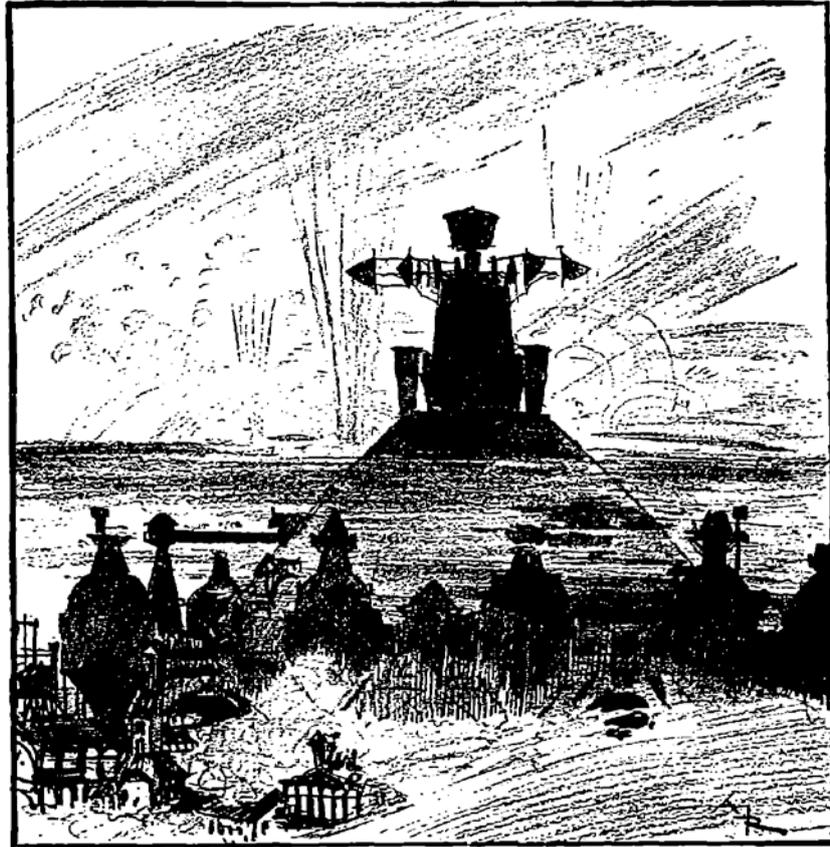


Electric Life



To my friend, Angelo Mariani.

A.R.



PART ONE

I

On the afternoon of 12 December 1953, as a consequence of some small accident whose cause remained unknown, a violent electric storm—a “tornado,” according to the technical term—was unleashed over the entirety of Western Europe and occasioned, in the midst of the confusion and profound disturbances to life in general, very unexpected results for certain individuals whom we shall introduce in due course.

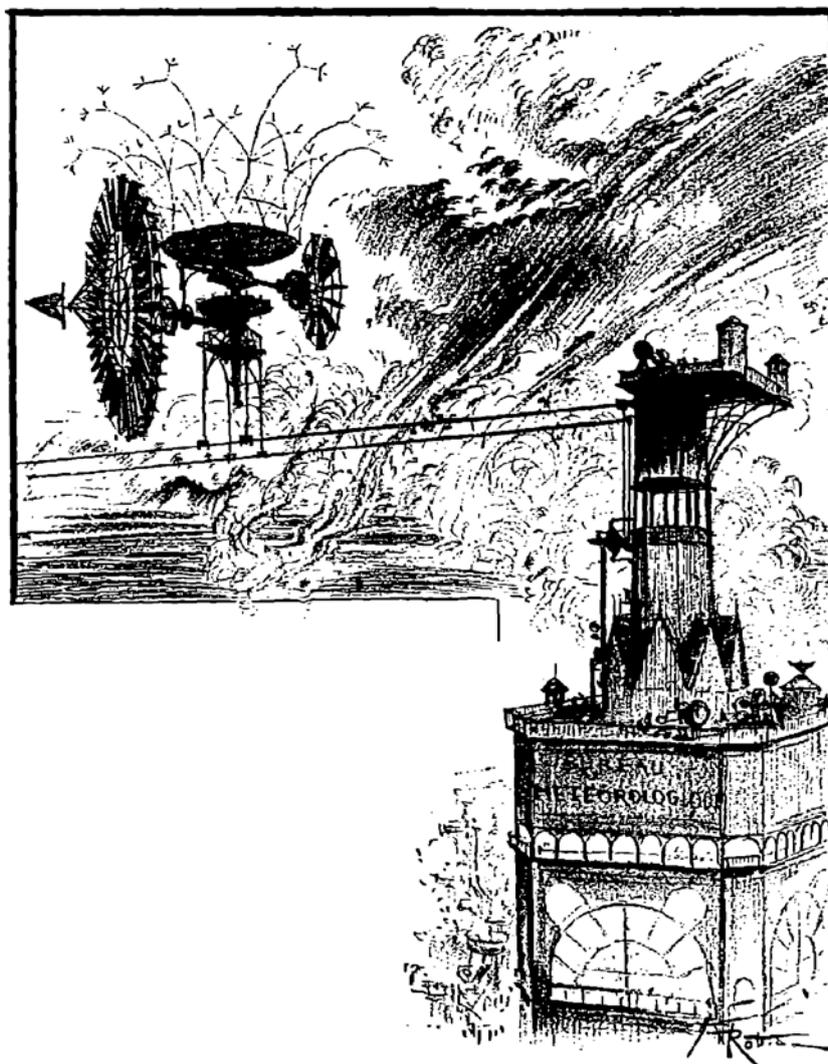
Snow had been falling in large quantities for two weeks, covering all of France except for a small area in the Midi with a thick white carpet, magnificent but very inconvenient. As usual, The Ministry of Highways and Aerial and Terrestrial Communications ordered an artificial thaw, and the huge Power Station No.17 in the Ardèche, charged with the operation, succeeded in less than five hours in clearing the entire north-west of the continent of snow, the white mourning-dress that Nature, her horizons already saddened by the livid mists of winter, had once worn for weeks on end.

Modern science has recently placed powerful means of action in human hands, to help in the struggle against the elements, including the harsh weather of winter, to all the rigors of which it was once necessary to submit with resignation, wrapping oneself up and huddling at one’s fireside at home. Today, the Observatories are no longer content to record atmospheric variations passively; equipped for the battle against intemperate variations, they act, and correct the disorders of Nature to the extent that they can.

