

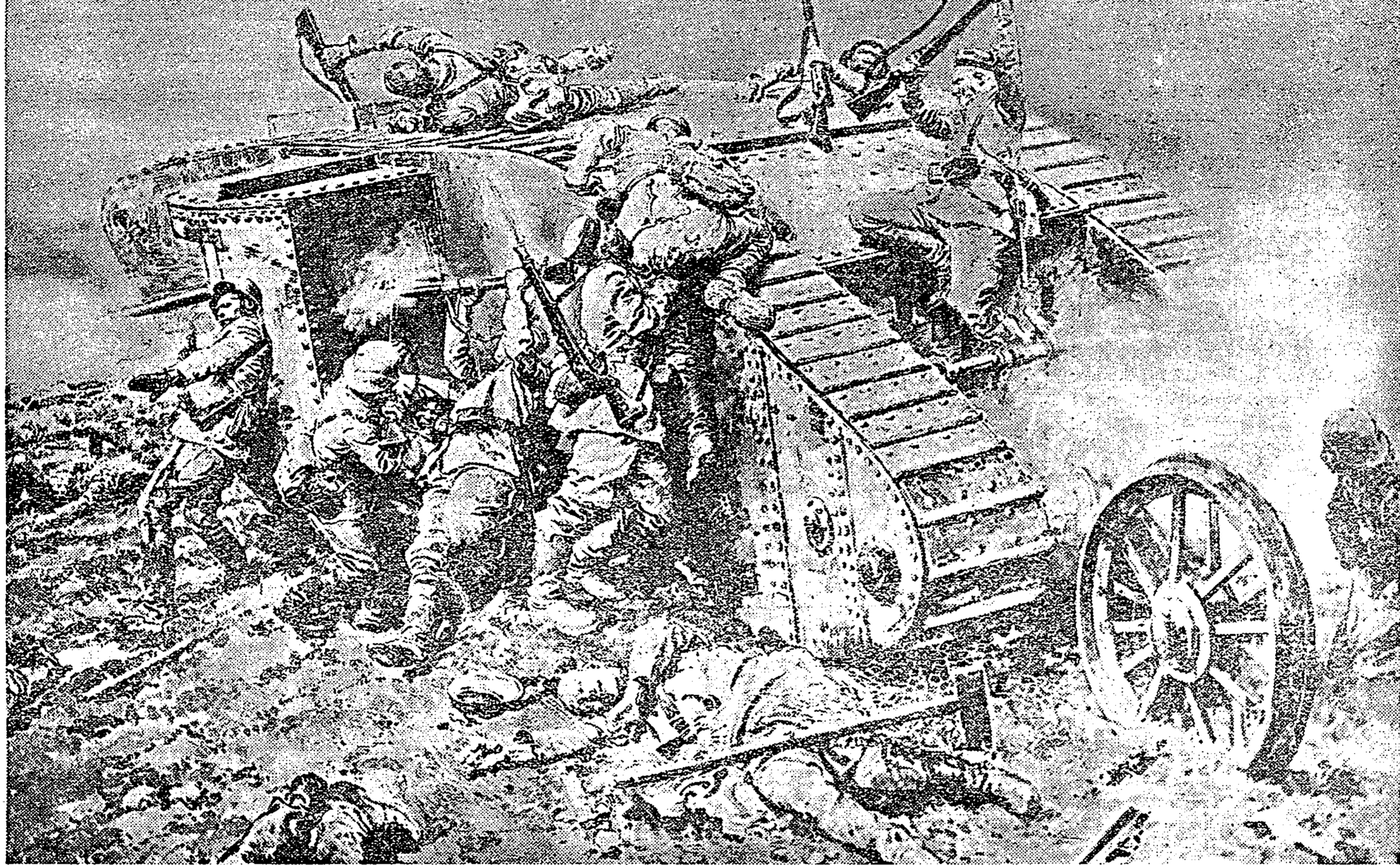
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German Infantry Attacking an English "Tank" Which Has Penetrated Their Lines.  
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## PROPHESIES BIGGER "TANKS"

Novelist Who Foretold the Caterpillar Forts Believes  
More Terrible Land Battleships Are Sure to Come

**T**HE young of even the most horrible beasts have something piquant and engaging about them, and so I suppose it is in the way of things that the land ironclad, which opens a new and more dreadful and destructive phase in the human folly of warfare, should appear first as if it were a joke. Never has any such thing so completely masked its wickedness under an appearance of genial silliness. The "tank" is a creature to which one naturally flings a pet name; the five or six I was shown, wandering, rooting, and climbing over obstacles round a large field near X., were as amusing, as disarming, as a litter of lively young pigs.

