



The red-hot tube burst with a whir; the fragments of glass scattered all over the floor; a cloud of steam rose with a buzz from under the fiery ball, while the ball, agitated and rocked, moved aside and perched upon the marble table, slightly quivering, as if the scant power it contained, was pulsating.

The Revolt of the Atoms

by V. Orlovsky

PROFESSOR Flinder was in very bad humor. In spite of his customary self-control, he felt that, he was in no position to hold himself together, to consciously and soundly lead his thoughts through the channels of clear, logical and correct inferences. Their harmonious flow through the gray convolutions of his brain always afforded him immense pleasure. But today, he was unable to direct the flow along the calm and sound channel; this, of course, affected his mood to such an extent, that even his favorite cigar seemed bitter and tasteless.

Indeed, there were reasons for it.

In the first place, this morning Flinder discovered, in his working cabinet adjoining the laboratory, the absence of several of his documents pertaining to his work. The theft had been committed at night with incredible and almost incomprehensible boldness. The laboratory was situated in the garden, in a separate building, in the rear of the large detached building in which he resided. The windows were protected with iron grating and from them radiated a net of wires connected with the burglar alarm system, not mentioning the special night-watchmen, old non-commissioned officers. The result was that the wires were cut, the grating had apparently been cut through the corners with the oxy-hydrogen blowpipe, or something of that kind, and the window-panes had been cut out and removed.

The room was topsy-turvy. Two table-drawers were pulled out and their contents were littered all over the floor. The thieves, it seemed, were pressed for time, for they had left the others undisturbed. But worst of all

was the breaking open of the fireproof safe and the emptying of one of its compartments.

Something must have frightened the night intruders, routing them into flight before they had succeeded in completing their work, for they left many traces behind: a handkerchief bespattered with dirt and ashes; drops of blood at the safe, apparently from excoriations on the hands; and scraps of newspapers of the preceding day. There were no tracks to be found in the garden. The Police Commissioner and a detective summoned by the professor, nodded their heads approvingly, inspected and examined everything, put what was of interest into their brief-cases, and left, to return shortly with a police dog. The hound jumped out through the window, leading his guides towards the stone wall, in which they found a large hole covered up with bushes. From there he led them into the garden and then into one of the crowded streets of Berlin. In a word, everything turned out to be just as it always happens in similar cases, but Flinder could not overcome the grief and excitement, even when the agents of the Police Department assured him that everything, so far, was progressing in their favor.

Having examined the remaining papers and documents, he discovered the absence of several which contained rough outlines of his recent work. Others embodied data which he kept secret, and which served him as connecting links for his future work.

He knew with certainty who stood behind this affair. It was quite clear that it was directed by one who knew his business thoroughly. For the past few years in Nancy, France, they were conducting experiments

similar to his own. The little, dry, old man with that penetrating look in his deep-set eyes, gray tuft of hair on his forehead and sharp beard, whose photographs Flinder was examining with curiosity and animosity, in the "*L'Illustration*" directed this work and was stretching his avid and tenacious fingers in his direction. These two rivals had never met in their life, yet they hated each other with all the depth of feeling, of which each was capable in his own way.

Which of the two would be the first to harness this power and direct it by his own will, depended, to a great degree on the issue of the silent struggle between two nations, that struggle which, in fact has not ceased for a single moment, even after the cannon had ceased to roar and human flesh had ceased to be shot to pieces.

In to-day's conflict, his opponent had the upper hand, a circumstance sufficient to spoil his best mood.

In addition, there was another unpleasant feature connected with this affair. Danger threatened from another side. For the past two years, a young Russian engineer commissioned here by Russia, had worked as a scientific collaborator in Flinder's laboratory, commissioned by this amazing country, where only recently they had been feeding on human flesh and where people were dropping dead from hunger on the streets of the cities. This same country is now interested in electrification, in breaking up the atom, in the study of the nerve system and what not—which lines of work, according to Flinder, were not at all suited to savages and cannibals. At first, Deriugin, the Russian collaborator, displayed no qualities entitling him to any greater consideration than that given to his fellow-workers. In fact, he appeared rather to be possessed of a dull mind, or, at least, a mind not likely to lead him to the fore in this particular field. He worked along the lines of chemistry and radioactivity and,

although this was in close contact with the research work of the professor, it never provoked any alarm in the latter's mind.

Of late, however, it began to dawn upon Flinder that Deriugin knew more than he was willing to show; in fact, more than he was supposed to know. This, of course, was impossible to ascertain with any definiteness; nevertheless, after carefully observing the nature of some of his experiments not directly connected with his work, the professor began to divine the curious mind, persistent and bold, which was striving to fathom the great mystery. The glitter, which this somewhat round-shouldered man could not always extinguish, and which continued to glow in the depth of his eyes at lectures or during the hours of practice, whenever the subject of the breaking up of the atom came up, filled Flinder with discomfort and alarm.

Perhaps, there was more danger in this young man than in the little old man from Nancy. Something was happening right here, under his very eyes. And the thought of ridding himself of the uncomfortable collaborator began to occupy the professor's mind.

Eitel, the professor's son, who was serving as a volunteer in the cavalry division of the Reichswehr, detested Deriugin with all the passion of his heavy and sad hatred. He had been telling his father, that if he were in his father's place, he would have sent this "Moscow spy" to all the devils, or, at least, he would keep him from the laboratory at a distance of a cannon shot. Flinder was beginning to agree with his son's contentions, now. But, after all, one must have some plausible excuse.

And all this is hardly calculated to serve as a cure for depressed spirits, not to mention the fact that the newspapers had been offering food for the most somber reflections every day. Those fellows beyond the Rhine, lost all control over themselves; they

permitted themselves to go to the very limit. They continued to slap the back of the vanquished adversary, until it made Flinder clutch his fists and gasp for breath.

“Well, so be it,” he thought. “He laughs best, who laughs last—and this is their own adage. We shall see who will do the laughing. Flinder will give to Germany, that mighty, indomitable power, which he feels will soon flow in powerful torrents into his laboratory. We shall see! Yes, we shall see!”

Flinder pushed his unfinished cigar into the ash-tray with such disgust and anger, that a heap of ashes scattered over the table, and he left the room.

IT was dinner time, a meal which was observed with great precision in his home. At the window, drumming with his fingers on the glass, stood a tall young man in military uniform.

“Hello, father!” said the young man as he greeted his parent. “I met your red-headed Moscovy idiot again. When are you going to get rid of him? I just can’t look at him without disgust. He invariably spoils my temper, this Asiatic...”

The professor silently shrugged his shoulders.

At the table, Eitel began telling his father, who was listening very absent-mindedly, about his service, about the horses at the squadron-stables and about his fellow-soldiers, and he spoke with high esteem of his Colonel.

“By the way, he spoke of you with great respect; he said that Germany is much indebted to you and is expecting still more from you.”

The professor smiled. Queer though it was, yet it was pleasant to hear such recognition of his merits from the lips of a Hussar Colonel.