When the North Wind blows the chill of the polar ice-sheets toward us, the electricians direct stronger countercurrents against the northerly airflow, which enclose them in an artificial cyclonic

nucleus and take them to warm up over the deserts of Africa or Asia, which they fecundate as they pass overhead with torrential rainfall. The sands of Nubia and torrid Arabia have already been rendered fecund. Similarly, when the summer sun overheats our fields and makes the blood and brains of poor peasants and city-dwellers simmer painfully, artificial currents establish a refreshing atmospheric circulation between us and the Arctic seas.

Humans no longer submit to the whims of the atmosphere, sometimes so harmful or disastrous, as a fatality against which no contest is possible. Humans are no longer humble, timid, fearful insects, defenseless against the release of the brutal forces of Nature, bowing their heads beneath the yoke and sadly supporting the routine horror of interminable winters, as well as tempestuous upheavals and cyclones. The roles are reversed; today, it is Nature that meekly submits to the reflective will of humans, who know how to modify the eternal cycle of the seasons at will, as necessary, and to give each region what it requires, in accordance with the various needs of different countries: the quantity of heat that is necessary, the share of coolness for which it sighs, or the refreshing rains demanded by soil that is too dry. People no longer want to shiver unnecessarily or cook in their own juices.



Humans have also regulated the seasons and distributed them more suitably. They have captured the rain by means of electric apparatus and, so to speak, taken in hand the clouds charged with humidity, the inundations of which threaten to ruin crops, in order to guide them elsewhere, toward regions where the earth is scorched, and where depleted agriculture yearns for beneficent rain.

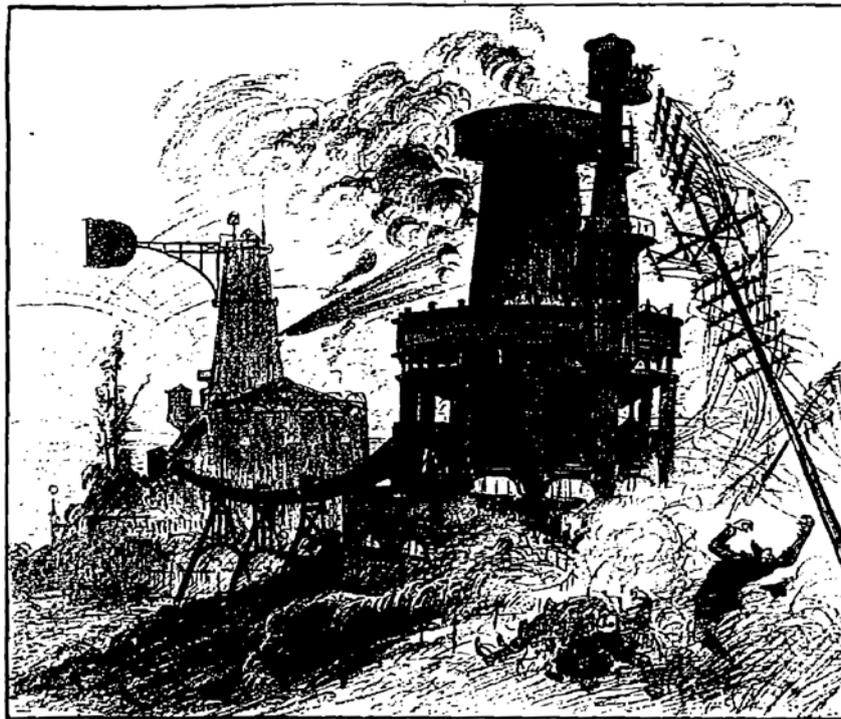
This marvelous conquest of modern science, scarcely fifteen years old in 1953, has already changed the face of the globe in many ways; it had rendered life to areas that had become virtually uninhabitable, deserts of crumbled rock or arid sands, in which creatures vegetated miserably between

hunger and thirst. Go and see ancient Nubia reborn, or the burning steppes of Persia, strewn with ruins that were the capitals of extinct nations. The once-desiccated breasts of Asia, the veritable mother of peoples, are once again giving milk to the sons of humankind!

It is the definitive conquest of Electricity, the mysterious motor of worlds, that has permitted people to change what appeared to be immutable, to restore the ancient order of things, to resume control of Creation, and to modify what was once believed to remain eternally above and beyond the reach of human hands.

Electricity is the Great Slave. Electricity, the respiration of the universe, the fluid running through the veins of the Earth or wandering in space in fulgurant zigzags radiating through the immensities of the ether, has been seized, enchained and domesticated. Now, it is obedient to the orders of the human beings who were once terrified by the manifestations of its incomprehensible power; humbly and submissively, it goes where it is commanded to go, working and striving on their behalf. It is the inexhaustible source of light and force; its captive power is employed to activate the enormous accumulation of colossal machines in our millions of factories, as well as the most delicate and subtle mechanisms. It carries voices instantaneously from one end of the earth to the other, suppresses the limits of vision, and transports its human masters—once ridiculous earthbound creatures, like larval insects—through the air. Finally, while it is a tool, a torch, an intercontinental, transoceanic—and soon interplanetary—voice-carrier, and a thousand other things, it is also a terrible weapon, a terrifying instrument of war.

However, the slave that we have been able to compel to render us so many and varied services is not so completely domesticated, so securely riveted to its chains, that it does not rebel occasionally. It has to be watched, and watched perpetually, for the slightest error, the smallest negligence or inattention, can give it an opportunity, which it will not neglect, for a sneak attack, or even one of those abrupt uprisings that cause catastrophes to burst forth.



On the December day in question, unfortunately, one of those accidents, caused by an oversight or a momentary distraction on the part of some employee, occurred during the defrosting operation carried out by Power Station No. 17. At the very moment when the task had just been successfully completed, the great Storage Unit sprung a leak, so suddenly that the personnel could only preserve two sectors out of twelve; an enormous leak and a formidable deflagration ensued.

A tornado was unleashed: one of those terribly destructive electrical storms, a few of which occur every year in the electrical centers, in spite of all provisions and precautions. It is necessary to

accustom ourselves to them, like the thousand other serious or trivial accidents to which we are exposed as we move through the extreme complications of our ultra-scientific civilization.

To begin with, the Station 17 tornado followed a capricious trajectory, along which a certain number of people who were telephoning were struck dead or paralyzed; then the crazy current, attracting latent electricity to it with an irresistible force, took on a rapid gyratory movement, after the fashion of natural cyclones, producing a further series of accidents in the regions through which it passed and imparting a disastrous disturbance to general life, which would soon have resulted in a series of violent regional cataclysms if the captation apparatus of the various regions had not gone into immediate action. The electricians were alert, though, and, as usual, after a few more or less serious disasters, the tornado would be aborted and the crazy current captured and channeled before the final explosion.