The War Office, after a period of reluctance, has suddenly permitted a lavish publication of photographs and descriptions of these things, so that their general appearance is now familiar to every one.

They are like large slugs, with an underside a little like the flattened rockers of a rocking horse, slugs between twenty and forty feet long. They are like flat-sided slugs, slugs of spirit, who raise an inquiring snout, like the snout of a dogfish, into the air. They crawl upon their bellies in a way that would be

tedious to describe to the general reader and unnecessary to describe to the inquiring specialist. They go over the ground with the sliding speed of active snails.

Behind them trail two wheels, supporting a flimsy tail, wheels that strike one as incongruous as if a monster began kangaroo and ended doll's perambulator. (These wheels annoy me.) They are not steely monsters; they are painted the drab and unassuming colors that are fashionable in modern warfare, so that the armor seems rather like the integument of a rhinoceros. At the sides of the head project armored cheeks, and from above these stick out guns that look like stalked eyes. That is the general appearance of the contemporary "tank."

It slides on the ground; the silly little wheels that so detract from the genial bestiality of its appearance dangle and bump behind it. It swings round about its axis. It comes to an obstacle, a low wall, let us say, or a heap of bricks, and sets to work to climb with its snout. It rears over the obstacle, it raises its

straining belly, it overhangs more and more, and at last topples forward; it sways upon the heap and then goes plunging downward, sticking out the weak counterpoise of its wheeled tail.

If it comes to a house or a tree or a wall or such like obstruction it rams against it so as to bring all its weight to bear upon it—it weighs *some* tons—and then climbs over the débris. I saw it, and incredulous soldiers of experience watched it, at the same time, cross trenches and wallow amazingly through muddy exaggerations of shell holes. Then I repeated the tour inside.

Again the "tank" is like the slug. The slug, as every biological student knows, is unexpectedly complicated inside. The "tank" is as crowded with inward parts as a battleship. It is filled with engines, guns and ammunition, and, in the interstices, men.

"You will smash your hat," said Colonel Stern. "No! keep it on, or else you will smash your head."

Only Mr. C. R. W. Nevins could do justice to the interior of a "tank." You

see a hand gripping something; you see the eyes and forehead of an engineer's face; you perceive that an overall bluishness beyond the engine is the back of another man.

"Don't hold that," says some one. "It is too hot. Hold on to that." The engines roar, so loudly that I doubt whether one could hear guns without; the floor begins to slope and slopes until one seems to be at forty-five degrees or thereabouts; then the whole concern swings up and sways and slants the other way.

You have crossed a bank. You heel sideways. Through the door which has been left open you see the little group of engineers, staff officers and naval men receding and falling away behind you. You straighten up and go up hill. You halt and begin to rotate. Through the open door the green field with its red walls, rows of workshops and forests of chimneys in the background, begins a steady processional movement. The group of engineers and officers and naval men appears at the other side of the door, and further off. Then comes a sprint down hill.

You descend and stretch your legs.

About the field other "tanks" are doing

their stunts. One is struggling in an apoplectic way in the mud pit with a cheek half buried. It noses its way out and on with an air of animal relief.

They are like jokes by Heath Robinson. One forgets that these things have already saved the lives of many hundreds of our soldiers and smashed and defeated thousands of Germans.

Said one soldier to me: "In the old attacks you used to see the British dead lying outside the machine gun emplacements like birds outside a butt with a good shot inside. Now, these things walk through."

I saw other things that day at X. The "tank" is only a beginning in a new phase of warfare. Of these other things I may only write in the most general terms.

I realized as I walked through gigantic forges as high and marvelous as cathedrals, and from workshed to workshed where gun carriages, ammunition carts and a hundred such things were flowing into existence with the swelling abundance of a river that flows out of a gorge, that as the demand for the new developments grows clear and strong, the resources of Britain are capable still of a tremendous response. *If only we do not rob these great factories and works of their men.*

Upon this question I would like to say certain things very plainly. *The decisive factor in the sort of war we are now waging is the production and right use of mechanical material;* victory in this war depends now upon three things: the aeroplane, the gun, and the "tank" developments. These—and not crowds of men—are the prime necessity for a successful offensive.

Every man we draw from munition making to the ranks brings our western condition nearer to the military condition of Russia. In these things we may be easily misled by military "experts." We have to remember that the military "expert" is a man who learned his business before 1914, and that the business of war has been absolutely revolutionized since 1914. The military expert is a man trained to think of war as essentially an affair of cavalry, infantry in formation, and field guns, whereas cavalry is entirely obsolete, infantry no longer fights in formation, and the methods of gunnery have entirely changed.

