EDISON'S PLAN FOR PREPAREDNESS: The Inventor Tells How We Could Be ...
By Edward Marshall.
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EDISON'S PLAN FOR PREPAREDNESS

The Inventor Tells How We Could Be Made Invincible in War Without Overburdening Ourselves with Taxation.

By Edward Marshall.

THOMAS A. EDISON has been considering the relations of the United States to the European war and the possibilities that we may some time be involved in a great conflict. The great inventor is no peace-at-any-price man. His career has shown him to be a fighter. But he is not a militarist.

He believes that we should be invincible. In the following interview he for the first time tells the world how he thinks we may accomplish this without so burdening ourselves with taxation as to reduce our living standards and morale to the European level.

His plan for rendering us invulnerable to attack, while at the same time preserving us from high taxation, includes the establishment of new West Points and new Naval Academies for the training of officers and a vast system of military and naval education for the rank and file.

He would establish vast reserves of stores and arms and ammunition and he would count rather upon automobiles than upon the railroads for quick transportation.

He would build many aeroplanes and submarines, and he would construct a fleet of cruisers, battleships and other naval vessels—this is his most extraordinary proposal—to be kept in drydock, practically in storage, and fully up to date, until needed.

We discussed the matter while we sat in the great library of his laboratory at Orange.

"Several things already have been proved by the war," said Mr. Edison. "One, of course, is that war itself is inefficient. But we knew that. Another is that an 'efficiency' which submerges the individual is an inefficiency.

"As a lay student of the situation it seems to me that the comparatively untrained Englishman has had an advantage from the start just because he has been untrained. This is a striking thing, with a big lesson in it, for the English soldier, I believe, may be regarded, upon the whole, as the physical inferior of the German soldier. Too much military training not only availed Germany nothing, but actually proved to be her handicap.

"Germany was ready for war after the old idea of readiness, but her army never got to Paris. She was overready. She was so overready that she was nervous. Her trigger-fingers became jumpy. It was an attack of hysteria, due to overreadiness, which plunged Europe into war.

"Another thing which has been proved is that no engine of destruction or defense can be so effective that the ingenuity of desperate men cannot devise something which will offset it. Germany's new field guns, the secret of which had been so carefully kept, were the sensation of the first weeks of the war, yet France matched them before it was too late.

"In the unavoidable interpretation which one must place upon these facts is another reassurance for America. We are as clever at mechanics, whether they be those of war or those of peace, as any people of the world. We gave the world the ironclad war vessel as the result of one emergency. We gave the world the submarine. Our Wright brothers perfected the aeroplane.

"If any foreign power should seriously consider an attack upon this country a hundred men of special training quickly would be at work here upon new means of repelling the invaders. I would be at it, myself. There would be no lack of the spirit of determination or the spirit of self-sacrifice. Of these two qualities was the 'Spirit of '76' made up. It is still latent here.

"I believe that the developments of the European war have proved beyond the shadow of a doubt the uselessness of large standing armies. The best work which has been done has been that of the English and French volunteers and the German landsturm.

"It has been a war of trench fighting. What does all the elaborate training of manoeuvres count in trench work? And what does the fact that it counts little mean? Certainly that the world has wasted a vast amount of money in unnecessary military drill and useless fortifications. I cannot understand the situation in any other way.

Thomas A. Edison Holding the Civic Forum Medal Recently Presented to Him as "Inventor-World Benefactor."

"I do not wish any of these statements to lead readers to the belief that I would have my country neglect to realize the necessity of being able to defend itself. I merely wish to call attention to the lessons which the European war seems to me to teach.

"I consider it a reasonable certainty that some day we shall have a war; and I consider it a probability that when that day comes we shall find ourselves unprepared to meet it. I believe it to be the duty of every American patriot to do what he can to see that this does not occur, but I do not believe that the events of recent months in Europe have shown their method of preparation to be the right one.

"Always we have done new things or done old things in a new way, and frequently they have been better things and better ways than Europe has developed. Why should we follow her lead in a military course which has proved to be disastrous to her?

"The European plan of readiness for war really has provoked war. We should evolve a plan of readiness for war which would not do that, but which none the less would worthily protect us.

"We should not take our men from industry and overtrain them, but we should have 2,000,000 rifles ready, in perfect order, even greased, with armories equipped with the very best machinery to begin upon short notice, in case the work should be required, the manufacture of a hundred thousand new firearms every day.

