

## THE ETERNAL FLAME

“Never has such a vast hope been given to the world... The Earth will no longer die... Nor the human race... Its genius will burn like an eternal flame.”

### I

“No trouble at home? Your wife? Your kids? No? Oh, that’s good. You had me worried, you know. When I arrived that the paper I was told that you’d telephoned, that you wanted to see me here, today, at four o’clock. I thought...”

“Good old Laronce...just like you, immediately imagining catastrophes. No, no. Don’t worry. No trouble. On the contrary.”

On the flowery terrace of Bellevue, in front of the Center for Studies in Physics, the young scientist François Thibault patted his friend, the journalist Laronce, on the shoulder to calm him down.

In the sumptuous June sunlight, the contrast between the two men seemed comical. Tall and solidly built, his face forceful and tender beneath the unkempt hedge of his bushy chestnut-brown hair, François Thibault was the image of placid and cheerful strength. Laronce had a puny build, red hair and a tormented expression. He was forever picking at his ragged beard or readjusting his old-fashioned pince-nez with three fingers.

“So,” said the journalist, “why did you call me?”

“To show you my discovery. It’s finished. No one has seen it. You’ll be the first.”

“Oh! Your wife must know...”

“Of course! Naturally, she knows—and my bosses know too. But it’s a first, even so!”

“Well, what is it? I know that for seven years you’ve been working on matter, on the atom, but that’s all. You’ve never wanted to tell me anymore.”

“That’s true. I owe you an apology, old chap. It was me that I didn’t trust. I wasn’t sure of success.”

“So, the invention...?”

“I’ll show it to you right away.

He plucked a rose from one of the bushes on the terrace and preceded Laronce into the main building of the Center. The two men passed rapidly through a white-walled vestibule as vast and sonorous as a chapel, where a monumental global map of the world stood on a pedestal.

The laboratory where François Thibault worked overlooked the terrace via tall bay windows similar to those of an orangery. The walls were lined with display cabinets in which glassware, measuring instruments and bottles of chemical products gleamed.

On a small table, brightly illuminated by a window, there was a kind of microscope. François Thibault detached a rose petal and, after rubbing it slightly, placed it on a slide. He carefully positioned the slide and turned a knob. Immediately, an electric motor fixed to the ground next to the table began to hum.

Laronce started. “What’s happening? What does that signify?”

Smiling, the young inventor said in an unemotional voice: “The rose petal is dissociating. The energy that it’s releasing will animate the motor for days. Just think—the dissociation of a gram of matter furnishes as much energy as the combustion of three hundred thousand kilos of coal!”

“I don’t understand,” Laronce confessed, bitterly.

“You must have heard mention of the dissociation of matter?”

“Like everyone else—which is to say that I don’t know anything about it.”

“Would you like me to try to give you’re a rapid lesson? It wouldn’t annoy you?”

“Agreed. Just a second—with your permission?” Laronce took a notepad and pencil from his pocket and sat down at the long table that occupied the middle of the laboratory. “I wouldn’t be sorry to put together the elements of an article to appear when the time is ripe. I’m listening—but don’t forget that you’re talking to the public.”

“Yes. Well, this is it. It’s necessary to think of space—all space—as a kind of fluid: animate, quivering and vital, traversed by vibrant waves, radiations, like light, electricity and many others that are being discovered every day. In brief, the universe is energy. Sometimes, that energy becomes concentrated, agglomerates, and condenses into matter. Thus, a nebula appears; it becomes a giant star, then a star; a world is born—and in that world, every atom is a whirlpool of energy in stable equilibrium.”

The journalist stopped writing and raised his head. “Pardon me, but how can that energy, with which you’re populating space, become something weighty—matter?”

“You can explain it to your readers by analogy. Can’t an electric current, which is energy that is invisible, give rise to a spark, which has form and color? Doesn’t lightning sometimes accumulate into a ball of fire?”

“Let’s admit that. So what?”

“Then you can imagine how, by virtue of an inverse process, the atom can restore the energy that’s concentrated within in, like a lightly-wound spiral spring unwinding. Having come from space, the energy returns to space. It’s been known for a long time that so-called radioactive substances emit parcels of the energy of which they’re a temporarily condensed form, but all substances can dissociate. By provoking that dissociation by an easy and reliable method, therefore, one could procure unlimited energy, effortlessly, inexpensively and endlessly.”