The military man, I observe, still runs about the world in spurs, he travels in trains in spurs, he walks in spurs, he thinks in terms of spurs. He has still to discover that it is about as ridiculous for a soldier to go about in spurs today as if he were to carry a crossbow. I take it these spurs are only the outward and visible sign of an inward obsolescence.

The disposition of the military expert is still to think too little of machinery and to demand too much of men. He makes irrational demands for men and for the wrong sort of men. Behind our front at the present time there are, for example, many thousands of cavalry, men tending horses, men engaged in transporting bulky fodder for horses, and the like.

These men are doing about as much in this war as if they were at Timbuctoo. Every man who is taken from munition making at X, to spur-worshipping in khaki, is a dead loss to the military efficiency of the country. Every man that is needed or is likely to be needed for the actual operations of modern warfare can be got by combing out the cavalry, the brewing and distilling industries, the theatres and music halls, and the like unproductive occupations. The understaffing of munition works, the diminution of their efficiency by the use of aged and female labor, is the straight course to failure in this war.

In X, in the forges and machine shops, I saw already too large a proportion of boys and gray heads.

War is a thing that changes very rapidly, and we have in the "tanks" only the first of a great series of offensive developments. They are bound to be improved, at a great pace. The method of

using them will change very rapidly. Any added invention will necessitate the scrapping of old types and the production of the new patterns in quantity.

It is of supreme necessity to the Allies, if they are to win this war outright, that the lead in inventions and enterprise which the British have won over the Germans in the matter should be retained. It is our game now to press the advantage for all it is worth. We have to keep ahead to win. We cannot do so unless we have unstinted men and unstinted material to produce each new development as its use is realized.

Given that much, the "tank" will enormously enhance the advantage of the new offensive method on the French front—the method, that is, of gun demolition after aerial photography, followed by an advance. It is a huge addition to our prospect of decisive victory.

What does it do? It solves two problems. The existing "tank" affords a means of advancing against machine gun fire and of destroying wire and machine guns without much risk of loss, so soon as the big guns have done their duty by the enemy guns. And also behind the "tank" itself, it is useless to conceal, lies the possibility of bringing up big guns and big gun ammunition, across nearly any sort of country, as fast as the advance can press forward. Hitherto every advance has paid a heavy toll to the machine gun, and every advance has had to halt after a couple of miles or so while the big guns (taking five or six days for the job) toiled up to the new positions.

It is impossible to restrain a note of sharp urgency from what one has to say about these developments. The "tanks"

—if we keep ahead with them—remove the last technical difficulties in our way to decisive victory and a permanent peace; they also afford a reason for straining every nerve to bring about a decision and peace soon.

At the risk of seeming an imaginative alarmist, I would like to point out the reasons these things disclose for hurrying this war to a decision and doing our utmost to arrange the world's affairs so as to make another war improbable. Already these serio-comic "tanks," weighing many tons, have gone slithering and sliding over dead and wounded men. That is not an incident for sensitive minds to dwell upon, but it is a mere little child's play anticipation of what the big land ironclads that are bound to come if there is no world pacification, are going to do.

What lies behind the "tank" depends upon this fact: there is no definable upward limit of mass. Upon that I would lay all the stress possible, because everything turns upon that.

You cannot make a land ironclad so big and heavy but that you cannot make a caterpillar track wide enough and strong enough to carry it forward. "Tanks" are quite possible that will carry twenty-inch or twenty-five-inch guns, besides minor armament. Such "tanks" may be undesirable; the production may exceed the industrial resources of any empire to produce; but there is no inherent impossibility in such things. There are not even the same limitations as to draught and docking accommodation that set bounds to the size of battleships.

It follows, therefore, as a necessary deduction, that if the world's affairs are so left at the end of the war that the race of armaments continues,

the "tank," which at present weighs under twenty tons, will develop steadily into a tremendous instrument of warfare, driven by engines of scores of thousands of horse power, tracking on a track scores of hundreds of yards wide, and weighing hundreds or thousands of tons. Nothing but a world agreement not to do so can prevent this logical development of the land ironclad idea. Such a structure will make wheel-ruts scores of feet deep; it will plow up, devastate and destroy the country it passes over altogether.

For my own part, I never imagined the land ironclad idea would get loose into war. I thought that the military intelligence was essentially unimaginative and that such an aggressive military power as Germany, dominated by military people, would never produce anything of the sort. I thought that this war would be fought out without "tanks" and that then war would come to an end. For of course it is mere stupidity that makes people doubt the ultimate ending of war.

I have been so far justified in these expectations of mine, that it is not from military sources that these things have come. They have been thrust upon the soldiers from without. But now that they are loose, now that they are in war, we have to face their full possibilities, to use our advantage in them and press on to the end of the war.