“But, what I was going to ask you, father,” he continued, “is to give me a general

outline of your latest work. It seems to me that every Tom, Dick and Harry in our Casino knows more about it than I do.”

Flinder smiled again.

“I think you are right, my son. I shall do my best to enlighten you.... Do you realize that man’s greatest problem on Earth is the struggle for energy, which he draws from nature in manifold forms?”

The Hussar shook his head.

“Each new explosive, each newly constructed machine, is a new, more convenient, cheaper, or more expedient method of pumping out new energy from the earth—that energy which moves our ships and trains, works our factories and mills, carries in the air our airplanes, drives our dirigibles, and hurls our projectiles over ranges of scores of miles. But the supply of the Earth’s coal is constantly diminishing; besides they have taken our coal away from us; nor have we oil.... At the same time inexhaustible sources of energy are scattered all about us in abundance.”

“Where are they?”

“Everywhere; in this piece of iron lying on the table; in the puddles of filthy water in the streets; in the road-dust beneath our feet—wherever you turn your eyes.”

“I do not understand.”

“Well—do you know what an atom is?”

Eitel smiled.

“I have heard something about it. I think it is something very small.”

“That’s right,” said the professor with an involuntary smile, “and in those infinitesimally small bricks, of which all bodies of the universe are made, all those colossal supplies of energy are stored. Atoms consist of concentrated, condensed electricity. They resemble an endless mass of miniature, tightly coiled springs, or, better still, little charges of powerful explosive matter. And when we learn to release the detent of those

springs, to explode those charges and to control them and their energy, we will usher in a new era in the history of mankind; we shall enlist in our work the dormant power that lies about us; we shall flood the world with cheap and inexhaustible energy; we shall free mankind from the curse of unequal and strength-sapping toil; we shall direct it into new channels; we ...”

“We shall first feed up our war weapons with that new power and dictate our terms to Paris and London...” interrupted Eitel, standing in the center of the room, with glittering eyes, threatening with his fists some region in space.

II

FLINDER turned on the current and shut the door of the laboratory behind him. A flood of light illumined the familiar picture, at once arresting one's attention with the serenity and peacefulness of a working atmosphere. Wires in rigid lines stretched all over the walls; porcelain insulators, like ivory fingers, protruded here and there and between them; on the tables and shelves sparkled glass utensils; brass parts of the apparatus glittered in yellow reflections; a marble switch board with its appliances and colored lamps, added a cold, yet solemn appearance to the spacious room.

Upon a large marble-top table, at the rear wall, stood a mechanical appliance, from which the work was to start. Flinder stopped before it with a feeling of inward satisfaction and throbbing expectation. Everything he saw before him was the reflection and incarnation of his thoughts. Each lever, each screw, each contact of the wires—everything to the minutest detail—was carefully considered, weighed and computed. This new apparatus was entirely his brain-child. To the ordinary method of breaking-up of atoms, by means of bombarding them with grains of helium, that

are discharged by radioactive matter, he added the action of the electromagnetic field of high tension. This enhanced the speed of flight and the power of explosion of the miniature charges. And to-day he intended to test the influence of some admixtures upon activated nitrogen, admixtures that are dissolved in the tube with gas and represent minutest molecules.

He examined carefully the scheme of arrangement of the appliances and focused the microscope over the fluorescence stage over which the explosions were to register the path of the fragments of the atoms, and turned on the switch. A deep, heavy buzz of the transformer filled the room, as if a giant drone from out the wilderness of the night, beat his wings and whizzed upon the window-sill, shaking the concrete walls with his blows.

The professor turned off the light and looked into the microscope. There was the usual scene: like falling stars on a calm August night, flashes of racing atoms glimmered in the dark field, left and right, in the direction of the current; paths of light intersected the field of sight, crossing in places, indicating colliding, extinguishing and flashing up again, and strange seemed the silence in which this fiery rain was pouring down. Then, turning a small stop-cock, Flinder admitted into the tube of the apparatus a tiny cloud of dust, which was to serve as a stimulator and augments of the process. And at once the picture in the dark field changed. Into the pattern of fiery lines, broke in a volley of rays, scattering themselves in all directions like explosions of miniature charges. These were no longer integral; the atoms were being scattered into tens and hundreds of fragments by the force of the bombardment. Microscopic worlds were being destroyed, silently rumbled the catastrophes, one after another splashing flashes of rays followed one another.

And now dead silence reigned as before, broken only by the monotonous

humming of the transformer.

Flinder almost doubted his own eyes. This meant, that the problem was solved at last. The key to the mysterious treasure was found; an unparalleled victory was won.

Impotently and slowly he dropped into his armchair, in a sense shocked by the achievement. After ten years of persistent work, he had apparently reached his goal. It was difficult for him to realize it all at once. He sat steeped in a confused state of semi-forgetfulness and semi-delirium.

The door clicked; apparently, Hinez, one of the assistants, finished his work and left. Flinder did not notice him. He remained under the influence of the excitement that possessed him, trying to visualize the dizzy perspectives that were being opened to mankind. An insignificant dot of matter will yield enough energy to drive ocean liners, and ponderous trains, for many hours. Millions of millions of horse-power! The end of the struggle for energy! We are the masters of energy!

Thus, for about a half an hour Flinder remained in his semi-dreaming state, which completely enthralled his mind. When he finally bent over the eyeglass of the microscope again, that which he saw there was so unexpected, that he uttered a cry.

He no longer saw the separate fiery lines or the volleys of rays; but the whole circle was enveloped in a raging sea of fire; flaming vortices circled and danced right and left and all along the current stream. Flinder instinctively grabbed hold of the current control lever and shut off the power. The transformers stopped and the dead silence that hovered in the room, filled his heart with a longing premonition.

The scene under the microscope had changed very little. The fiery sea continued its rage, but no longer in one direction: The whirls rotated, collided and scattered in all directions in utter chaos. Flinder stretched out

his hand to the switch and lighted up the laboratory. Everything stood in its place: the apparatus, the retorts, the flasks and the insulators with their ivory fingers, and the switches stuck out from the walls and ceiling; the windows were darkened by night shadows and at the right stood a bright, reddish star, apparently, Arcturus. Everything about was simple, familiar and comprehensible.

What was it, then, that had frightened him so? The foolish play of his high-strung nerves. Simply, looking down upon this phenomenon, still new to him, he recalled Deriugin's recent phrase, in the words of Aston: "The research work into the inner-atomic energy, is like playing with fire on top of a barrel of gun-powder." And it appeared to him, that this very minute the force he himself had just freed, would crush into fragments the laboratory and everything about it. What nonsense! Here he has stopped the work of the apparatus and nothing at all happened. Apparently, the process, once begun, continues by itself. So far, so good! The only question to be decided on now is, how to utilize this new energy without wasting it without purpose?