In Paris, in a sumptuous dwelling in the sixty-second arrondissement, on the heights of Sannois, a father was in the process of scolding his son vehemently when the tornado burst. The father in question was none other than the famous Philoxène Lorriss, the great inventor, the world-renowned scientist, the biggest of all the big brains of scientific industry.



In Philoxène Lorriss, we are by no means dealing with the meek and timid bespectacled scientists of old. Tall, stout, red-faced and bearded, Philoxène Lorriss is a man of decisive appearance, with curt and precise gestures and a loud voice. The son of a petty bourgeois family living—or, rather, vegetating—placidly on their annual income of forty thousand livres, he is a self-made man. Having graduated top of his class, first from the École Polytechnique and then the Institute of International Scientific Industry, he refused to accept the offer made by a group of financiers to *exploit* him—to use the technical term—and set out forthrightly to do that for himself, issuing four thousand ten-year shares at 5,000 francs apiece, which were all snapped up on the day of issue, on the strength of his reputation.

With the millions thus raised, Philoxène Lorriss immediately founded a huge factory for the implementation of a large-scale project that he planned and nurtured with love, the profits of which were so considerable that the returns on the major share-holding

reserved to him by the company charter enabled him to buy back all the issued shares before the end of the fourth year. From then on, his business took on a prodigious momentum; he set up an admirably well-organized research laboratory, surrounded himself with first-class collaborators, and launched a dozen major operations one after another, based on his inventions and discoveries.

Honors, fame and wealth all arrived at the same time for the fortunate Philoxène Lorriss. He needed the money for his immense enterprises, his innumerable projects, his factories, laboratories, observatories and testing-grounds. The business enterprises supplied the necessary funds for research on a lavish scale. As for honors, Philoxène Lorriss was by no means disdainful of them; he was soon a member of all the Academies and all the Institutes, a dignitary of every Order of Old Europe, Mature America and Young Oceania.

The great enterprise of the Paris-Peking Metal-Plated Paper Tubes—the Pneumatic Tubeway—won Philoxène Lorriss the title of Emerald Button Mandarin in China, and that of Duke of Tiflis in Transcaucasia. He was already Count Lorriss in the nobility created by the United States of America, a Baron in Danubia, and many other things elsewhere, and although he was proudest of all to be Philoxène Lorriss, he never forgot to line up the interminable series of his titles when the occasion warranted, because it looked so impressive on prospectuses.

Even though he was plunged neck-deep in his research and business interests, Philoxène Lorriss, by sheer force of activity, found time for play and social life, and to give his exuberant nature all the true satisfactions that life can offer a vigorous man in possession of a healthy body and a well-balanced mind. Having married between discoveries and inventions, he had a son, Georges Lorriss—the one whom we find him in the process of scolding on the day of the tornado.

Georges Lorriss is a handsome boy of twenty-seven or twenty-eight, as tall and solid as his father, with decisive features, distinguished by a forceful blond moustache. He is striding back and forth across the room and sometimes replying in a cheerful and agreeable tone to his father's admonitions.

The latter is not there in person—he is three hundred leagues away, in the house of the chief engineer of his vanadium mines in the mountains of Catalonia—but he appears on the crystal screen of the telephonoscope: that admirable invention, a great improvement of the simple telephone, recently brought to the utmost degree of perfection by Philoxène Lorriss himself.

The invention in question not only permits people to converse at long distances, with anyone linked electrically to the worldwide network of wires, but also to see their interlocutors, individually framed, in their distant homes: a fortunate suppression of absence, which secures the happiness of families that are often scattered throughout the globe in our busy era, but can come together in the evening if they wish, dining together at different tables, far apart, but almost forming a single family table.

On the screen of the Tele—the customary abbreviation of the instrument's name—Philoxène appears, also striding back and forth in his room, a cigar between his teeth and his hands behind his back. He is speaking.

"But after all, my dear boy," he said, "I've done everything possible and more to make of you what I, Philoxène Lorriss, have the right to expect and demand—which is to say, a product of the highest cultivation, a superior, refined, improved Lorriss—but look at all you can offer me by way of a son! A Georges Lorriss who is well-behaved, I concede, and intelligent, I don't deny—but that's all: a mere lieutenant in the Chemical Artillery, at...how old are you?"

"Twenty-seven, alas!" George replied, with a smile, turning toward the telephonoscope screen.

"I'm not laughing—make some effort to be serious," said Philoxène Lorriss, with vivacity, taking a few energetic puffs on his cigar.

"Your cigar's gone out," said the son. "I can't offer you a match; you're too far away..."

"In sum," the father continued, "at your age, I'd already launched my first major enterprises; I was already the famous Philox Lorriss—but you're content to be a 'daddy's boy,' you calmly let the thread of life go by. What are you? No particular qualifications, emerged from the best schools with modest results, and, for the moment, a simple lieutenant in the Chemical Artillery..."

"That's all, alas," said the young man, while his father, in the telephonoscope screen, turned his back angrily and went to the far end of his room, "but is it my fault that you've discovered or invented everything, and organized everything? I've arrived too late in a world too well-equipped and too well-honed. You've left nothing for the rest of us to discover!"

"Get away! We're only in the first infantile babblings of science; the next century will make fun of us. But let's not stray from the point. Georges, my boy, I'm heart-broken, but, such as you are, you scarcely seem to me to be ready, now that your years of national service are over, to take up the thread of my work—which is to say, to direct my principal laboratory, the universally-reputed Philox Lorriss Laboratory, and the two hundred factories or businesses that exploit my discoveries."

"Do you want to retire from business?"

"Never!" cried the father, forcefully. "But I intended to associate you seriously with my projects, to march to discovery with you, to do research with you, to seek and to find...that's what I'd have done with the person I wanted to make of you, as if I had two selves to think and to act...but you can't be that second self, my boy. It's deplorable! I haven't paid enough attention in the past to atavistic influences alas; I wasn't sufficiently informed. O youth! I, the star pupil of the International Institute of Scientific Industry, have been negligent! For I'm obliged to confess, my poor boy, that it's not entirely your fault if you don't have a sufficiently scientific mind—it's your mother's fault, of course—or, rather, that of one of your mother's ancestors. I've made my enquiries a trifle late in the day, I agree, and that's where I've been culpable. I've made enquiries, and I've discovered in your mother's family..."

"What?" said Georges, intrigued.

"Only three generations back...a flaw, a vice, a defect..."

"A defect?"