“And you’ve found this method?”

“Yes—but thanks to many pioneers, whose work I’ve merely carried forward. A discovery is always a conclusion. All those who are trying to reach the same goal make up a ladder, like gymnasts in a human pyramid; the only who arrives at the top is supported by all the others.”

Laronce was pensive. He murmured, in a sigh: “Extraordinary...”

“Then again, I was lucky, and helped by a memory. Do you remember the story of Archimedes setting fire, from the ramparts of Syracuse, to the Roman ships blockading the city with his ardent mirrors? That solar ardor concentrated at the focus of a curved mirror or lens—what a beam of light! The sun doesn’t only emit calorific radiation. It emits others, like cathode rays. To be sure, they’re not as easy to concentrate at a focal point, but it can be done. And matter dissociates at their focal point in the same way that matter at the focal point of ardent rays catches fire.

“Of course, I had to render that dissociation progressive, in order to remain in control of it. Take note too that I’d be able to use a pebble as easily as a rose petal. Anything will do—but vegetable matter seems to me to be preferable, because it represents an inexhaustible substance. Finally, I employ the liberated energy in the form of electricity because the present world is electrically equipped.”

Laronce scribbled rapid notes on the paper. Nothing was visible but his red hair, in short frizzy curls, so well-nourished with pomade that it looked like varnished mahogany. Without raising his head he said: “And then? The results?”

François Thibault smiled softly, and in a simple and proud tone he said: “I think this profusion of energy will change the conditions of life completely.” Then, becoming gradually more excited, he went on: “Think about it. It’s the end of coal, oil, all the combustibles whose extraction is so difficult, so perilous and so barbaric, and of which the Earth only contains limited quantities—reserves that will be rapidly exhausted. It’s the end of hydroelectric power, which depends on bad weather and demands titanic earthworks. Energy—infinite energy—for nothing! It will permit all hopes, it will permit all daring. I glimpse repercussions so profound, so far-reaching...if I told you...”

He was interrupted by the entrance of his wife. Petite and brunette, simultaneously slim and plump, Marianne Thibault had large dark eyes, a fresh and natural mouth, and restrained gestures. They lived in a small detached house near the Center where François worked, so she often came to the laboratory. She knew that Laronce would be there that day.

“Bonjour, Laronce,” she said, offering him her hand. “Has François brought you up to date?”

The journalist had risen to his feet. François was familiar with his comrade's anxious personality, but he was astonished to see his expression so troubled. His forehead was furrowed by deep wrinkles: a strange manner of celebrating the great event.

"Yes, I've heard the bad news," Laronce replied, hoarsely.

"What do you mean?" the young woman asked.

"Knowing about his invention, you're going to let him spread it around?"

"Of course."

"But don't you see that it will get him into terrible trouble, and that, what's more, it will come to nothing?"

"Why?"

"You haven't thought about the formidable adversaries who are going to bar the way? But he's just named them himself. The coal magnates and the hydroelectric men, and most of all the oil men—all those terrible antagonists, ready to do anything: in brief, all the merchants of energy." He turned to François. "It's necessary to add to the list the manufacturers of explosives, munitions, war materials in general—for they'll be frustrated. In fact, your invention will doubtless permit the realization of electrical war: war by comparison with which chemical warfare and microbial warfare will merely be innocent trifles, petty jigs; war in which the planet can be systematically blasted with lightning—war, in short, that will render all other means of attack futile and vain."

"Certainly," François agreed, forcefully. "War the mere dread of which, the mere threat of which, will in fact lead to the suppression of war. That's how I conceive it."

"Yes. Well, those people won't permit your discovery to see the light of day. They'll begin by stifling it, by denying it."

With a strong and supple hand, François caressed the cast-iron casing of the enormous motor that was still purring. Tranquilly, he said: "It can't be denied, since it exists."

These forebodings did not trouble him very much. Obviously, the journalist was exaggerating. Since the distant times when they had been neighbors, as children, in their home town, François had been familiar with Laronce's two-sided character, both envious and devoted; his friendship was suggesting a fear that delighted his jealousy.