"We should not only have upon hand a large surplus stock of the best ammunition, but we should have Government factories equipped to produce a thousand tons of high explosive in a month if need arises.

"We should have a thousand trenching engines ready and should be prepared with every other mechanical device for rapid defense. Of these things I am certain.

"But I do not in the least agree with the advocates of a great standing army or even of a great military reserve. I believe that, all other details having been looked after, we shall be quite safe if we maintain, as now is authorized, an army of, say, 100,000 men.

"With as many men as that with which to meet the first shock of an emergency, I believe that we could confidently count on volunteers to meet what might come later.

"We should organize our State militia upon really efficient lines. It is my belief that it should be under national, not State control. The men who train it, whether their selection be left with the States or be the business of the National Government, should be chosen with as much care as that with which I select men for important tasks in my laboratory.

"The development of such a method quickly would discover for us, in addition to our standing army, at least 25,000 men especially equipped by natural ability and taste to achieve military efficiency, and these would be drill sergeants, competent to instruct quickly a vast number of soldiers in time of emergency.

"I have suggested 25,000 drill sergeants. We would be doing better if we had 40,000.

"What we want is a small army trained to a big knowledge, and trained to teach it as well as to exercise it. Raw material for training is at hand. We have many millions of potential fighting men.

"We never must become a military nation in the old sense of the term, but I believe it possible that we may become one of the greatest of the military nations without burdening ourselves with any comparatively great, permanent military expense. Modern warfare is more a matter of machines than of men. Most of the machines are simple matters if we compare them to the machines of industry.

"If we had machinery at hand with which to equip a million men we could find the million men upon twenty-four hours' notice. There is practically no military sentiment in the United States, nor ever has been, but we have proved ourselves to be among the world's most powerful fighters whenever we have had to fight.

"What is true of our necessities for machinery is true, also, of our necessities for a great supply of field pieces, large cannon, and ammunition. We should have a large number of small factories, equipped and with the raw material at hand in quantities, but so stored as to avoid deterioration, ready to make the latest and most powerful explosives. We should have arsenals with an enormous capacity for the manufacture of large guns, and their facilities should be kept strictly up to date; we should have accurate knowledge of all shops and factories equipped to manufacture tools for defense, aeroplanes, and all manner of accoutrements. We should have contracts with the owners permitting the commandeering of all such shops in case of war and at a given price for their use, and this should be true of all instrumentalities needed in case of war and instantly operated.

"We need not keep men employed in these shops out of more productive work in times of peace in order that they may be ready to give service if a war should come.

"We should carefully consider transportation in its changed conditions. The efficiency of the railroad is not, now, a matter of such vital moment for us as a

means of moving troops, although, of course, the railroads must remain for many years the chief means by which heavy artillery and supplies will be moved.

"The motor car is more flexible than the railroad, and our roads are reaching such a stage of betterment that automobiles could be generally utilized for moving men.

"Of course, in case of war, troops would be needed on the coasts. Less than 5 per cent. of our country would need defense. All our war would be there.

"The greater part of the transportation to the Eastern coast could be most efficiently done by automobiles.

"I do not believe we would lack transport if we organized an emergency system by means of which our vast number of privately owned motor cars could be commandeered in case war came. It would be easy to commandeer 200,000 automobiles, and 1,000,000 men could be moved 100 miles in a night by using all the parallel common roads.

"I am the last man who would be willing to suggest parsimony in expenditure upon coast and harbor defense. We should have more guns than we have now at all our harbors and they should be better guns, of longer range than any ship can carry.

"That ought not to be a difficult problem to work out, when it is considered that the harbor defense guns would be mounted upon solid foundations, while ships' guns must be mounted upon platforms of a limited carrying capacity.

"I advocate not only the construction of an enormous number of submarines, as I have suggested, to be held in readiness for operations, not to be kept in commission, but our manufacture at once of a vast supply of harbor defense mines and the construction of many vessels properly equipped to plant them hurriedly in case of an emergency.

"In trench fighting, with our unlimited supply of the most intelligent and independently thinking individual fighters in the world, we would be invincible. In case we were attacked we could set our theatre of defense to suit ourselves, planning (these figures are wholly tentative) fifty lines of trenches.

