

# Calls Typhus American Disease

*Pathology*

North America has developed its own special brand of typhus fever, the Old World scourge that still takes terrific toll of life among the lower classes of Russia.

Dr. Kenneth F. Maxcy of the U. S. Public Health Service has found that a mild form of typhus fever is endemic, that is, occurs repeatedly from time to time, in certain states in the south, notably Georgia, Alabama, North Carolina, Virginia and Florida. In this region it appears to be identical with tarbardillo, the typhus that bobs up with uncomfortable frequency south of the Rio Grande and sometimes above it.

It differs from Old World typhus in that most of the cases occur in summer and fall instead of spring and winter, and in its relatively low mortality.

Contrary to expectation, native white Americans of respectable station have been the principal victims, while negroes remained almost unaffected. An occupational analysis showed that a large percentage of the cases were from among people engaged in handling foods, such as groceries, meats, produce and feed. This circumstance has led to the formulation of the theory that rats or mice act as reservoirs of the disease from which man

is accidentally infected by bites of some bloodsucking parasite.

One of the tests that have been developed to help identify this disease, for many of the early cases were confused with other maladies, has recently been found to give a positive reaction for Rocky Mountain spotted fever, a disease of the typhus group, but immunologically distinct.

"The typhus," said Dr. Moxcy, "which has been occurring in our eastern seaports does not depend upon direct importation from across the sea. It belongs to the North American Continent."

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## "Thinking Machine" Aims Guns—*Continued*

explode. But when it does, the effect is ruinous. Half a wing, or the whole of the rudder apparatus simply vanishes. So much has been determined by trial on fabric targets, but what would happen should one of these little shells chance to hit a loaded bomb rack had better be left to the imagination.

In addition to these guns that attack with shell, the Army has turned its attention to the possibilities of machine guns. These should be especially useful against low-flying planes that "strafe" infantry and transport columns with machine-gun fire and light bombs. Some of the newer planes designed for this kind of fighting carry light armor about the cockpit, to protect the crew and vital machinery from ordinary fire. To answer this argument, the .50-caliber machine gun has been developed. It is the same in general construction as the .30-caliber Browning heavy machine gun, but it throws a massive cigar-shaped bullet, half an inch in diameter and weighing two ounces. The light plates an airplane is able to carry cannot deny entrance to such messengers as these. And in order to get a high concentration of fire, four of these pieces are placed on the same mount. With such a battery one gunner can direct a veritable hurricane of fire—thirty shots a second.

Both the 37-millimeter automatic and the multiple-mounted machine guns can be handled by means of the new five-direction instrument, to as great advantage as their larger relatives, the 3-inch and the 4.1-inch. In fact, the Army's robot may branch

out and make itself useful to the field artillery as well as to the "archies". One problem that has not yet been solved by the field guns is the rapidly moving tank. They cannot follow it fast enough. But, say the anti-aircraft ordnance officers, if we can score hits on a bombing plane flying at 100 miles an hour and having three dimensions to shift around in, it would surely be a much simpler job to score a hit on a tank moving ten or twenty miles an hour, and for all practical purposes limited to movement in two dimensions. In case this fire-direction

instrument, or some modification of it, does demonstrate an ability to find the troublesome tank, these new-born military dinosaurs are going to have a harder time of it than they had in the World War. For a direct hit with a 75 or 155-millimeter shell will put out of action the biggest tank going, and it would be impracticable to add armor thick enough to stop such projectiles. It will be a most curious development if a weapon designed for use against hawks should prove useful also against armadilloes.

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DIAGRAM OF THE NEW RECEPTION COMMITTEE for enemy aircraft. The "thinking machine" is on the trailer in the foreground