

# If WAR Comes —

*Will it be as horrible as alarmists predict? These new machines of destruction — and of defense against old terrors — give the answer*

by FLOYD W. PARSONS

**T**HE next war will bear little semblance to the stand-up and knock-down struggles of the past.

It will be a manufacturing proposition — a matching of national resources — a contest in the rapid utilization of each nation's natural and artificial wealth.

It will be 80 per cent engineering and 20 per cent military, and will be won by weapons that conquer, not by masses of men. The gun will overwhelm the enemy; the infantry will merely take possession.

Each country will use every death-dealing agent it can muster, and the loss of life probably will exceed all the estimates of present alarmists. The new weapons employed will make it impossible to safeguard innocent non-combatants.

No war was ever conducted according to moral rules and international agreements, and in this respect the next war is not likely to be any different. The War Book of the most powerful European nation engaged in the World War stated that "the errors which proceed from the spirit of benevolence in war are the worst."

War is still an act of violence which in its application knows no bounds. In view of the records of present dictators, it is absurd to introduce into the philosophy of war itself a principle of moderation. Doubtless the necessities of the immediate hour will determine the rules of conduct and the degree of injury and destruction rendered.

The World War gave inventive minds ideas that in the last sixteen years have been worked out with startling results.

The newest tanks travel seven times as fast as they did in 1916. One experimental model carrying a 3-inch cannon recently sped 100 miles an hour, jumped 10-foot gaps and forded streams under its own power.

One type of tank easily swims rivers and yet can travel highways at a great speed. The Germans have a fast amphibian war automobile that is capable of making 90 miles an hour on land and 15 miles an hour in the water. The body of the machine is watertight to provide buoyancy.

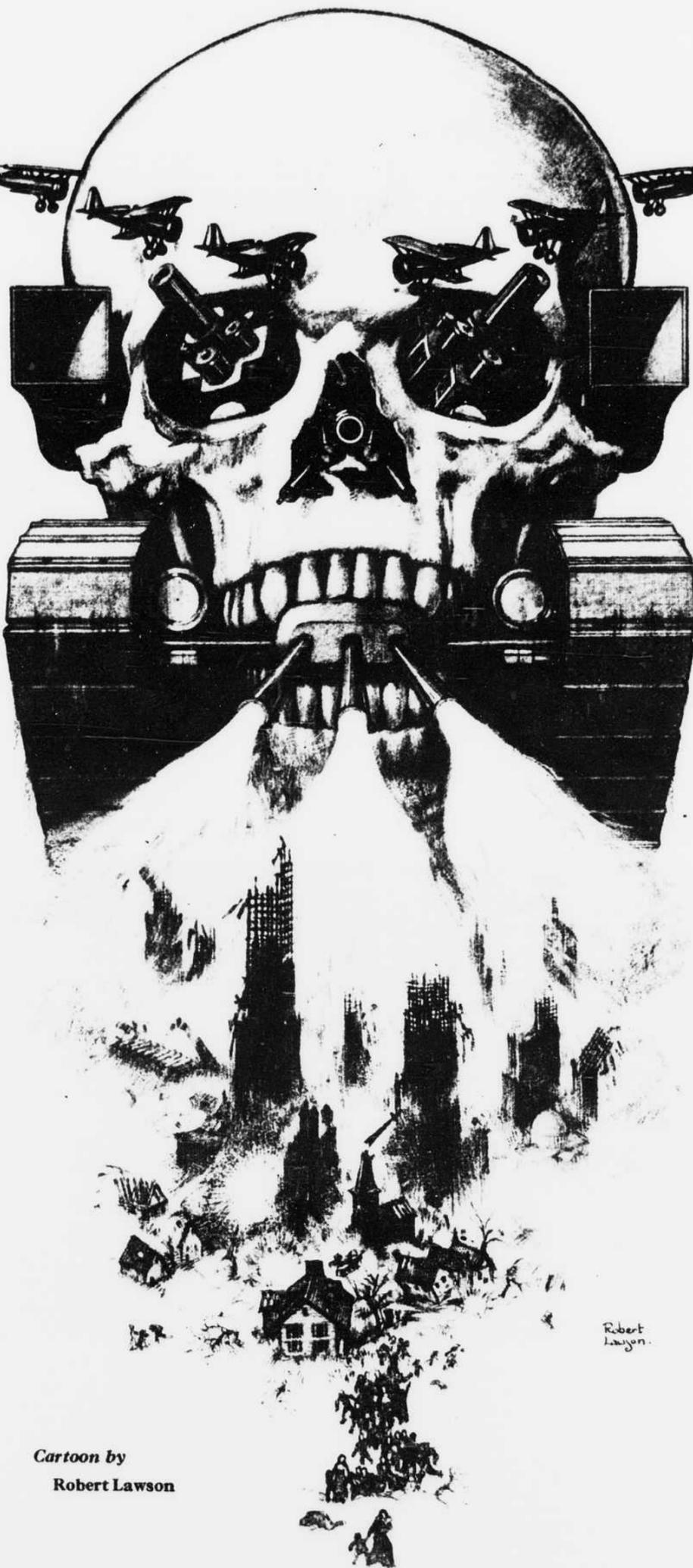
A Japanese machine can be directed by radio, carries no crew, and is designed to explode in enemy trenches like a torpedo.