"The first line, or even the first two or three lines, would be dug as practically all those in this European war have been dug, by individual soldiers with picks and shovels, but lines to the rear of them could be dug (and this is one of the emergencies for which we should prepare) by trenching machines. We have developed this line of machinery to a state of very high perfection and to adapt the existing machinery to the purposes of military trenching would be a very simple matter.

"With fifty or more lines of trenches thus quickly, perfectly, and very cheaply prepared we could easily defeat, even destroy, any attacking force which the enemy might land from his ships.

"He probably would be able to take some of our first lines of trenches, but it is inconceivable that he could have any men left with which to fight after he had reached, for instance, (to select a numeral at random,) our twenty-fifth line.

"If the veritable worthlessness of great standing armies and the wicked waste of their maintenance may be considered the most important lesson which the European war so far has held for us, the value of the simple, inexpensive trench is next in importance to us.

"Europe has been conducting a vast and terribly costly experiment for our benefit. She has shown us that in thirty days we can organize a more effective army than the Germans have been able to put into the field if we follow, with the rank and file, the plan of preparation which I have suggested, giving the men the rudiments of training and then returning them to industry.

"She has shown us that we need trained officers. We should immensely increase facilities for training them, even to the establishment of many schools as efficient as West Point.

"But these men, too, should be returned to civil life, after they have had their training, with annual periods of additional study to keep them up to date. They should not be taken permanently from productive and thrust into unproductive effort. They should be kept alive, alert, abreast of everything worth while; we should make splendid all-around citizens of them, fit for unusual usefulness in civil as well as in military effort.

"I think we never should let up on training men for the navy. We should have the greatest number of trained naval sailors that any nation ever has had, but we should not let them eat their heads off after they have got their training.

"We should greatly increase our number of competent naval officers, but we should not make the work of most of them a life career. Like the officers we train for military service, our naval officers should be developed to the top notch of efficiency and then sent back to private life upon part salaries and required to keep up with new developments and be ready for a call if one should come.

"I believe that we should have a navy larger than our present fleet, probably much larger, but I do not believe that the additional ships should be kept in commission.

"I should not in the least object to the payment of my share of the tax which would be necessary for the construction of a dozen dreadnoughts or, for that matter, of two dozen dreadnoughts, but I should strenuously object to the payment of a tax for the support of all of them, manned and in commission during days of peace.

"After each ship is built it should be launched and tested, and then, like the arms and ammunition, it should be stored till the day of need came. Enough vessels of the most approved type should be kept in commission to be used as training ships and enough men should be trained so that we would have no difficulty in finding competent crews for all our vessels. Create a great surplus of trained men, then send them back to industry, with payment of a small annual retainer.

"I believe that in addition to this the Government should maintain a great research laboratory, jointly under military and naval and civilian control. In this could be developed the continually increasing possibilities of great guns, the minutiae of new explosives, all the technique of military and naval progression, without any vast expense.

"When the time came, if it ever did, we could take advantage of the knowledge gained through this research work and quickly manufacture in large quantities the very latest and most efficient instruments of warfare.

"England is doing great work, now, with wonderful artillery. By far the greater part of these big guns have been created out of raw material since the beginning of the war. They seem to be as effective as if not more so than the German guns, which were made in advance of and in anticipation of the conflict, succeeding many other guns, made in former years of peace, but, becoming antiquated, presumably melted up to furnish some of the material for the new artillery.

"At this great laboratory we should keep abreast with every advanced thought in armament, in sanitation, in transportation, in communication — as, for example, under the last named head, with the rapidly developing telegraph and telephone, and, under the head of transportation, with motor car building.

"If we did this we very quickly could manufacture supplies in wholesale quantities when the need for them arose. We could see to it that no attacking nation could have longer-range or more accurate artillery than we would be prepared to make upon short notice."

I asked Mr. Edison to specifically comment on the movement which formed one of the most conspicuous features of the recent Congress—that led by Mr. Gardner for a vast increase in our military expenditure.

"The Gardner movement is unqualifiedly bad," he answered without hesitation. "We don't need any such preparedness as he and his associates are advocating. For General Leonard Wood I have the highest and most profound respect; but I do not agree with him in his opinion as to what is necessary to the welfare of this country in the way of a military establishment.

"We do not need the great machines which these undoubtedly well-intentioned gentlemen are advocating. There is infinitely less reason to believe, today, that we need them, than there was before the outbreak of the European war. We now know how to fight. We did not know, Europe did not know, until this war developed."