The young inventor had to admit, however, that although he had devoted himself to his discovery for a long time, often thinking about the benefits that it might bring, he had not thought sufficiently about the means of delivering it to the world. He would have to begin a new apprenticeship—and when he had called Laronce, he had strongly suspected that his comrade would point out all the difficulties to him.

"Your invention will be suppressed," the latter went on, furiously. "The newspapers won't talk about it. Oh, you don't know about the conspiracy of silence. It was born with the big press, the one that manufactures opinion. The conspiracy of silence is the most formidable weapon ever discovered. If one wants to prevent a project from bearing fruit, one keeps quiet about it. That's sufficient. It dies. You see, old chap, all the great wealthy corporations are connected, whether they like it or not; they all share the same fear of an upheaval. All their coffers are bound together, like the bricks in a wall—and what a wall! If one of them is threatened, the others defend it, instinctively. You're going to threaten the interests of the oil men, the coal producers, the armaments manufacturers? They'll sound the rallying cry, and the entire horde will be in league against you. And as the big press is in their hands, your fate is certain. A simple order: *shh!* And you're erased from the world."

François, who did not want to believe in such a black outlook, remarked softly: "But you, my dear Laronce, will talk about my research, when the time comes?"

Laronce was the news editor of the *Bonjour*.

"Me? I can only talk about it if the boss authorizes me to do so. If he imposes a veto, my paper jumps to it. Even the advertising industry—paid advertising, you understand—will refuse yours insertion if it receives the order. Even if you found a major backer, and arrived with a wad of bills, the advertising industry would slam the door in your face, if the big men have decided that it should."

"There's still an independent press, though."

"Nobody reads it."

"There are specialized journals; there are communications to Academies, scientific societies; there are lectures, the radio...what do I know?"

“Well, yes,” Laronce admitted. “The rumor of your discovery will spread no matter what. Then there’ll be a change of tactics. You’ll be denigrated, doomed in the public mind. You’ll be held up to ridicule. It will be insinuated that it’s a fake, a confidence trick, a hoax. Or it’ll be presented as a laboratory experiment without any practical application, and full of dangers. Or, in the end, after having tried to wear down your patience, you’ll be granted the privilege of expert reports, which will be secretly sabotaged...”

“You’re exaggerating, Laronce.”

“Me? Come on! You know better than I do how all those who have proposed fuels less costly or less flammable than gasoline have been discouraged. What became of their trials? What became of the light accumulator discovered by a Spanish priest? In another field of research, what became of the methods of bread-manufacture that went directly from wheat to bread, free from the all-powerful mill?”

“Perhaps those inventions weren’t workable?”

“That’s what will be said about yours. Any means is good to crush the intruder. I’ve been told that the tire-manufacturers buy up all the patents that could supersede their tires, in order to bury them at the bottom of a drawer. And they might not be content to attack your invention—sometimes, they pick on the inventor. Do you remember Thimonnier, the inventor of the sewing machine, whom the tailors tried to drown?<sup>1</sup> And Lebon, the inventor of gas lighting, murdered in the Champs-Élysées on the eve of Napoléon’s coronation? It was obviously the work of merchants of Argand lamps.<sup>2</sup> And many others...”

“Of course, the invention doesn’t disappear with the inventor—but it’s held back. The murderers have gained time. That’s the great drama of technology: an industry becomes ferocious as soon as a new invention threatens its existence, or even threatens merely to change its equipment.”

“Come, let’s not be dramatic,” said François, cheerfully. “The Lebon case was never clarified. And on the other hand, I can cite you numerous inventors who lived, as they say, laden with years and honors: Bessemer, who revolutionized metallurgy; Edison, whose little incandescent bulb put all other light-sources in the shade.”

Laronce became exasperated. “The battle was less intense than it is today. Think about the adversaries you’ll have against you. You cited the oil men yourself. You know full well that those fellows, when they’re fighting one another for supremacy, are ever-ready to transform their conflicts of interest into world wars—to throw the two halves of the globe against one another. Of what will they be capable the day when they unite against you!”