"Yes, 115 years ago, around 1840, her great-grandfather—which is to say, your great-great-grandfather—was..."

"Was what? What are you telling me? You're scaring me!"

“An artist!” said Philox Lorriss, piteously, falling into an armchair.

George Lorriss could not help laughing, irreverently—and in response to that laughter, his father leapt furiously to the telephonoscope.

“Yes, an artist!” he cried, “And what’s more, an idealistic, nebulous artist—a romantic, as they said in those days: a dreamer, a trifler, a peddler of nonsense. You can take it from me that I’ve informed myself. In order to know the full extent of my misfortune, I’ve consulted our great present-day artists, the photo-painters of the Institut. I know what he was, your great-great-grandfather! I only had a light and evidently vaporous mind at his disposal, like yours, deprived of serious circumvolutions, like yours, for it’s from him that you’ve got this inaptitude for the positive sciences for which I’m reproaching you. O atavism! Such are your blows! How can the influence of this ancestor, who lives again in you, be obliterated? How can he be killed, the rascal? For you can take it for granted that I shall fight and kill him...”

“How can an ancestor dead for more than a hundred years be killed?” said Georges Lorriss, smiling. “You know that I’ll defend my ancestor, for whom I don’t profess the same superb disdain as you...”

“I want to destroy him—metaphorically, of course, since the scoundrel who is ruining my plans is out of range; I want to combat his unfortunate influence and overcome it. You can take it for granted, my boy, that I’m not going to abandon you, you poor child. I won’t abandon my own flesh and blood, unlucky rather than culpable. Certainly not! I can’t remake you, alas; I can’t return you to the Intensive Scientific Institute for four or five years, as I’ve thought of doing...”

“Thanks,” said Georges, fearfully. “I’d prefer something else...”

“I have something else—something better, for you wouldn’t come out any stronger...”

“What is this better plan?”

“This: I shall marry you off. I’ll save us by marriage.”

“Marriage!” exclaimed Georges, amazed.

“Wait! A planned, rational marriage, in which I’ll have loaded the dice in our favor. I need four grandchildren, of any sex—I’d prefer boys if possible, but in any case, four chips off the Philox Lorriss block: a chemist, a naturalist, a physician and a technologist, who will complement one another and perpetuate the Philox Lorriss scientific dynasty. I consider the intermediate generation to be spoiled...”

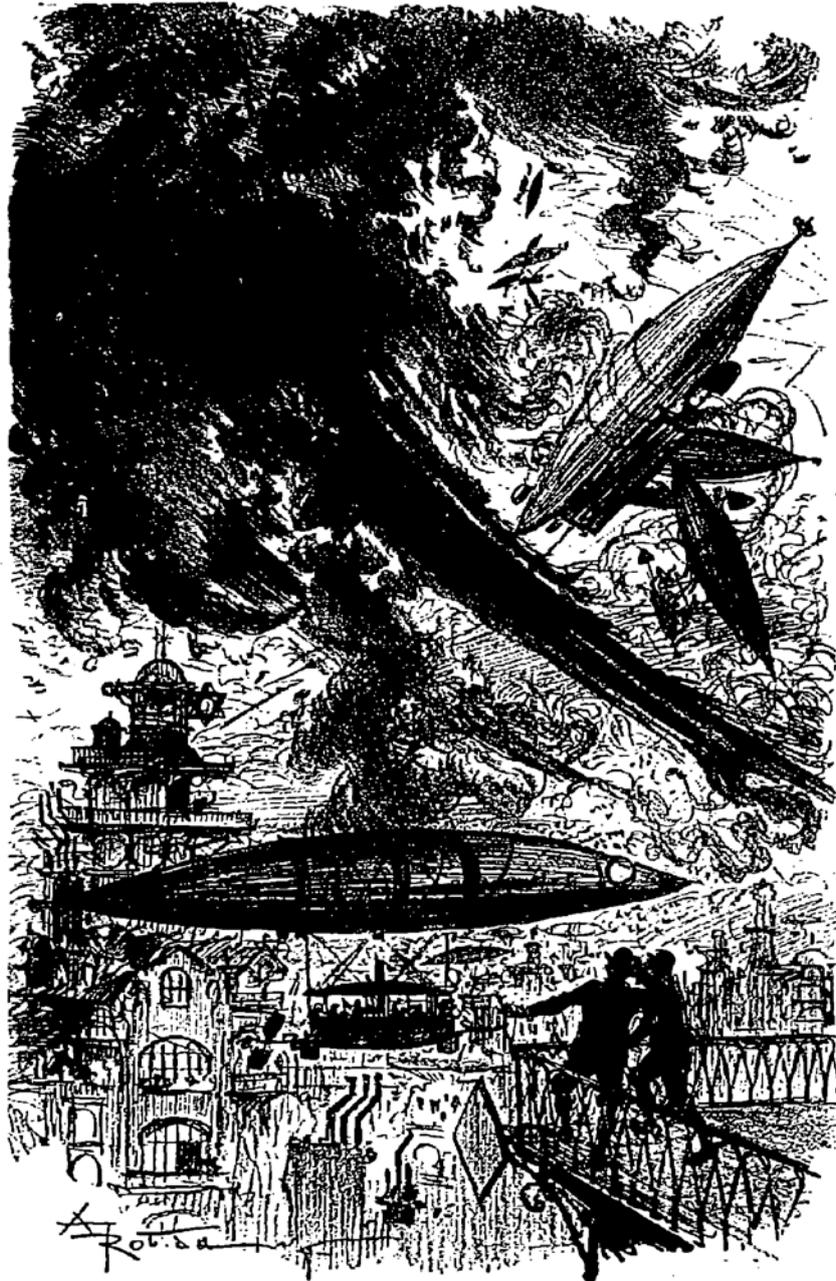
“Thanks.”

“Utterly ruined! It’s worthless, of no account. I shall therefore set that intermediate generation aside, and make arrangements to stick around until the moment comes to hand over to my grandchildren. That’s my plan! So, I’m going to marry you off...”

“May one know to whom?”

“That doesn’t concern you. I don’t know myself, yet. I need a true scientific mind, sufficiently mature—as mature as possible, in order to have a head free from all frivolous notions...”

Georges was about to reply when the first electric shock due to the accident at Station 17 was produced. Georges fell into his armchair and swiftly raised his feet, in order to avoid contact with the floor, which was transmitting further shocks.