He now examined the microscope. Under the object-glass gleamed a bright dot, discernible with the naked eye. Bending over closer, he convinced himself, to his great surprise, that the glass tube had melted away and the tiny pale-blue star quivered without the apparatus, at the brass mounting. An unpleasant chill again ran up his spine.

Mechanically he extended his hand to the glittering object, but withdrew it immediately; his fingers were burned as by a red-hot iron and his body was rocked as by a heavy blow.

And it suddenly appeared to him that the glittering dot was growing in size before his very eyes; that it was not a dot any more; that it had become a small ball, the size of a pea. He wiped his eyes and looked up again;

he felt the hair on his head rising and his forehead was covered with cold perspiration.

No longer responsible for his actions, Flinder grabbed a glass of water from the table and splashed it under the microscope. The red-hot tube burst with a whir; the fragments of glass scattered all over the floor; a cloud of steam rose with a buzz from under the fiery ball, while the ball, agitated and rocked, moved aside and perched upon the marble table, slightly quivering, as if the scant power it contained, was pulsating.

It was quite clear now that it was growing from minute to minute, slowly but surely. Flinder suddenly became conscious of the fact that his lower jaw was jumping and the teeth were chattering. He stood motionless, his hands clutching the table, his face pale as death and his eyes widely bulged. Everything was clear now.

This was a catastrophe, the kind our Earth had not yet experienced. The breaking up of the atom, which he had caused in the minute volume of gas, had been so energetic, and the fragments were scattered with such force and rapidity, that, when colliding with the neighboring molecules, they, in turn, broke their constituent atoms, and now the process was spreading unchecked from one place to the other, liberating the dormant power and releasing light, heat and electric radiation.

He had set free the spark which was to cause a world conflagration! And there was nothing in all the world that could avert the destruction that was to follow. Nothing! Nothing! Certainly, we are powerless to exert any influence upon the process within those microcosms not yet known to us. None, whatever! And the world was not yet aware of anything; it did not dream that here, in the quiet of the laboratory, a catastrophe had taken place—that would ultimately reduce this globe into cosmic dust. Everybody was oblivious of the impending danger! They slept, walked, ate, worked, laughed and were

occupied with a million trifling matters! Yet the shadow of death had swept over our Earth....

And this he, Conrad Flinder had done; Conrad Flinder, the gray-bearded old man, to whose health the Hussar Colonel drank last night. He suddenly began to laugh, ever louder and louder, his teeth chattering, his lower jaw jumping up and down, as if it were suspended on a rubber string. He thrust himself at the door forcing it open, and rushed out in disheveled condition. Running along the garden tracks, he rebounded from the trees, fell, rose and ran on toward the house, ceaselessly laughing....

III

IN bold-type captions appeared the news of Professor Flinder's suicide in the morning newspapers. The newsboys announced this with piercing and shrieking voices, and waving their sheets, they tucked them under the arms of the passers-by. Deriugin had found out about the dreadful occurrence, while on his way to work. Flinder! Cool-headed, stone-calm Flinder, resembling a machine rather than a man!

The news stunned the engineer. He sensed in it an event more significant than could be deduced from the newspapers accounts, which ascribed the incident to a sudden attack of mental alienation. This, they deduced from the note left by the professor and from the unintelligible phrases written therein, which, in all probability, bore witness to the chaos of his last thoughts. "General destruction! ... World conflagration! ... Aston was right ... I did it ... It grows larger each second ..." While this was merely a string of words, the incoherent phrases produced an overwhelming impression upon Deriugin. He was shaken with fear. In these words he read of an incredible and absurd menace, which suddenly appeared to him as a possibility. He

quickened his pace, jostling his way through the human tide, toward the Institute where, at the very entrance to the laboratory, he met Hinez, the assistant.

“What happened?” he inquired of the assistant who stood before the locked door. The latter shrugged his shoulders.

“I know as much as you do, colleague. At any rate, this is a colossal loss to Germany—it is almost irreplaceable.”

“A dreadful occurrence, indeed,” returned the Russian, “but I am afraid that this is not the end of it...”

“What do you mean to say?”

“It seems to me that something has happened in the laboratory. Have you any idea, colleague, what special work the professor was doing there yesterday?”

Hinez suspiciously looked up at the speaker and replied reluctantly:

“I believe he was making preparations to test the newly installed apparatus, which was to accelerate the breaking up of the atoms of several gases...”

“Listen, Hinez,” exclaimed Deriugin, his voice ringing with excitement, “I understand that my words seem strange to you, perhaps brazen, but the situation is too serious for us to fret about formalities. I have been watching the work of the professor for a long time and was very much interested in it. But now, I repeat, I am afraid that some mishap has occurred there.”

Hinez silently shrugged his shoulders, yet, he too felt that he was becoming affected by an incomprehensible alarm.

They unlocked the door of the laboratory. In the assistant’s room, a servant with a long iron rod, on one end of which a rag was tied, was cleaning the room. The servant welcomed the entering pair with a curt: *Guten Tag*. The two whisked through the room directly into the laboratory of the professor.

Hinez led the way. On the threshold of

the large room he halted unwillingly and covered his eyes with his hand, blinded by the unexpected light. Behind him stood Deriugin; silent and pale as a ghost, he was contemplating the picture that lay before their eyes. Upon a large marble table, where the new adjustments were gathered, shone, with unbearable brightness, a fiery sphere the size of a man’s head. It quivered, as if it pulsed. Upon its dazzling background, bluish veins crossed themselves and everything about it was covered with a bluish mist. At the place where the sphere had touched the surface of the table, a light sizzling and crackling was heard. The room was hot and suffocating, as it is before a big storm, and a sharp smell of ozone assailed the nostrils.

Hinez and Deriugin stood like a pair of statues, not daring to move from their places nor to remove their eyes from the strange phenomenon.

“Herr Hinez,” exclaimed the surprised servant, who had followed them into the laboratory, “something is burning there!”

And before either of them had a chance to stop him, he ran over to the table and drove the end of his iron rod into the face of the fiery sphere.

A dry, loud crack followed. A dazzling spark, resembling a short lightning, flashed out at the end of the rod and the old man dropped backwards, spreading his hands and knocking his head against the hard floor. His body twisted up in spasms and remained motionless. All this took place, it seemed, within the twinkle of an eye. When Hinez rushed over to the old man, bending over him and trying to raise him up, he no longer breathed.

“Dead!” confusedly announced the assistant, retreating unwillingly and turning back his head to his colleague. Deriugin, standing at the door, repeated mechanically one and the same phrase: “I knew it...! I knew it...!” About ten minutes passed before the

visitors regained a little of their composure. They carried out the body of the old man into the assistant's room, and tried every means to revive him, but all their attempts failed; the unfortunate man was dead.

"What is this anyhow?" demanded Hinez, at last, when he realized the futility of their efforts.

"This," repeated Deriugin, and the sound of his voice resembled the burst of thunder before a rainstorm, "this is a mutiny of the atoms, revolting against the man who dared to disturb them...."

"You mean to say, that..." began Hinez with uncertainty.