In support of a photo-aero directed artillery, even our present "tanks" can be used to complete an invincible offensive. We shall not so much push as ram. It is doubtful if the Germans can get anything of the sort into action before the Spring. We ought to get the war onto

German soil before the "tanks" have grown to more than three or four times their present size. Then it will not matter so much how much bigger they grow. It will be the German landscape that will suffer.

Of course, if we comb out our colliers and munition workers, it will take much longer, and the big ones will come from the German side. That is the elementary common sense of the case.

After one has seen the actual "tanks," it is not very difficult to close one's eyes and figure the sort of "tank" that—given the assent of our military leaders—may be arguing with Germany in a few months' time about the restoration of Belgium and Serbia and France, the restoration of the sunken tonnage, the penalties of the various Zeppelin and submarine murders, the freedom of the seas and land alike from piracy, the evacuation and reunion of Poland, and the guarantees for the future peace of Europe.

The machine will be, perhaps, as big as a destroyer and more heavily armed and equipped. It will swim over and through the soil at a pace of ten or twelve miles an hour. In front of it will be corn land, neat woods, orchards, pasture, gardens, villages, and towns. It will advance upon its belly with a swaying motion, devouring the ground beneath it. Behind it masses of soil and rock, lumps of turf, splintered wood, bits of houses, occasional streaks of red, will drop from its track, and it will leave a wake, six or seven times as wide as a high road, from which all soil, all cultivation, all semblance to cultivated or cultivatable land will have disappeared.

It will not even be a track of soil. It

will be a track of subsoil laid bare. It will be a flayed strip of nature. In the course of its fighting the monster may have to turn about. It will then halt and spin slowly around, grinding out an arena of desolation with a circumference equal to its length. If it has to retreat and advance again, these streaks and holes of destruction will increase and multiply. Behind the fighting line these monsters will manoeuvre to and fro, destroying the land for all ordinary agricultural purposes, for ages to come.

The first imaginative account of the land ironclad that was ever written concluded with the words, "They are the reductio ad absurdum of war." They are, and it is to the engineers, the ironmasters, the workers and the inventive talent of Great Britain and France that we must look to insure that it is in Germany, the great modern war propagandist, that this demonstration of war's ultimate absurdity is completed.

For forty years Frankenstein Germany invoked war, turned every development of material and social science to aggressive ends, and at last, when she felt the time was ripe, she let loose the new monster that she had made of war to cow the spirit of mankind. She set the thing trampling through Belgium. She cannot grumble if at last it comes home, stranger and more dreadful even than she made it, trampling the German towns and fields with German blood upon it and its eyes toward Berlin.

This logical development of the "tank" idea may seem a gloomy prospect for mankind. But it is open to question whether the tremendous development of warfare that has gone on in the last two years does after all open a prospect of unmitigated gloom. There has been a good deal of cheap and despondent sneering recently at the phrase, "The war that will end war."

It is still possible to maintain that that may be a correct description of this war. It has to be remembered that war, as the aeroplane and the "tank" have made it, has already become an impossible luxury for any barbaric or uncivilized people. War on the grade that has been achieved on the Somme predicates an immense industrialism behind it.

Of all the States in the world, only four can certainly be said to be fully capable of sustaining war at the level to which it has now been brought upon the western front. These are Britain, France, Germany, and the United States of America. Less certainly equal to the effort are Italy, Japan, Russia and Austria.

These eight powers are the only powers in the world capable of warfare under modern conditions. Five are already allies and one is incurably pacific. There is no other power or people in the world that can go to war now without the consent and connivance of these great powers.

If we consider their alliances, we may count it that the matter rests now between two groups of allies and one neutral power. So that while, on the one hand, the development of modern warfare of which the "tank" is the present symbol opens a prospect of limitless, senseless destruction, it opens on the other hand a prospect of an organized world control of war.

This "tank" development must ultimately bring the need of a real permanent settlement within the compass of the meanest of diplomatic intelligences. A peace that will restore competitive armaments has now become an almost less desirable prospect for every one than a continuation of the war.

Things were bad enough before, when the land forces were still in a primitive phase of infantry, cavalry and artillery, and when the only real race to develop monsters and destructors was for sea power. But the race for sea power before 1914 was mere child's play to the breeding of engineering monstrosities for land warfare that must now follow any indeterminate peace settlement.

I am no blind believer in the wisdom of mankind, but I cannot believe that men are so insensate and headstrong as to miss the plain omens of the present situation.

So that, after all, the cheerful amusement the sight of a "tank" causes may not be so very unreasonable. These things may be no more than one of these penetrating flashes of wit that will sometimes light up and dispel the contentions of an angry man. If they are not that, then they are the grimmest jest that ever set men grinning. Wait and see, if you do not believe me.