His father had not flinched. “Imbecile!” he shouted. “You don’t have insulating soles on, and you’re walking around like that, in a house where electricity is flowing everywhere, through a network of intersecting wires, circulating like the blood in a man’s veins! Put some on and pay attention. It’s a leak that’s just occurred somewhere, and one never knows how far these accidents might extend. No, I haven’t time—I’ll let you go. Besides which, the line’s breaking up...”

Indeed, the sharp image on the Tele screen suddenly faded, its contours becoming vague, and there was soon nothing but a series of confused and tremulous patches.

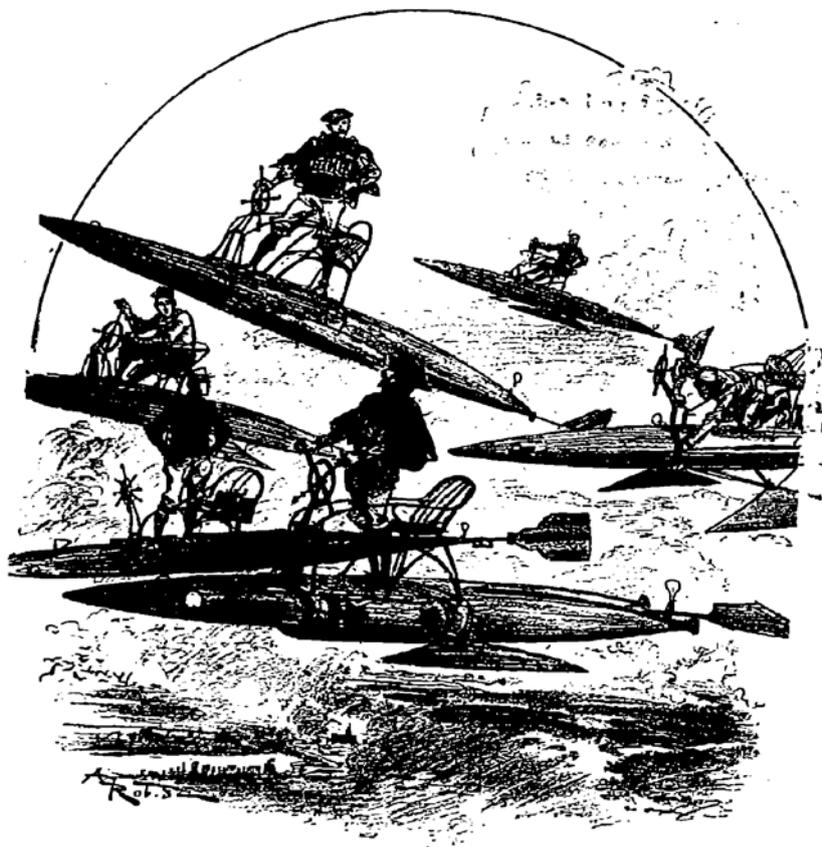
II

The tornado was at its height; the accidents caused by the terrible power of the crazy current—by the frightful natural forces stored, concentrated and measured by humans, suddenly escaped from the directive grip, now free from any inhibition—multiplied over a region representing almost a fifth of Europe. For an hour, all electrical communications had been cut off; one can imagine the disruption to business and the march of society. Aerial traffic was similarly interrupted; the sky had emptied of all

aerial vehicles almost instantaneously, and the hurricane had complete freedom to unfold its dangerous spirals in the atmosphere.

Although all the airships had been garaged as quickly as possible at the first alarm from their electrometers, a few crashes occurred. Several airships encountered by the whirlwind at the moment that it flowed out of the Storage Unit were literally pulverized over Lyon; nothing but shards fell to earth. Airships taken by surprise here and there, without having had time to surround themselves with envelopes of insulating gas—the role of which is analogous to that of oil in maritime tempests—came down broken, with their personnel killed or wounded.

The worst disaster occurred between Orléans and Tours. The Touraine Aeronautic Club was holding its big annual regatta that day. Between a thousand and twelve hundred aerial vehicles of every size and shape were following the progress of the competitions on the racecourse, in which twenty-eight aerofleches¹ were engaged. All eyes being on the competitors in most of the vehicles, the fact that the electrometer needles had begun to spin madly went unperceived, and even the alarm bells went unheard amid the cheers and shouts of the punters.



When the danger was realized, there was a fantastic stampede among the crowd of airships to seek shelter on the ground. The thousand vehicles came down at top speed in a confused and entangled mass, in which landing accidents were numerous and often serious. The tornado, arriving with

¹ I have anglicized Robida's improvised term *aéroflèches* rather than hazard a translation; a *flèche* is an arrow, a dart or a spire. Robida never says explicitly that any of his imagined aircraft are heavier than air, although his *hélicoptères* [helicopters] clearly are, and the fact that he continually contrasts *aéronefs* [airships] with *aérocabs* [aircabs] is suggestive of some essential difference. The illustration related to this passage depicts an *aéroflèche* as wingless cylinder, rounded at the front and tapering to a point at the rear, with two men stationed on a dorsal platform; some aircabs also resemble airborne canoes or flying motor-cycles fitted with battering-rams, although others look more like miniature zeppelins.

lightning rapidity, swept away all those that had not had time to flee; some of the broken airships carried off by the whirlwind were hurled to the ground a few seconds later fifty leagues away. Fortunately, in the midst of the disaster, the large airships carrying the members of the Aeronautic Club and their families were provided with new apparatus linking the electrometers to the cylinders of insulating gas by means of automatic valves. The apparatus opened of its own accord as soon as the needle marked danger, and the airships, enveloped in protective clouds, were only severely shaken; they were able to get back to the club's airfield.

If we return to Paris, to the Philox Lorris house, at the height of the tornado, we find the Sannois district in an easily-imaginable chaos: terrifying lightning-bolts are springing forth everywhere, and frightful explosions are rumbling in the distance, the echoes of which reverberate continually, gradually weakening only to resume abruptly and burst out with increased violence.



George Lorris, clad in insulating shoes and gloves, is watching the spectacle of the convulsive sky from his bedroom window. There is nothing to do but wait, in prudent inaction, for the crazy current to be captured.

Suddenly, after a crescendo of electrical discharges and thunderclaps accompanied by prodigious lightning-bolts, in sheets and zigzags, Nature seemed to utter an immense sigh of relief and calm descends instantaneously. The heroic engineers and employees of Station 28 at Amiens had just succeeded in cracking the tornado and channeling the crazy current. The deputy chief engineer and thirteen men had fallen victim to their devotion, but it was all over, and there were no further disasters to be feared.