He took a large silver watch out of his waistcoat. “Time for the paper to go to press! I have to run.” He paused in the vestibule, however, beneath the gigantic globe. “Adieu, Marianne. Excuse me for having spoken in front of you, but it was necessary that those things be said, and it’s better that you heard them.”

He shook François’ hand, and added: “You too, old chap, forgive me. You understand—you’re flying at a high altitude in your dreams, as if in the clouds, and it needs an obscure little journalist like me to warn you about the dangers of landing. Believe me—don’t divulge your invention. Don’t start a fight that really is too unequal. Think about it. Take advice. Consult your nearest and dearest—and keep me up to date.”

He fled.

“What a character,” François murmured.

He did not feel shaken. How little they counted, these risks—problematic, in any case—before the total certainty of alleviating suffering, spreading well-being, ameliorating the lot of human beings; before the hope of meriting their approval, their gratitude and their praise; before the pride of changing the face and fate of the world...

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<sup>1</sup> Barthélemy Thimonnier (1793-1867) obtained a patent for a sewing machine in 1830 and founded a manufacturing company to exploit it, initially by providing military uniforms; it was burned down repeatedly by manual workers fearful for their future, and by the time the machine finally took off commercially Thimonnier had died in poverty.

<sup>2</sup> This is pure conjecture; as François observes, the murder of Philippe le Bon, or Lebon (1767-1804), who industrialized the production of flammable gas from wood, remained stubbornly mysterious.

He was still resolved to divulge his discovery. On that point, at least, he would not consult his relatives, as Laronce advised. His parents? He was their pride, their reason for living, their god. They lit up with joy every time he was able to visit them in the dear old Burgundian estate. Since his decision was made, and firm, what was the point of worrying them needlessly? What was the point of consulting Marianne's father, Pierre Contal, since the famous author of *Génie antique*, passionately attached to the past, deplored science and denied progress?

In the shadow of the enormous globe, Marianne had drawn closer to her husband. She did not say much. François called her his "silent darling." To be sure, no one can exteriorize their most tender sentiments; it is one of the infirmities of the human creature; everyone keeps the best of themselves to themselves—but Marianne was subject to that strange modesty in the extreme, even though she had realized the most tender union and loving family with François. She looked up at him with her magnificent gaze and simply said: "What he said isn't true, is it?"

He hugged her to him, burying her in the hollow of his solid shoulder. "No, it's not true. You know that. He sees everything in black. But I had to consult him. If he hadn't been informed first, he would have been deeply hurt."

They went outside. The terrace was their garden. On a lawn, their two children were playing, watched by a young maidservant. They came running. Lise arrived first. She was seven. Because of her pretty face, her happy smile and her perfect little body, François called her "the majorette." Two-year-old Claude followed her. His arms swinging, his hands waving, he threw his rounded belly and his awkward feet forward like a little Silenus drunk on life. He was at the gracious age that precedes the ingrate age.

François lifted him high into the air and advanced to the edge of the terrace. In a great silence compounded from a thousand rumors, the ocean of Paris extended in the evening mist. And from the stone balcony, where so many ambitious dreamers must have invoked or cursed or challenged the enormous city, François, in his turn, spoke to the child he was holding in his arms.

"No, my little Claude, it isn't true, what that wretch Laronce says. No, no, now that energy will no longer cost anything, great things can be done. It's necessary that in this great Paris, people can see as clearly by night as by day. It's necessary that the whole world—the whole world, you hear—will be warm in winter and cool in summer. You'll see that, my little Claude.

"You'll see the sky become clear, because we'll no longer be expelling the smoke of coal fires into it. You'll see the city extend, further and further, becoming, for thirty or forty kilometers around, an immense park of greenery, flowers and villas. As electricity, which can do anything, won't cost anything, all that vegetation will be able to grow, thick and fast; rain or sunshine will be summoned to it according to its needs.

"People will be able to live further away because they'll be able to travel faster. After a day's work, which will be made much easier, simpler and shorter, everyone will disperse in all directions, in lightning-fast cars. It will be the reign of guided projectiles, rockets, propeller-driven torpedoes. Yes, my little Claude, you'll see that magnificent culmination: projectiles that will finally be useful for something!

"And because life will already have become a little easier, people will become a little better. You'll see all those things, my little Claude. And you'll be able to glimpse so many others..."