"I believe," interrupted Deriugin harshly, "that the destruction of matter has begun and, in all probability, nothing in the whole world will be able to check it. This old man is the first victim of the millions that are to follow."

"But, why do you speak about a catastrophe, colleague? And even if what you expect to happen, does happen, it will not pass beyond the bounds of the laboratory and can be disposed of right here."

"Disposed of? And this I hear from you, assistant to Professor Flinder? Don't you realize that we are powerless when it comes to the element? Can we, in any way or with any thing influence the work that goes on within the atoms? Can we stop the growth of this fiery vortex?"

"Growth?" this new idea impelled Hinez to withdraw hastily into the main laboratory.

Indeed, this was quite apparent: the flaming sphere, in the last half hour, had increased about a fraction of an inch in diameter. Besides, it was becoming more and more difficult to breathe in the room. The air was all pregnant with electricity. The twinkling of little bluish lights upon all the prominent parts of the apparatus and other appliances, transformed the whole picture into a fairy-

scene.

Deriugin and Hinez left the laboratory, shutting the door tightly behind them. Actions and measures to forestall an impending calamity began immediately. Hinez took upon himself the task of informing all the professors of the Institute of the actual prevailing condition; Deriugin, meanwhile, departed to see Eike, a friend of his and the editor of a leading newspaper. To find him was not an easy task. But about one o'clock in the afternoon, he found him in his editorial office. At first Eike was hesitant and undecided about going with him. Professional curiosity finally, triumphed however.

They entered a machine that puffed at the street-door entrance, and whisked away in the direction of the Institute. On the Frankfurt Strasse they noticed a pillar of smoke standing almost motionless in the air. Along the streets, hissing, whistling and pealing their bells, hurried the fire-engines. Men in copper helmets, with hatchets in their hands, clung to the sides, like operatic warriors on the stage.

"There must be a fire somewhere," remarked Eike, flaming up again with the curiosity, which is so much part of a newspaper man.

"It's there..." insisted Deriugin with growing alarm. "We are late! It's there!"

His premonition did not deceive him. Their noses were soon assailed by a scorching sensation. Opposite the house in which Flinder lived, a large throng of people had assembled. From the garden, now and then, firemen were running to their engines; beyond the iron fence and between the trees, where the laboratory stood, tongues of flames danced and smoke rose and whirled, gradually being carried away into the street which was becoming enveloped in a thick and corrosive cloud.

In this hubbub, Eike immediately lost sight of Deriugin, so he decided to go around the burning house to the windy side to quietly view the scene of fire, from there. Suddenly,

from the side of the laboratory came loud shrieks from the firemen and the crowds of curious people who had broken into the garden. Eike threw himself in the direction of the shrieks and almost collided with Deriugin, who ran up at demoniacal speed.

“Look out! It has broken out into the open! Look out, Eike!” he shouted, waving everybody away with his hands.

At that moment, a gust of wind wafted a cloud of smoke upon the two, and the editor saw a sphere of fire, about eighteen inches in diameter, quivering and tossing, borne by the wind, directly towards the dumbfounded spectators.

“Save yourselves!” shouted someone in the crowd. “It’s ball lightning!”

The crowd of people scattered in all directions. Eike remained on the spot, as if nailed to the ground, but only for a few fleeting seconds. Soon, he too, threw himself aside, as the flaming whirl, flying past and only a few feet away from him, breathed forth its sultry heat and blinded the eyes with its dazzling glitter. As it moved over the sand of the road, thousands of fiery sparks fell from it upon the earth and upon objects it met on its way.

Dazed and stunned, Eike fell down, stumbling over bumps. Lying there, his terror-filled eyes continued to follow the flight of the sphere.

He saw how the trees, with which the fiery sphere collided, caught fire; how a sudden gust of wind flung it upon a group of people that tried to cross its path; how a shower of fiery rays poured down upon them and, without having had a chance to even utter a cry, three of them dropped flat on the ground and remained motionless.

The last thing Eike succeeded in seeing was how the fiery globe reached the iron fence. A loud crackling was heard, as if a shock of lightning had passed between the iron bars and the fiery cloud, and in the next

moment the sphere found itself on the outer side of the fence in which yawned a large opening, lined by torn and melted fragments of metal. The streets were filled with wild shoutings, stamping of feet, pealing of bells and loud cracklings.

IV

THE following two days were astonishing days. To some of the people who witnessed the strange events, it was perfectly clear that something unusual was occurring; it seemed clear that beginning with this day, the real agony of the Earth would lead up to imminent destruction. Yet, they did not seem to have made up their minds to speak about it in the open. Such a supposition seemed entirely too wild and absurd. Although in Eike’s newspaper, on the day following the event, there appeared an article which quite carefully explained the significance of the events, the edition was immediately suppressed by order of the authorities, who found in the news nothing but a common newspaper-bait, capable of creating a panic and of causing an undesirable commotion. Those few, who succeeded in getting copies, simply shrugged their shoulders in wonderment; how could a respectable newspaper lower itself by running after cheap sensationalism?

On the other hand, there were other eye-witnesses and victims of the destruction caused by the flight of the fiery globe through the streets of Berlin. But their number was too small to be reckoned with—ten or fifteen souls altogether. The fires that occurred in several parts of the city were rapidly extinguished. Besides, upon reaching the eastern outskirts of the city, the sphere disappeared in the direction of Furstenwalde.

Nothing at all was heard about it for two days. It did not in the least resemble an elementary catastrophe. In a word, no one seemed to think the event either serious or

significant.

Hinez, however, did not rest; like a poisoned beast he ran from one City Office to the other; he rushed to the Council of professors, to editorial offices, everywhere insisting, demanding, himself not knowing what. Nobody wanted to listen to him; they shrugged their shoulders and smiled in his face. Two—three professors of the Institute, indeed, shared his alarm and were certain that the affair was not yet finished. But not one was willing to stake his reputation or risk falling into a ridiculous position, if the whole affair should perchance turn out to be a false alarm.

Deriugin did not show himself anywhere. He had apparently forgotten about the dreadful occurrence, while he worked continuously and feverishly over some research work in the laboratory of the Institute. He hadn't even shown up at the professor's funeral, at which all the flower of the scientific world of Berlin and Germany had gathered. So completely absorbed was he in his work.

For all that, Eitel had played a conspicuous part on that day, and strange it was to see his bright uniform in the background of black frocks of the professors and their colleagues. Here, for the first time, since that significant day, young Flinder met Hinez, now an absent-minded, ill and irresponsible person.

Eitel could not, for some time, explain to himself the meaning of the fantastic tales the young engineer had been telling him.

"You mean to say, that the air is burning over there?" he queried, bewildered, wiping his forehead.

"Not burning," nervously replied Hinez, twitching and twisting, as if on springs, "not burning, but destroying itself. Its atoms, broken up and exploded into their infinitesimally small bulkiness by your father, are drifting with their fragments, with such

rapidity, that they are gradually destroying the neighboring atoms, thereby freeing the dormant energy that is hidden within them; they, scattered into hundreds of fragments, in their turn destroy new layers of gas, thus, a terrific gangrene is gradually hemming in more and more volumes of ether...."