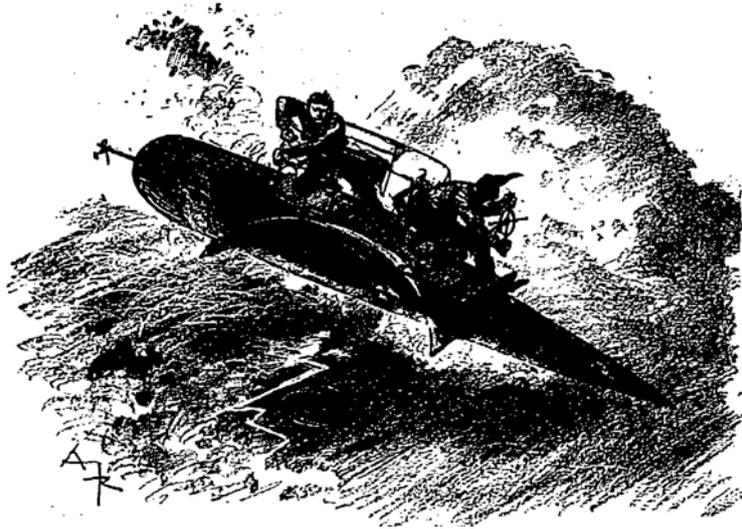
The danger had disappeared, but not the last traces of the great disturbance. Over Georges Lorris' telephonoscope screen, and all the Teles in the region, thousands of confused images were passing with prodigious speed, and sounds brought from everywhere filled the houses with rumors reminiscent of the roar of a new and wilder tempest. It is easy to imagine that deafening rumor, which consisted of the sounds of life over an area of 1,600 square leagues—all the sounds collected everywhere by the ensemble of machines, condensed into a general racket, conveyed and rendered in total by each individual apparatus with a fearful intensity!

In the course of the tornado, a number of serious breakdowns had naturally occurred at the telephone exchanges; wires had melted and amalgamated on the lines. These minor accidents did not pose any risk to anyone—provided, of course, that people did not touch the apparatus.

Having picked up a book with photographic illustrations, Georges Lorris patiently installed himself in an armchair, in order to let the telephonic crisis run its course. It did not take long. After twenty minutes, the rumor suddenly died down. The central exchange had just established an escape wire. While waiting for the damage to be repaired, however—which would require at least two or

three hours of work—every apparatus received some random communication or other that could not be interrupted before order was fully restored.

On the Tele screen, the faces ceased to flicker in mad confusion, and gradually settled down; the procession slowed, and then, all of a sudden, a clear and precise image formed within the frame, and no longer changed.



It was a simply-furnished bedroom, a small room with bare wood paneling, with only a few chairs and a table laden with books and papers, with a sewing-basket in front of the fireplace. Huddled in a corner, almost on her knees, a young woman still seemed prey to the most profound terror. She had her hands over her eyes, and only took them away in order to put them over her ears, in a gesture of panic.

At first, Georges Lorris only saw a tall, slim and graceful figure, pretty delicate hands and beautiful blonde hair, slightly unkempt. He immediately spoke, in order to draw the unknown woman out of her prostration. “Mademoiselle! Mademoiselle!” he said, sufficiently gently.

The young woman, however, her hands over her ears and her head still full of the terrible rumors that had only just ceased, did not seem to be able to hear him.

“Mademoiselle!” Georges shouted, in a loud voice.

The young woman, turning her head without lowering her hands and, without budging, looked at her bedroom Tele with a fearful expression.

“The danger is over, Mademoiselle,” Georges went on, gently. “Pull yourself together. Can you hear me?”

She nodded her head, without making any other reply.

“You have nothing more to fear. The tornado is over...”



“You’re sure it won’t come back?” said the young woman, in a voice so tremulous that Georges Lorriss could scarcely understand her.

“It’s completely finished; everything’s back in order; we won’t hear any more of the racket that seems to have frightened you so much...”

“Oh, Monsieur, how scared I was!” cried the young woman, scarcely daring to straighten up. “How scared I was!”

“But you don’t have your insulating slippers on!” said Georges, who had noticed, when the young woman moved, that she was only wearing dainty shoes.

“No,” she replied. My insulators are downstairs; I didn’t dare go to look for them.”

“Silly girl—you might have been electrocuted if your house had been directly in the path of the crazy current; never do anything so imprudent! Accidents as serious as that tornado are rare, but it’s necessary nevertheless to be constantly on one’s guard, and always to keep the preservatives that science provides against the dangers it has created, as a precaution against major or minor accidents, within range of one’s hands...or feet.”

“Science would have done better not to multiply the causes of danger so much,” said the young woman, pursing her lips slightly.

“I confess that I’m of the same opinion,” said Georges, smiling. “I can see, Mademoiselle, that you’re beginning to recover. Go and fetch your insulating slippers, I beg you.”

“There’s no more danger, then?”

“No, but the electric squall has thrown everything into such disorder that a few petty accidents might occur in consequence—damaged wires, pockets of electricity left behind by the tornado in a few places suddenly emptying out, and so on. Prudence is indispensable for another hour or two.”

“I’ll run and fetch my insulators!” exclaimed the young woman.

