

AERONAUTICS

Super-Bombers Coming

Flying battleships predicted by Gen. Arnold will, he says, make cross-Atlantic round trip without refueling but carrying full load of bombs.

► PRESIDENT ROOSEVELT'S warning to the peoples of the battered Axis powers that there's even worse to come if they don't surrender now receives specific backing from his Army Air Forces chief, Gen. H. H. Arnold, who tells of giant planes carrying half-carload lots of more-than-blockbuster bombs, in *Army Ordnance*.

These flying battleships, which Gen. Arnold says will be able to deliver their massive loads of devastation clear across the Atlantic and fly home again without refueling, will be armed for defense with cannon of a caliber larger even than the 37-millimeter that some American fighters now carry. These guns will operate on an entirely new principle, details of which are of course not yet disclosable. They will be mounted in multiple turrets operated from a central aiming position, analogous to the fire-control system of present-day battleships. The new gunsight will be as revolutionary as the present bombsight.

The plane will have "eyes" that will help guide it to its target or warn and plot the course of enemy interceptor planes.

The present bombers, which the promised new super-bomber will render obsolete, are given a liberal meed of praise by Gen. Arnold. Their defensive armament of .50-caliber machine guns, with which Flying Fortresses and Liberators fairly bristle, is the most formidable carried by any bombers in the world. It was a real stroke of foresight on the part of our ordnance designers, the air chief declares, that provided us with this highly effective weapon, which fires two-ounce slugs at a rate of 800 a minute and outranges enemy 20-millimeter cannon, in advance of our actual need for it.

Effectiveness of our demolition bombs was greatly increased by improvements in methods of manufacturing their casings, which hold them together while they penetrate deep into overhead earth or concrete protection, so that their heavy explosive charges detonate with earthquake-like results.

Fragmentation bombs, such as have lately destroyed many enemy airplanes on the ground, are made on a simple

but highly effective pattern. Square rod iron is bent into a spiral coil, like the springs on a car wheel. Within this is a core of TNT. When this explodes, the coil is broken into 1,000 to 1,500 short chunks, which are hurled in all directions at twice the speed of a rifle bullet. At 200 feet these deadly fragments will cut through airplane wings, gas tanks, tires, radiators and control mechanisms. No human being standing anywhere near has a chance against this deadly iron hail. The Japs are said especially to dread American fragmentation bombs.

Science News Letter, September 11, 1943

MILITARY SCIENCE—PSYCHOLOGY

Infantry's Comeback Seen As Psychological Victory

► INFANTRY is still final boss of the battlefield. Pre-war anticipation that everything would be mechanized, and that the man on foot would have no chance against airplanes and tanks, have not been realized. This is the thesis of a lead editorial in the *Infantry Journal* (September).

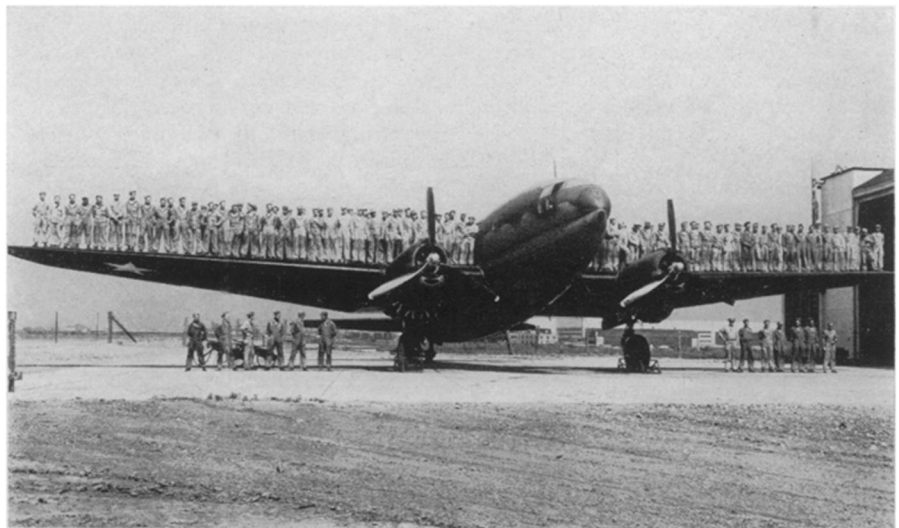
Infantry's comeback, the *Journal* indicates, has involved a psychological as well as a military victory, for the claimants of all-annihilating power for the newer weapons had created lurking doubts in the minds of all but experienced soldiers concerning the value of the foot soldier under present-day combat conditions:

"To repeat and repeat that infantry was a dead arm might not affect the spirit of the soldier with experience, but it was almost bound to impede the building of the esprit that makes a fighting unit and the morale that sustains a fighting soldier as he goes into battle."

In the editor's opinion, the extravagant claims advanced, especially by proponents of air power, "could all have been made without attacking the older means. They could have been spread just as widely without insisting that only the new in war counted for victory and that all that was old was useless."

His own experience in battle, on fronts all the way from the Solomons to Sicily, have convinced the infantryman of the fallaciousness of these facile arguments and of his own tough, surviving value. The *Journal* continues:

"The infantryman who had any doubts soon learned that he was no second-rater. He learned that modern warfare calls for the utmost effort in every sphere where man can fight, and that if an army is weak in any one sphere and the opposing army is not, no possible amount of strength in the other spheres can make up for that weakness. (Please turn page)



WING SPREAD—As a graphic demonstration of the size of the great Curtiss Commando (C-46) cargo plane, 100 soldiers posed on the 108-foot wing span. The C-46 is powered with two 2,000 horsepower engines and weighs about 50,000 pounds fully loaded.