Chapter 34

TESLA TRIES TO PREVENT WORLD WAR II

When Tesla was talking as a scientist he was opposed to wars on moral, economic and all practical and theoretical grounds. But, like most scientists, when he stopped thinking as a scientist, and let his emotions rule his thoughts, he found exceptions in which he felt some wars and situations were justifiable. As a scientist he was unwilling to have the discoveries of scientists applied to the pruposes of war makers, but when the emotional phase of his nature took the ruling position he was then willing to apply his genius to devising measures that would prevent wars by supplying protective devices.

This attitude is exemplified in the following statement which he prepared in the twenties but did not publish:

"At present many of the ablest minds are trying to devise expedients for preventing a repetition of the awful conflict which is only theoretically ended and the duration and main issues of which I correctly predicted in an article printed in the Sun of December 20, 1914. The League is not a remedy but, on the contrary, in the opinion of a number of competent men, may bring about results just the opposite. It is particularly regrettable that a punitive policy was adopted in framing the terms of peace because a few years hence it will be possible for nations to fight without armies, ships or guns, by weapons far more terrible, to the destructive action and range of which there is virtually no limit. Any city at any distance whatsoever from the enemy can be destroyed by him and no power on earth can stop him from doing so. If we want to avert an impending calamity and a state of things which may transorm this globe into an inferno, we should push the development of flying machines and wireless transmission of energy without an instant's delay and with all the power and resources of the nation."

Tesla saw preventative possibilities in his new invention which embodied "death ray" characteristics and which was made several years after the foregoing statement was written. He saw it providing a curtain of protection which any country, no matter how small, could use as a protection against invasion. While he might offer it as a defensive weapon, however, there would be nothing to stop military men from using it as a weapon of offense.

While I did not know the nature of Tesla's plan I was convinced that it did embody many discoveries that would be of commercial value, and these were the angles he should seek to develop. I felt that if he could be induced to develop some minor phase of his work that would have immediate commercial use he could derive an income from it which would enable him to proceed with his more elaborate plans. To this end I sought to gain some insight into his thoughts, that would enable me to get a practical plan in operation. This was no secret to Tesla and he successfully parried every thrust I made.

The clearest conception I got, and that was largely from scattered remarks, and by making deductions from them, concerned a possible manner in which one phase of his curtain of protection might operate. This was a "war" angle and as such it did not interest

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me, but since it involved "lightning balls," or "fire balls," I was very curious. Fi .lls had always fascina . o, and I had read everything I could lay my hands on about them.

A fire ball is a strange phenomenon associated with lightning. Some of the energy of the lightning stroke appears to become locked into a ball shaped structure which may be of any size from a couple of inches to a foot in diameter. It looks like a perfect sphere, brightly incandescent and floats like a bubble, being easily carried by air currents. They may last for a short time, from a fraction of a second to many seconds. In this interval, during which they stay fairly close to the ground, they may come close to many objects without damaging them or being damaged by them. Suddenly, for no known reason, the ball explodes doing as much damage as a bomb, if close to structures, and no damage if in the open.

The fire ball looked to me like a gigantically enlarged model of the tiny electron, one of the building blocks of matter, which acts as if it were just a spherical area of space in which an amount of energy was crystallized to give it structure. I felt that if it were possible to discover how a large amount of energy was stored in this fairy bubble structure of a fire ball a new insight might be gained into the structure of the electron and other fundamental particles of matter. Also this method of storing energy could be applied to a thousand useful purposes.

When I approached Tesla with pleas along this line to develop this possible phase of his discovery he would evade direct reply by indulging in a, not always, tolerant lecture on my gullability in believing theories about the complex structure of the atom. While he had in earlier years discussed some of his experiences with fire balls in his laboratory at Colorado Springs and explained his theory of their formation, he would not in the later years permit himself to be drawn into a discussion of them as a possible part of his system. This, of course, made me suspicious that the clue was "hot" but I could be completely wrong in my conclusions. Tesla was very quick in detecting my technique when I sought to narrow down a field by trying to get him to deny statements when he was adamant to direct questions.

Tesla became familiar with the destructive characteristics of fire balls in his experiments at Colorado Springs in 1899. He produced them quite by accident and saw them, more than once, explode and shatter his tall mast and also destroy apparatus within his laboratory. The destructive action accompanying the disintegration of a fire ball, he declared, takes place with inconceivabel violence.

