to be effective at any considerable range. Only this new power plant could furnish sufficient energy. The filaments in the projectors would only glow on the power supplied by the old outfits."

Momentarily the roar of *terrorium* shells and the flashing of magnesium flares waxed more intense in the air above. In the few minutes that the big generator had been running, the Americans had annihilated practically three-quarters of their foes. However, a few were trying to escape into the night with their lights turned off. One fifteen-hundred-foot monster was directly above at an altitude of not more than half a mile. Its guns belching with the fury of despair at a smaller but much more agile American ship that was rapidly approaching.

Suddenly the invaders scored a hit. The little vessel crumpled up and fell. The big ship was continuing its retreat away from the scene of battle when a bluish beam, originating from a

projector in the neighborhood of Whitley Park, leaped up from the earth and struck it. The ray lingered over the whole expanse of its hull for a second and then died out. The dreadnaught continued to hurtle blindly on its way, its rocket motors roaring full blast. It was headed straight for a skyscraper, and a moment later it struck. A third of the building's height was sheared off; together with the twisted remnants of the ship the mass of steel and masonry fell with a terrific crash into the cleft of a dark street. There the airship still buzzed and hissed like a wounded insect.

A wild impulse was surging up in the breast of Pelton—an intense desire to take an active part in the victory he had done so much to bring about."

He turned to his companion: "Keep the outfit running, Jerry, I've simply got to be in this fight."

As rapidly as his legs would carry him, the young scientist raced to the little shed nearby where he kept his flier. In his hand he carried a small black tube fitted with a pistol grip and trigger. It was a ray projector.

In a moment he had dragged the little craft out and climbed into the cockpit. He turned a dial that operated the gravitational screen. There was a sudden feeling of weightlessness—and then he shot upward amid the gust of rising air.

Three thousand feet Pelton ascended before he started his *terrorium* rocket-motors.

At a distance of perhaps half a mile, a "dog-fight" between countless small craft was in progress.

At first he thought there was no one in his immediate vicinity; and then, above him and a little to the north, he saw a flier similar to his own, but obviously Asiatic. A bar of opalescence leaped out from the little weapon in Pelton's hand, and the enemy pilot was no more.

The discoverer of the crystal ray was in the act of turning around to join the "dog-fight" when a dozen or more bullets directed with an uncanny accuracy swept down upon him from above. He was unhurt, but a lead pellet had struck his weapon, destroying it completely. When he looked up, clammy fear seized him; for he saw a black flier painted with orange suns and piloted with a fiendish skill, diving straight toward him. Every inhabitant of the United States would have recognized that craft. It belonged to Saku, the ace

who had shot more than a hundred opponents from the sky!

Impelled by the instinct of self-preservation, Pelton shut off the power from his gravitational screen. It was all he could do. He thought that perhaps by a rapid dive he could escape the yellow ace; but it was a vain hope. Even as he began to fall plummet-like toward the earth, a gust of poisoned bullets ripped through his body.

Probably his senses swam, and it was certain that he felt no pain; for death in those cases is a matter of an instant. Nevertheless a faint smile crossed his lips. Against the blackness of the eternity that poured into his brain, he seemed to see his name written so that people of the future would read with awe, and after his name the words: "*He won the war!*"