"Does this presage anything serious?" asked Eitel confusedly.

"This presages a world conflagration!"

"But isn't it possible to stop that wandering sphere, somehow? Extinguish its growing flame, or—whatever you call it?"

"That's just where the fear lies—it is impossible, absolutely impossible, at least, in the present state of science. This process is homogeneous with the phenomenon of radioactivity and upon them we can exert no influence whatever. They are absolutely beyond our control."

The poor brain of the soldier was tangled hopelessly in the wild perspectives.

Hinez was right. On the same day, Friday evening, the first news was received from the east about the appearance of a large exhibition of ball lightning and, as described by an eyewitness, it moved in a direction towards the Polish border. The phenomenon resembled a fiery ball, five feet in diameter; it flew slowly with the wind, close to the ground. At night it emitted a dazzling bright radiance; in the daytime, it seemed like an incandescent flaming cloud. The nature of the strange appearance, doubtless, was electrical. Upon its approach, the work of the telephone and telegraph stations ceased completely; in places of weak insulation and upon the apparatus, sparks poured down in shower-like fashion; compass needles turned in all directions, as in time of severe magnetic storms.

In general, it was very difficult to pass any judgment upon the details, but from the information thus far received, it was deducible that a danger of an unknown nature was

actually threatening. The path of the sphere's movement was a streak of growing destruction. Fields and meadows stretched in wide burned-down ribbons; wherever it encountered forests, fires flashed up and long red flames rose high into the sky. Several villages were completely wiped out.

To keep silent and conceal the truth was impossible. The Sunday newspapers were filled with alarming dispatches, articles and questions addressed to the scientific societies and individual specialists working in the fields of electro-chemistry and radioactivity.

Despite the fact that it was a holiday, a special meeting of all the professors of the Institute was called, and the most prominent representatives of scientific thought, that were in Berlin at that time, were also invited. Amongst them was Hinez—tired, emaciated and apparently grown older by many years. Deriugin, who had been working on some questions, on the solution of which now depended the fate of mankind, perhaps, was there also. The thought was wild and absurd; it sounded like a fairy-tale; yet, despite it, the chairman, opening the meeting, introduced that first. Never before had the walls of this meeting hall, within which a majestic spirit of sober discussions and cold understanding, always reigned, heard similar orations. The fantasy and the fairy-tale combined with reality; mathematic formulae and apocalyptic predictions were all blended into a strange chaos. But the most terrible thing of all was, that the meeting at once declared its complete incompetence for solving the problems they were confronted with. Man was impotent. The spirit he provoked turned against him and threatened complete annihilation. The meeting suddenly became pervaded with inexplicable alarm, and with a painful feeling of hopelessness; there seemed to be no way out of it.

Then Deriugin asked for the floor, and briefly summed up the situation on hand:

“The process is enlarging and growing. To wait till the obstinate work of the brain or a fortunate chance or accident will disclose to us a method or a means to stop it—is unthinkable. We must do now, at least, whatever is possible; we must check the further movements of the sphere—arrest it...”

The hall reverberated with exclamations of wonderment, almost indignation, on the part of the assembled scientists. Some delegates openly declared that they had not come there to listen to the hollow prattle of dilettanti.

Deriugin, having waited till the noise subsided, asked that he be heard carefully till the end. And concentrated attention, a few minutes later, was the answer to his speech.

His project had the following salient points: to adjust upon a huge caterpillar-tractor, moving at a speed of 40 kilometers an hour, a powerful dynamo, fed by electric motors of several thousand horse-power. Its current should pass through the armature of the electromagnet, thereby supplying the latter with colossal force. Four—five such colossal magnetos, in Deriugin's opinion, would suffice to cause the sphere to move against a moderately blowing wind to reach the magnet poles.

Of course, the execution of the project demanded a colossal effort and a large sum of money. Germany was not the only country where precautions were necessary. It was of paramount importance to organize a system of construction of electro-magnets in several points on the continent, because it was impossible to foretell whither the tide would toss the strange enemy in the near future. Besides, the work would have to be completed in the shortest possible time; else it might be too late. The operations seemed very difficult, indeed—almost beyond possibility of fulfilment—but upon them rested the fate of mankind. It was absolutely necessary to try.

All this was so evident, that it did not

provoke any disputes or discussions. After a brief exchange of opinions, it was decided to appoint a commission to work out every detail of the project proposed by Deriugin.

In addition to that, the assembly decided to bring the case before the people and appeal to the government to immediately appropriate an adequate sum of money in order to carry out the work. Similar appeals were addressed to all the scientific societies and to the governments of the other countries, urging them to join in the common cause.

V

THREE weeks had passed. Old Europe was crumbling on every step. From one end to the other, by the will of the wind, hovered the flaming sphere, increasing steadily in size and sweeping away everything that was alive. Cities and villages were burning, forests were aflame, day and night enshrouded the sky with curling clouds and asphyxiating smoke. Meadows and fields in ever greater strips, were becoming reduced into carbonized deserts, stretching in winding ribbons over the map of terror-stricken Europe.

Crossing the Polish border, the flaming sphere on the same day reached Torna and, passing over the fortress, it destroyed two forts, several batteries and some large powder-depots. The city proper, remained on the safe side of the moving atomic whirl, but it suffered much from the explosions in the forts; the number of dead and wounded reached several hundreds.

The news of the Torna catastrophe reached Warsaw Saturday evening.

Sunday morning an enraged mob broke into the building of the German Consul General and ransacked it, due to a rumor that had passed amongst the people, that "the Germans were at the bottom of everything," and that the approaching disaster was intentionally precipitated upon Poland by

Germany. In the churches, the bells were ringing and the *Miserere* was solemnly being sung; people were imploring the Lord to rid them of the elemental disaster. An endless procession, with cross and banners, wound through the streets, and the blue smoke of the censers rose high into the bright sky. East of Warsaw a chain of batteries stood ready to meet, at midnight, the unwelcome enemy with the thunder of their metallic mouths. This was the mobilization of religion and science; heavenly and earthly army.

At two in the afternoon, the enemy appeared. Enveloped in a halo of smoke, the flaming sphere moved along the shore of the Vistula, setting the forests of Belian and Mlotzin on fire. The chain of batteries, lined up in front of the fortress, was broken up in twenty minutes, the arsenal was blown to pieces and ten minutes later the sphere burst into the streets of the city. The bells were silenced, the procession was dispersed in panic, fright and horror. Cries of despair, the hissing of the flames, the crackling of breaking glass and the roar of falling walls signified the course of flight of the atomic vortex. A quarter of an hour later, having laid waste the New World and Lazenki, it disappeared in the direction of Mokotow; behind it the vast city roared and sighed in smoke and flame.