He studied the process by which they were produced, not because he wanted to produce them but in order to eliminate the conditions in which they were created. It is not pleasant, he related, to have a fire ball explode in your vicinity for they will destroy anything they come in contact with.

It will be necessary to reconstruct his statements from very fragmentary notes and a long distance memory.

"Parasitic oscillations, or circuits, within the main circuit were a source of danger from this cause. Points of resistance in the main circuit could result in minor oscillating circuits between terminals or between two points of resistance and these minor circuits would have a very much higher period of oscillation than the main circuit and could be set into oscillation by the main current of lower frequency.

"Even when the principal oscillating circuit was adjusted for the greatest efficiency of operation by the dimination of all sources of losses the fire balls continued to occur but these were due to stray high frequency charges from random earth currents.

"From these experiences it became apparent that the fire balls resulted from the interaction of two frequencies, a stray higher frequency wave imposed on the lower frequency free oscillation of the main circuit.

"As the free oscillation of the circuit builds up from the zero point to the quarter wave length node it passes through various rates of change. In a current of shorter wavelength the rates of change will be steeper. When the two currents react on each other the resultant complex will contain a wave in which there is an extremely steep rate of change, and for the briefest instant currents may move at a tremendous rate, at the rate of millions of horsepower.

"This condition acts as a trigger which may cause the total energy of the powerful longer wave to be discharged in an infinitesmally small interval of time and at a proportionately tremendously great rate of energy movement which cannot confine itself to the metal circuit and is released into surrounding space with inconceivable violence."

It is but a step, from learning how a high frequency current can explosively discharge a lower frequency current, to using the principle to design a system in which these explosions can be produced by intent. The following process appears a possible one but no evidence is available that it is the one Tesla evolved: An oscillator, such as he used to send power wirelessly around the earth at Colorado Springs, is set in operation at a frequency to which a given warship is resonant. The complex structure of a ship would provide a great number of spots in which electrical oscillations will be set up of a much higher frequency than those coursing through the ship as a whole. These parasistic currents will react on the main current causing the production of fireballs which by their explosions will destroy the ship, even more effectively than the explosion of the magazine which would also take place. A second oscillator may be used to transmit the shorter wavelength current.

Somewhat later I learned the reason for Tesla's reticence to discuss details. This came shortly after Stanley Baldwin replaced Neville Chamberlin as Prime Minister of Great Britain.

Tesla revealed that he had carried on negotiations with Prime Minister Chamberlin for the sale of his ray system to Great Britain for $30,000,000 on the basis of his presentation that the device would provide complete protection for the British Isles against any enemy approaching by sea or air, and would provide an

offensive weapon to which there was no defense. He was convinced, he declared, of the sincerity of Mr. Chamberlain and his intent to adopt the device as it would have prevented the outbreak of the then threatening war, and would have made possible the continuation- under the duress which this weapon would make possible - of the working agreement involving France, Germany and Britain to maintain the status quo in Europe. When Chamberlin failed, at the Munich conference, to retain this state of European equilibrium it was necessary to get rid of Chamberlin and install a new Prime Minister who could make the effort to shift one corner of the triangle from Germany to Russia. Baldwin found no virtue in Tesla's plan and preemptorially ended the negotiations.

Tesla was greatly disappointed by the collapse of his negotiations with the British Government. With it there collapsed his hopes of providing a demonstration of his most recent, and, what he considered, his most important discoveries. He did not, however, dwell on the jubject; beyond the single conversation he did not mention the matter again. He did not get another chance to finance the demonstration of these discoveries.

During the period in which the negotiations were being carried on, Tesla declared, efforts had been made to steal the invention. His room had been entered and his papers examined but the thieves, or spies, left empty handed. There was no danger, he said, that his invention could be stolen for he had at no time committed any part of it to paper. He could trust his memory to preserve every fine detail of his investigations. This was true, he said, of all of his later major discoveries.

The nature of his system makes little difference now; he has gone and has taken it with him. Perhaps, if there is any communication from beyond the veil that separates this life from whatever exists hereafter, Tesla may look down upon earth's struggling mortals and find some way of dropping a hint concerning what he accomplished; but, if the situation is such that this cannot take place, then we must await until the human race produces another Tesla.

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