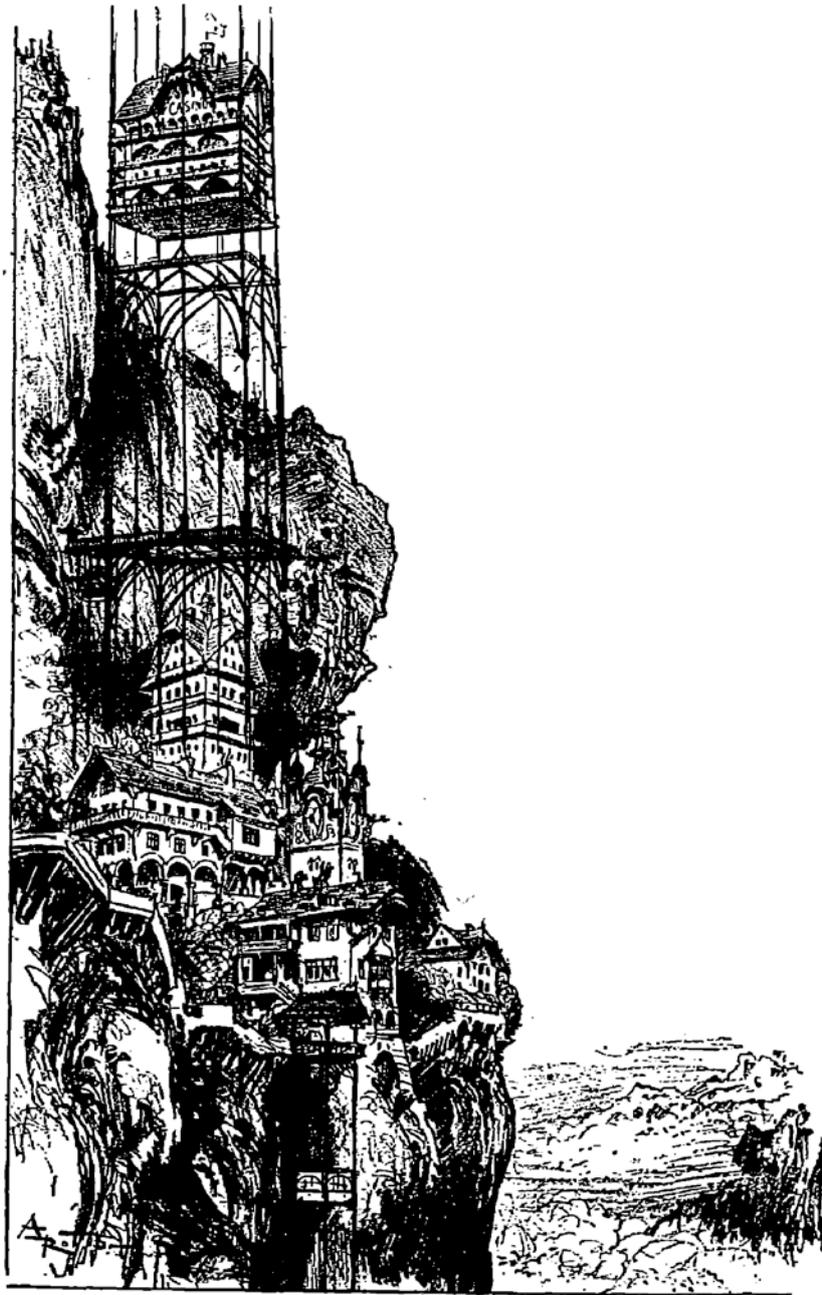
After two minutes the young woman came back, wearing her protective slippers over her dainty shoes. Her first glance, when she came back into the bedroom, was at the Tele screen; she seemed surprised to see that Georges Lorriss was still there.

“Mademoiselle,” the latter said, understanding her astonishment, “I ought to warn you that the tornado has confused the telephones somewhat; while they’re looking for leaks and reconnecting broken wires at the central exchange, all the machines have been connected up at random for as long as the work lasts. Don’t worry—it won’t take long. Permit me to introduce myself: Georges Lorris, of Paris; an engineer, like everyone else...”

“Estelle Lacombe, of Lauterbrunnen-Station, Switzerland, also an engineer, or very nearly, for my father, an inspector of the Alpine Beacons, intends me to join his administration...”

“I’m glad, Mademoiselle, of this chance connection, which has at least permitted me to reassure you somewhat—for you were very frightened, weren’t you?”





“Oh yes! I’m alone in the house with Grettly, our maid, who was even more frightened than me. She’s been in a corner of the kitchen for two hours with her head under a shawl, and won’t move. My father’s on a tour of inspection and my mother left by the quarter-past-twelve Tube to make a few purchases in Paris. As long as nothing’s happened to her, please God! My mother was due back at five-seventeen, and it’s already seven thirty-five...”

“Mademoiselle, the Tubes will have suspended all departures during the electric storm, but the delayed trains will depart in due course, and your mother will certainly be back before long...”

Mademoiselle Estelle Lacombe still seemed very anxious; the slightest sound made her shiver and from time to time she went to look anxiously at the sky through a window that seemed to look out over a deep alpine valley.

To calm her down, Georges Lorriss embarked on a long explanation of tornadoes, their causes, and the accidents that they produced, sometimes analogous to natural earthquakes. As she made no reply, and still remained pale and agitated, he spoke for a long time, giving her a veritable lecture, demonstrating to her that such tornadoes were becoming less and less frequent, by reason of the scrupulous precautions taken by the electrical personnel, and less terrible in their effects, thanks to the

progress of science and the improvements made on a daily basis to the apparatus designed to prevent the fluid from leaking.

“But you know all that as well as I do, since you’re an engineer like me,” he said, finally concluding his speech, which seemed to him to have been somewhat marred by pedantry.

“No, Monsieur, I still have a final examination to pass before obtaining my diploma, and...I have to confess that I’ve already failed twice. I’m continuing to follow the course at the University of Zurich by phonograph, and I’m preparing to take it for a third time, and I’m working hard and growing pale over my notes, but without making much progress, it seems. Alas, I don’t find it easy to get my teeth into all that, but I need my diploma to go into the Alpine Beacon Administration like my father. It’s my career that’s at stake! I’ve understood what you’ve told me very well, though; I’ll make a few notes while it’s still fresh in my mind, for it’ll all be blurred tomorrow.”

While the young woman, somewhat reassured, searched among the pile of books, notebooks and phonographic recordings that covered her work-table and scribbled a few notes, Georges Loris gazed at her, and could not help noticing the grace of her movements and the natural elegance of her entire person, in her simple and modest costume. When she raised her head again, he admired the delicacy and symmetry of her features, the graceful curvature of her nose, her deep pure eyes and broad forehead, over which magnificent blonde curls descended like a golden helmet.

Estelle Lacombe was the only daughter of a functionary in the Swiss section of the Alpine Beacon Administration. Because of the vast increase in aerial navigation, it had been necessary to illuminate our various mountain peaks in order to identify them to navigators of the atmosphere. The mountains of the Auvergne, the Pyrenean chain and the Alpine massif thus had series of lights at different height, an altitude of five hundred meters being indicated everywhere by colored lights a kilometer apart, and similarly for superior altitudes, at intervals of five hundred meters. Rotating lights signaled passes and the mouths of valleys. Finally, higher still, on every peak and spur, first-class lights shone, brilliant stars lost in the pale region of snows, which people of the plains confused with the celestial constellations.

For eight years, Monsieur Lacombe, the regional inspector of Alpine Beacons, had been living at Lauterbrunnen-Station, in a pretty chalet on the summit of Lauterbrunnen Mountain, near the beacon, a thousand meters above the beautiful valley directly opposite Staubach Falls. An engineer of some merit and a conscientious functionary, Monsieur Lacombe was very busy. All of his days and many of his evenings were taken up by his inspection tours, reports and supervision of work on the regional beacons. Madame Lacombe, a Parisienne by birth, and something of a socialite before her marriage, considered herself to be in exile in the magnificent location of Lauterbrunnen-Station, where a new village had been established a thousand meters above old Lauterbrunnen, with an aerial annex for air cures—which is to say, a casino that went seven or eight hundred meters further up in the afternoon, and then came back down again after sunset.