The burning of Warsaw served as an impetus to force the other nations to join the movement sponsored by Germany. Fervidly interested became the world's greatest scientists, such as Rutherford, Bohr, Aston and many others. Laboratories worked day and night; lathes and machines roared full-throatedly in the ironworks; metal grated against metal and one after another there appeared upon the Earth iron and brass giants that were to combat the inexorable foe.

Toward the end of the week, Deriugin was commissioned to Paris to set aside all the difficulties that impeded the work in the

Creusot ironworks. From there he was supposed to go to Genoa, where the works of Italy were concentrated. The flaming sphere, meanwhile, continued its course over Europe, leaving in its wake fires, devastation and thousands of victims. Passing Warsaw, it set fire to Kovel and then disappeared for some time in the marshes of Poliesie. Thence it moved southward, flying between Kiev and Zhitomir and wiping Ouman completely off the map, it descended over the river Boog, then brushing by the eastern outskirts of Nikolaev, it wended its course over the Black Sea.

The destruction caused by it began to assume actual cosmic dimensions. Aside from the fires and victims, now it bore with it new calamities. Dreadful thunderstorms and hurricanes of unusual proportions—similar to tropical showers—were descending from the atmosphere which was pregnant with vapors from the rivers, lakes and seas, caused by the immense heat that had been radiating from the destroying globe.

Passing through the Balkan Peninsula and inflicting great damage and suffering on Belgrade, the fiery vortex, by way of Tyrol and Baxaria, entered France, and devastating the north-eastern corner, disappeared into the ocean. At this point, between Cologne and Paris, it was met by Eitel Flinder.

The turbulent days, after the death of his father, bore heavily upon the young man. He was completely lost in the chaos of strange occurrences. Ever since the time he had spoken to Hinez, after his father's funeral, he found it impossible to collect his thoughts, or direct them along proper and sound channels. The strips of fires and ruin that had swept over Europe seemed to have cut deep crosses into his breast. He could not, under any circumstances, reconcile himself to the fact that his father was the cause of the disaster now ravaging all Europe. Besides, his old hatred for Deriugin, about whom he continued

to hear and read daily, had not ceased for a single moment. And despite the fact that he could not himself explain on what this strange feeling toward the young Russian was being fed, yet, in his utter ignorance, he did not notice how that feeling of reasonless malice was gradually changing into the blind conviction that, it was the Moscovite, who was the cause of his father's death, as well as of the dreadful nightmares that continued to ravage all of Europe for the last three weeks. Though the thought was wild, without any foundation, still it continued to torment the weak mind of the young Hussar. He felt certain that all misfortunes emanated from Moscow, for, while the fiery sphere had only grazed a small part of the Russian territory, it had played great havoc everywhere else in Europe. And without giving due consideration to his actions, Eitel turned about face to Paris, right on the heels of his detested foe.

VI

DERIUGIN was no longer in Paris. Though hot on his trail, Eitel did not follow him immediately to Italy. In these days of frightful nightmares, it was not easy to travel from one country to another. All depots were beleaguered by enormous crowds of people. Bloody encounters were fought in order to get into a railroad car. The immense city was in hot delirium. Eitel observed with timid curiosity the panic which possessed the human ant-hill and it found a live response in his own heart. And what he saw redoubled his hatred for the supposed author of the unprecedented catastrophe. Paris was dying before his eyes.

All this occurred two days before Eitel's arrival in Paris. As soon as the news about the appearance of the atomic vortex in the Vosges and about its movements westward were received, an unprecedented confusion broke out on the Bourse. The most solid values tumbled with amazing speed. In the

next twenty-four hours, several of the largest concerns in the country were forced to discontinue payments. Hordes of people hastened to withdraw their money from the banks. In a word, it was an ordinary financial panic multiplied several times by ten.

A human sea inundated the streets and squares of the city and splashed out there all its hatred, malice and fear that was kept locked within the stony boxes—their houses. Here and there, amid the living tempestuous stream, gonfalone fluctuated and statues of saints and of the Madonna vasculated on their litters in the processions that implored Heaven to deliver them from the impending disaster. Improvised choruses alternated, church bells pealed and women shrieked.

On the day of Eitel's arrival in Paris there appeared in "*Figaro*" an article which played the role of a barrel of gasoline poured upon an incipient fire. One of the most renowned authorities in the field of radioactivity was summing up the course of events and reached the following definite conclusion: that the earth was coming to an end, that man is in no position to arrest the breaking up of the atoms within the atomic vortex, that by now the speed of its growth has been constantly progressing, that it is expected in the near future to reach colossal dimensions and velocity, precluding almost an immediate cataclysm. This is imminent and seemed only a question of time. Any struggle with the enemy was fruitless and ridiculous. Civilization has fulfilled its mission, reached its culminating point of development and must leave the stage....

As an aftermath of the article, it appeared as if some sluices have opened in the gigantic city as well as in the hearts of the people. Prayers and anathemas, wailing and sighing, licentious songs and gospels of priests were intermingled and rolled into one. Throngs of insensates appeared in the streets. Some raised their hands to heaven in mute

prayer, others openly gave vent to wild profligacies. One great financier and millionaire, now the possessor of only worthless securities, appeared on the balcony of his palatial residence and gazing down upon the maddening crowds, he began to tear into shreds, notes and paper currency worth hundreds of thousands of dollars, shouting in wild frenzy:

"Our earth is coming to an end! It's the end of the world!"

The wild scenes completely possessed Eitel's mind. He was certain now that he was summoned from above to save the Earth from the impending destruction and, the only way to accomplish this, was to wipe off from the face of the Earth that person who, in his opinion, was the embodiment of all the dreadful occurrences.

When the atomic vortex flew past Paris without causing any damage, the first wave of refugees that sought salvation outside the walls of Paris, surged back into the city. Eitel dashed off for Genoa. Despite the fact that at that moment the city was not in immediate danger, young Flinder found in it almost the same picture as in Paris.

In the city full of commotion and beset with despair, there was a little island against which live waves dashed themselves to pieces. Here, day and night, in fire and heat of the melting furnaces, and amid the clank and din of machines, thousands of people worked, like the children of Vulcan in the blacksmith shops of hell. The world could rage with madness, as it saw fit, but here they forged implements for the struggle for its existence, while there still was a drop of hope left.

At the time of Deriugin's arrival, three powerful engines were completed, while another five were still in work. Every day, from early morning, leaving behind him the filthy and narrow streets of the noisy city, the engineer would enter the smoky kingdom of iron and steel, whence it was destined to

launch at the needed moment the iron giants, wherever the enemy was expected.

It was here that young Flinder had found him, after an untiring chase. Deriugin was in the yard of the gigantic plant which produced yesterday a new electromagnet which was to be tested this day. At first the engines were tested. The groaning of their oppressive weights shook up the machines with a heavy tremor, so that the earth began to shake under them. Several mechanics, together with Deriugin, walked around the iron monsters, observing their rhythm, breath and the workings of each and every part of them.