Airplanes of a new type will carry tanks beneath them, the plan being to drop these tanks in enemy territory by means of huge parachutes. An American inventor is working on a tank that will fly through the air, and has wings which can be discarded upon landing.

Advances in aeronautics not only render it possible for a pilot to fly an airplane "blind" by the use of visual instruments in the cockpit, but he can travel safely when actually blindfolded, using only his sense of hearing. This means that if the instrument board of the war plane goes out of commission, control will not be lost.

A new American bomber equipped with self-navigating devices has just completed a successful test in following a bee-line course without human aid to a previously fixed destination.

A new form of solid gasoline, while not as efficient as the liquid fuel now in use, is non-explosive, and will keep a plane operating after its gas tank has been punctured by a bullet. Simultaneously with this announcement comes a new design that adds wheels to seaplanes, making them as useful on land as they are at sea.



Cartoon by  
Robert Lawson

Fire bombs, so small and powerful that a single plane can carry 2,000 of them, are a threat to cities. Ten planes breaking through military defenses and making only one effective hit out of 100 bombs, could start 200 fires in widely separated places in a short time. Science is coming to believe that fire, rather than gas, may be the obliterating agent in the next war.

The outstanding success of the Germans with lighter-than-air craft — huge dirigibles

— emphasizes one thing: In spite of past mistakes, mostly preventable, the United States will soon have powerful "flying fortresses." Why? Because this country has 10,000,000,000 cubic feet of precious helium gas, the only usable supply in the world, and sufficient to last 100 years. The Germans are compelled to use hydrogen, which is explosive — helium is not.

What a big dirigible means to a nation at war is evident from the fact that the ill-fated

AKRON, weighing 240,000 pounds, had a total lifting power of 400,000 pounds — that is, it could carry 160,000 pounds of fuel, weapons and war materials. We will see and hear much more about these huge ships.

Automatons have taken over most of the pencil-and-paper work that formerly had to be done by army officers in a hurry under fire. One of these "thinking machines" is able to turn its telescopic eye upon a distant plane, and within 30 seconds automatically train on it a battery of high-angle guns that will harry the plane with a hurricane of steel, shot upward at the rate of a ton a minute.

The officers in charge of this artillery may be half a mile from the mechanical eyes that aim the gun.

Great secrecy surrounds the new developments in gunnery and ordnance. Marvelous alloys with special properties have practically eliminated corrosion and failure under high heat. Armor-piercing shells now have percussion caps that make explosions certain on impact.

The sensation of the next war, if it is not the aerial torpedo, will likely be the long range of the huge guns that will be ready. The astonishing development of the World War was Germany's "Big Bertha." This monstrous siege gun sent a 12-inch shell into the stratosphere, where the rarefied atmosphere ten miles or more above the earth offered little resistance to the 90-mile journey of this screaming agent of death.

The inhabitants of Paris were terrorized by this storm of destruction from out the heavens. Easter Sunday morning 100 helpless non-combatants in the Church of St. Gervais were instantly killed. No other known gun ever had a range of more than 25 miles. So far away was this death-dealing super-engine that its operators had to allow for the curvature of the earth and the speed of the earth's rotation.

When the war ended, the only result of an energetic search for the secret of "Big Bertha" was the discovery of the gun's emplacement more than 80 miles from Paris.

Although the Germans have kept their secret well, the next war will disclose even bigger and more accurate cannon hurling their shells through the unresisting stratosphere with deadly precision.

No less disturbing are the various new methods of using rays and beams to rout an enemy. One new beam of force, similar to the so-called "death ray" of scientific romance, may destroy soldiers miles away, or bring down an airplane like a duck on the wing. The inventor asserts that this aggregation of intense short waves will penetrate armor-plate, but it must be generated at a stationary power plant, which makes it wholly a defensive weapon.

Experiments disclose that "radio waves" used for the electrocution of destructive insects may be so amplified that they will kill human beings. The enemy must enter an electric field between huge electrodes, and it is the rapid oscillation of high-voltage energy across this field that does the job.

Radio waves already employed in hospitals can create in a patient a temperature of 115 degrees — deadly if maintained. In laboratory experiments, the electrostatic field set up by an 8000-volt stream of energy has killed insects instantly and will kill any person who remains in the area for very long. The switch of polarity changes from positive to negative

(Continued on page 13)