In the chalet at Lauterbrunnen-Station, suspended like a balcony from the mountainside, during the summer, and in an equally comfortable chalet, lower down at Interlaken, during the winter, Madame Lacombe grew bored and missed immense and tumultuous Paris. There was, however, no shortage of distractions. Every day, a considerable number of airships and yachts passed by; the London-Rome-Cairo Air Express called four times in every twenty-four hours, always depositing a few travelers making their little tours of Europe; furthermore, the aerial casino of Lauterbrunnen, which was very busy during the summer months, threw a big party for its invalids once a week, and a put on a concert or dramatic performance every night via the Tele.

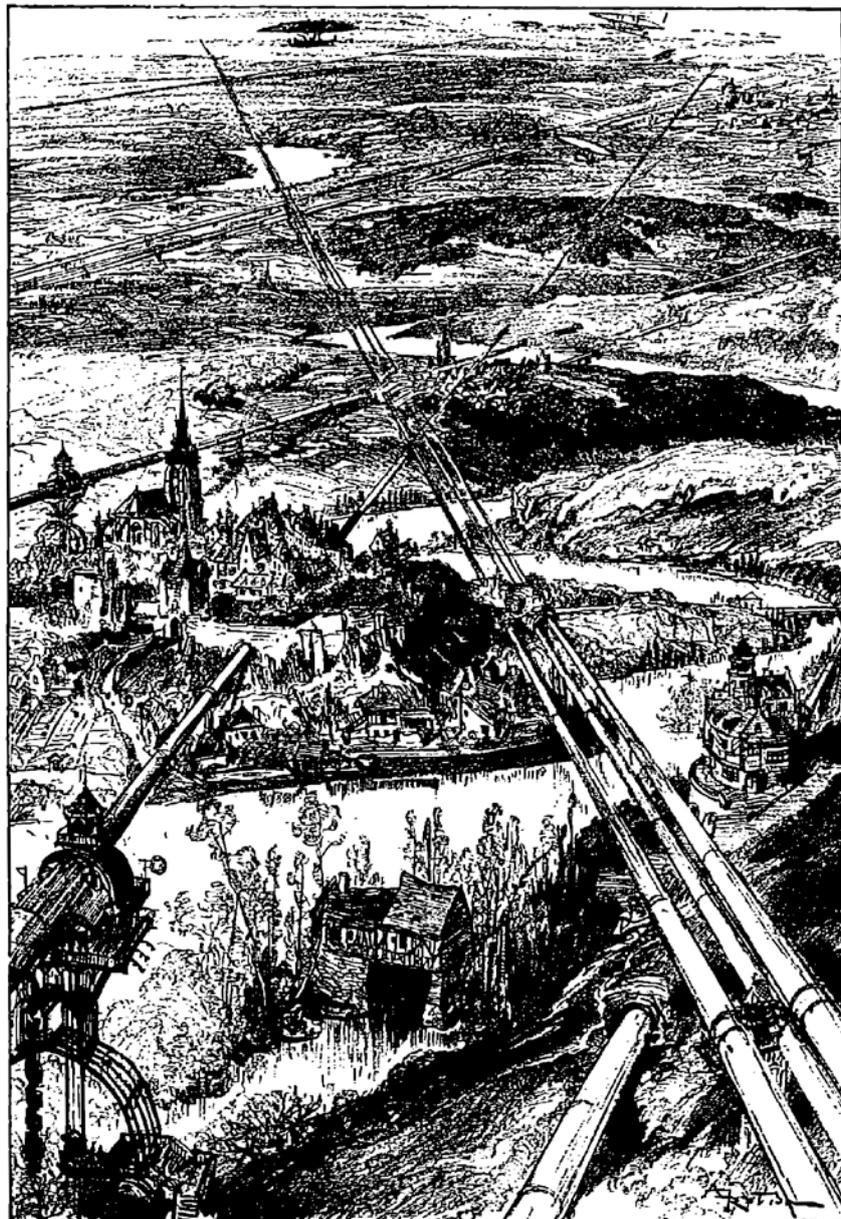
Even so, Madame Lacombe was bored, and took advantage of every opportunity and every possible excuse to return to her beloved Paris. Weary of only taking part by Tele in the little gatherings of her friends in Paris, she took the Electropneumatic Tube Train or the Air Express from time to time in order to rejoin the social whirl for an afternoon, to show herself at one of those elegant six o’clock sessions in which people lend an ear to all the gossip of the day and absorb all the malicious slanders that are floating around, while taking fashionable anti-anemics.

At other times, Madame Lacombe would go to have a little flutter on the Bourse, trying to add buoyancy to her budget, which was often excessively weighed down with expenses, with a few profits obtained there. The broker who advised her often misled her, and the household budget became very difficult to balance. Monsieur Lacombe’s only income was his 35,000-franc salary, and his lodgings—just enough to live on in the country if one made severe economies: a harsh necessity, all the more so,

because Madame Lacombe also liked to shop, and instead of having the clothes and fabrics that she and her daughter needed shown to her by Tele, without disturbing herself, she preferred to look around the big stores in Paris and take the Tube or the Air Express for the slightest reason, such as a bit of ribbon with which to bind her hair.

This modest situation would have been improved if Madame had had any qualifications. Unfortunately, in her youth, in 1930, when the exigencies of life were less demanding, her education had been neglected. She was not an engineer; only possessing baccalaureates in letters and sciences, she had not been able to go into the Beacons with her husband.

Only too well aware of the difficulties of life, Monsieur Lacombe had wanted a complete education for his daughter. He had destined her for the Administration. At twenty-four, when she would have finished her studies and would have her diplomas, she would start as a supernumerary engineer at six thousand francs a year, with the certainty of reaching the inspectorate one day, at the age of about forty. Then, whether she remained a spinster or married one of her fellow functionaries, her living would be secure.



Since the age of twelve, Estelle had followed the courses of the Institute of Zurich without leaving her family, entirely by Tele—an important advantage for families living far from any population center, who were no longer forced to board their children in regional schools or colleges. Estelle had taken all her classes by Tele without leaving home, without stirring from Lauterbrunnen. She followed the courses of the Central Electricity College in Paris in the same fashion, and also took private lessons by phonograph for a few renowned masters.

Unfortunately, she had not been able to take her examinations by Tele; the obsolete regulations forbade that—and in confrontation with her examiners, a slight timidity that she had inherited from her father had worked to her disadvantage.