The chief engineer, a tall, slim Italian, pointed out some inaccuracies in the refrigerator; a group of mechanics stopped to watch a tiny stream of gas that had been leaking out from somewhere. Deriugin stepped aside, writing something into his notebook, when suddenly, in the rear of the dark passageway of the interior building, appeared the figure of a man who stopped bewildered in the center of the yard, apparently stunned by the clanking and noise that filled the air from all sides. The visitor's face seemed familiar to Deriugin, but, for the moment, he could not recollect where he had met these restlessly seeking eyes, the protuberant forehead and hard-compressed lips.

Something strange, impetuous and alarming was in the stranger's pose, and Deriugin was about to inquire how and wherefore he had come here, when their eyes suddenly met. Within a trice, Deriugin's memory conjured up the forgotten image for him, and within the same trice the intruder's eyes became inflamed with such rabid hatred, that the engineer unwillingly retreated. Eitel's right hand dropped into his pocket and within a twinkle of an eye, Deriugin saw before himself the dark gap of the pistol's bore.

Not realizing what it was all about, he

uttered a cry and dashed off to the side of the ponderous engine. A shot rent the air, followed by another. Deriugin felt a burning sensation on his left shoulder. He turned around. Eitel stood a few feet away from him, aiming at close range for a new shot. From the cabin of the electromagnet a frightened face was peering out. At the refrigerator, the mechanics had gathered into a group, not knowing what to do.

In this very brief moment, there flashed through Deriugin's mind a bright thought. He made a sprint to the side of the magnet and shouted to the mechanic:

"Enrico, turn on the current!"

Another shot rent the air. Deriugin dropped to the ground. In the next moment something very astonishing had occurred: the pistol, torn out from Eitel's hand by the great power of the magnet, flew up into the air the dozen feet that separated it from the magnet, struck with all its might against the frame and remained there, as if held up by an unseen hand.

Confounded, Flinder remained standing unmoved, gazing about himself with frenzied eyes. When the people ran up to him and grasped him by the arm, he did not try to resist, but followed silently after them. Turning back his head, from time to time, he looked up bewilderingly at his weapon, which hung upon the strange monster as though it were glued down to it.

Several people ran up to Deriugin and busied themselves about him. Happily, his wounds, one in the shoulder, the other in the left leg, were not dangerous; at any rate, the bone was not touched. He was carried into the central building.

"Well, well, Signer Deriugin, I am happy to congratulate you!" said the chief engineer, after he was bandaged. "You certainly had a lucky escape. Had you not torn the pistol from the fiend's hand with the aid of the electro-magnet, we would not have had the

pleasure of speaking to you now.”

Indeed, the current turned into the field coils had transformed it into a powerful magnet, which attracted Flinder’s pistol.

“Everything is well—that ends well!” replied Deriugin smilingly. “But it is too bad, for the accident will retard my work for a few days.”

VII

A CROSS-EXAMINATION of Eitel proved beyond conjecture that they were dealing with a mentally-deranged person. He was one of those innumerable victims of the turbulent quarter of this century, whose fatigued and strained mind could not resist the powerful attacks of these frightful days. To turn him over to the authorities was not considered a wise move, as the streets nowadays were overfilled with similar madmen. Besides, the city itself resembled a huge Bedlam. It was decided to detain him on the factory grounds under special guard, in one of the rooms of the resident body of engineers.

However, in the pellmell of new events, he was completely forgotten. At the end of the week a dispatch came that the fiery vortex had again appeared on the French coast and it was coursing along the southwestern boundary toward the Mediterranean Sea. Three electro-magnets from the Creusot Works were sent out by railroad to intercept it, but they arrived too late. Destroying Toulouse and converting the Haute-Garonne into a veritable desert, the fiery vortex again wended its course over the maritime expanse. Now, within about forty-eight hours, it was expected somewhere on the western coast of Italy. Five new engines, fully equipped, were mounted on platforms in Genoa and shipped to Rome, whence it was easy to move them to any point on the coast. Locomotives stood in readiness, day and night, awaiting orders to fling their loads into action.

Deriugin, the chief engineer, and a number of mechanics were all ready at any moment to meet the treacherous foe.

However, after reading through the details about the movements of the atomic flame, the young engineer suddenly began to doubt the expediency of his own project. The cursed sphere continued to grow ever larger and larger, making the approach to it difficult and dangerous. An entirely new question now arose. Would it be possible to get near enough the sphere—within the proximity of about 70 or 100 feet, for instance, without being exposed to the danger of being scorched-in its sultry atmosphere? Would the electromagnets be effective at such a distance? And, if so, suppose they succeeded in encircling and arresting it? What then? Wasn’t it too late?...

Deriugin, however, did not share his views with his comrades, but continued to work as obstinately as before. But this was not all; there was still another discouraging feature of this affair. Alarming dispatches were arriving from Naples; Vesuvius was speaking in a manner never heard before. Tremendous pillars of vapor, 12 to 18 miles high, were rising from the crater. The Earth was sighing and rumbling as on the day of the Last Judgment. Naples was already destroyed and the inhabitants were fleeing from under the ruins in wild terror.

All this was sufficiently awe-inspiring in itself, without adding to the already difficult struggle with the atomic vortex. All the railroads were crammed with train-loads of refugees from the South. The panic, doubled by the new catastrophe, completely disorganized the authorities. Besides, even here, about two hundred kilometers away from the volcano, light tremors of the Earth were beginning to be felt. And most of all, a noticeable wind was beginning to draw. The chief engineer was grumbling and scowling, it seemed, as if he too were beginning to wonder whether the struggle was worth the pains.

On Tuesday evening, June 1, the radio announced that the vortex had passed between Corsica and Sardinia, taking an eastward course; at the same time another engine had arrived in Rome from Genoa and five from LeCreusot, France, to assist in the work. This was considered sufficient power to cope with the situation. The whole division of engines moved further south, every necessary step was taken to facilitate the unloading, when the hour of battle arrived, or to trail the fiery enemy, if a chance presented itself. A chain of observation posts were stationed all along the coast; on belfries, churches and field watch-towers. Everyone's nerves were strained to the extreme by feverish expectations. Meanwhile, from the south-east, the din of the volcano was clearly audible and a fiery pillar, like a giant torch, stood high in the darkening sky. Deriugin was filled with apprehension, as he anticipated the new, impending storm and shook his head sadly when he realized suddenly that the wind had begun to play stronger and sharper.

At two in the morning, the flaming cloud appeared alongside the shore. The engines were immediately started eastward toward the sea. At three o'clock, in two lines of a semi-circle one kilometer in diameter, they rolled down to the sea at the very moment when the flaming sphere, in curling vapor, whistling, hissing, with rolling thunder, reached the contingent almost in the center of the arc formed by the iron giants.

Deriugin was in one of the electro-magnets; he sat in a small cabin together with the commander and mechanic in the curve of the left line. It was dawning and in a few minutes the whole panorama was as clear as daylight. On the right and on the left puffed and roared the metallic parts of the massive monsters, resembling huge crabs. On the upper platforms gleamed flashes of light—optic signals, transmitting orders from the chief engineer, whose engine was outside the

arc of the second line. Directly in front the fiery, fuming sphere, freed from the vaporous atmosphere, darted lightning, emitted sparks, roared and thundered and breathed forth its heat and blinding light. Here, at a distance of a half a kilometer, the intensity of the heat was being felt. Everywhere, on the engines, over the bushes and trees along the shore, untouched as yet, jumped and quivered lights, like drops of cold water. At the same time, from the south-east ever louder roared the distant mountain and a huge black-gray pillar standing in the air, tossed its smoky peak up high on the crest of the wind.

The strange chase began.

The center of the arc remained stationary while its ends gradually were bending in, encircling the sphere from all sides and from the rear. The electro-magnets were put into action, but, at such a distance their influence, apparently, was insufficient. The fiery vortex moved eastward into the depth of the continent and the engines were retreating at the same speed. Retreating thus about six miles amid thundering, booming, crackling and dinning from all sides, the chief engineer decided to start the offensive. The center of the front tractors halted, the others closed on to the center from all sides, locking the ring tighter. The fiery sphere was approaching. The engines shuddered, sighed, and bellowed, as if alive. The dazzling light cut the eyes and the air was stifled with heat, as if hell itself had burst open. It was becoming more and more difficult to breathe; the blood rushed up the temples; the body reeked with perspiration, ached and grieved.

The cloud continued its approach.

Was it possible that all the efforts would be reduced to naught—turned into child's play? Was it possible that the attempts were made with inadequate means and that the vortex would fly past over their corpses on to the Apennines? The fiery cloud was so near that the eyes were about to burst with heat; the

head was spinning; there was no air in the chest. Deriugin unwillingly shut his eyes; he was about to faint. Suddenly someone grasped his arm. He opened his eyes. The chief mechanic, his face disfigured and his eyes bulging out, pressed his fingers painfully against Deriugin's, shouting madly, trying to overcome the furious din of the engines:

"It is stopping! It is stopping!"

Indeed, the sphere was no longer approaching; this huge flaming bubble wavered, to and fro, making a few attempts to break away, and finally became congealed on the spot.

Deriugin felt that hot tears burst out on his eyes.

"Devil take it! It is a victory just the same! Although temporary and shaky, still, it is a victory! This accursed human scourge was imprisoned after all!"

SUDDENLY darkness set in—as if a blanket of gray had covered up the turbid sky. Deriugin turned his head back over his shoulders and fell into a tremor; half of the horizon from south-east was enveloped in utter darkness; a lace-like black cloud spreading all the way from the volcano, blotted out the sun. In proportion thereof, the fiery sphere in the front shone brighter and lighter. From above fell heavy flocks of gray dust. The animal instinct enslaved his heart and filled up the body with wizened imbecility.

Someone clutched Deriugin's arm again. The chief mechanic, whose face was disfigured with horror, pointed to the East and shouted hoarsely:

"The wind, the wind, Santa Madonna!!"

Indeed, from the northwest the wind bore clouds of sand, heaps of ashes, dry grass and twirled them into pillars of whirlwinds from right and left. The fiery-sphere shuddered under the blows, rocked and

sighed; then, making two attempts to free itself, it suddenly gave an enormous leap toward the southern end of the enclosed circle. On the platforms of the tractors little fires began to jump restlessly, signaling the new formation. But it was too late. Cut up by the hurricane, the atomic vortex within a few seconds flew past the distance between the line of magnets and, enveloping in a flaming shroud the nearest of them, took itself off into the booming and rumbling darkness.

For several minutes the tractors tossed about confusedly like a herd of awkward turtles. Then, they stretched out in three lines and thundering and clanking with the metals, they took up the chase. Meanwhile, the darkness continued to spread, blanketing more than half of the sky. The wild chase continued for fifteen minutes. The fiery trail of the whirl disappeared completely in the blinding darkness which now had enveloped the full horizon. A torrent of rain poured down, mixed with dirt and ashes. To continue, was both absurd and impossible. Deriugin sat apathetically in his place, his arms crossed on his chest and his eyes shut, completely crushed by the enraged elements. Indolently his thoughts roved in his head, stopping at nothing. Thus passed half an hour.

Then it appeared as if the Earth had heaved a heavy sigh from its depths and quaked all the way down to its bottomless abyss. A shuddering, incredible roar devoured everything else and was precipitated in rumblings of sounds upon the trembling darkness. A giant fiery pillar grew up in measureless height, as if the Earth's womb had belched out its contents into heaven. A hot wave of heat smote Deriugin and he lost his conscience.

When he recovered, he found himself in one of Rome's hospitals amid tens of thousands of wounded, maimed and half-crazed people who had escaped death during the unusual catastrophe which had befallen

their unfortunate country.

He could not conceive for a long time what had happened. The events resembled too much the nightmares of a sick brain. But here's what happened: The earthquake in Campagna ended with such a colossal eruption, that it could be compared only with the catastrophe on the Krakatao Island in the Strait of Sunda, in 1883. Three consecutive subterranean shocks discharged from the crater of Vesuvius incredible amounts of glowing lava, pumice and ashes.

The power of explosion was of such nature, that the air-wave produced by it, was impelled into the upper layers of the atmosphere. These were the shocks that impressed themselves uppermost in Deriugin's mind. All the cities and villages within and about 100-150 kilometers around the center of the catastrophe were either destroyed by subterranean shocks and hurricanes, or buried under the layers of ashes and liquefied rock dirt. The coast was inundated by a huge wave swept upon it from the sea. The number of killed was not yet known, but it was estimated to exceed several hundred thousands; But together with that, in the general chaos of destruction, disappeared the atomic vortex. It was difficult, however, to say with any degree of certainty what had happened to it, but the postulate forwarded by

Professor Umbero Medona, of the Bologna University, was accepted as plausible and logical.

Apparently, the fiery sphere fell into a cyclone formed about Vesuvius, owing to the rising currents of air above the crater. Attracted by it, the sphere tore out of the ring of engines and sped away along the wide spiral toward the center of the tornado, and at the moment it reached the crater, the main explosion occurred, ejecting the atomic vortex together with the ether wave out of the bounds of the Earth's atmosphere. Opinions were current to the effect that such coincidence was not of common nature, but was caused by a chain of phenomena. Yet, to prove that this was so, was a thing beyond possibility.

At any rate, the Earth rid itself of the dreadful menace albeit at a dreadful price. Eitel Flinder suddenly disappeared from Genoa, but, in all probability met his death in the catastrophe that buried the beautiful Campagna.

Three months later, the astronomers at the Greenwich Observatory detected a tiny star that was performing its circle around the Earth in the form of a satellite, at the distance of about twelve hundred miles. This was the atomic vortex that was gradually dissipating into universal space its dreadful energy, no longer to be feared by man.