

AERONAUTICS

Plane Problem Complex

Controversy over whether American planes are superior is due to fact that some important features must be sacrificed to have others; fast planes are not maneuverable.

➤ ARE AMERICAN pilots being sent into the air in combat areas in planes that are inferior to the Japanese Zeros or the German Focke-Wulfs?

The answer is a vital one to the American people, and it is therefore the subject of hot controversy between writers who do not know the whole truth and public officials who are not at liberty to speak it.

When the facts are, finally, freely discussed, it will probably be perfectly clear that everyone is right and, to quote Gilbert and Sullivan, "all is right as right can be."

Here are the facts:

American airplane manufacturers can build the fastest planes in the blue.

They can make them climb.

They can make them maneuverable.

They can arm them with the best guns.

They can protect the pilot with the best in bullet proof windshields and fuselage.

They can make them relatively fire resistant by self-sealing fuel tanks.

They can make them carry a heavy load of guns, fuel, and bombs.

They can make them cruise farther with a fighting load than can the planes of any enemy — from Shangri La to Tokio.

But they can't combine all these features in any one plane.

If you build a plane that can outfly any other plane in the air, you can't expect to make it land on the space of a boat's deck.

If a plane is built that is so strongly fortified that it cannot be successfully opposed by any enemy fighter plane, you cannot expect extreme speed from it.

If a plane is built that will outdistance all pursuers, you can't expect that plane to "turn on a dime" and dart in and out of a dogfight like a mosquito.

And, all too often, a super-duper plane which combines an astounding number of these ideal features cannot be produced in large numbers in blitz time—it must be mulled over carefully by hand-workers.

Which of these features do we want

in our planes? That is a question that is not yet completely answered. The chances are it never will be, because warfare in the air is constantly changing. And the enemy doesn't build his tactics to allow us the advantage of our strong points—he aims constantly at our weak points.

If we have an air armada of heavy, strongly fortified planes of the "invincible" type, the enemy will try to make all air battles a hit-and-run, dodge-and-harry type. If all we could supply to our pilots at the front were light, vulnerable planes without heavy armament but able to out-maneuver any opponent in a breath-taking display of sharp turns and loops and rolls, dog-fighting in aerial warfare would immediately become as obsolete as the dodo.

The argument as to the relative importance of speed, maneuverability, strength of armament, pilot protection, goes on and on and will continue. It is

complicated by the fact that the pilot, too, has limits of what he can stand in maneuverability without "blacking out." The facts about the physiology of pilots, like those on the engineering performance of planes, is not being told lest it aid the enemy. Enemy pilots are subject to the same human failings when exposed to high altitudes, extreme cold, fast turns and abrupt dives. They would like to know what we know.

Some pilots lean to the opinion that the immediate practical answer to the question is this: We need planes—period. We need fast planes. We need maneuverable planes. We need quick-climbing planes. We need heavily armed planes. We need long-cruising planes. We need all sorts of planes. But, above all, we need planes—in quantity and immediately.

Science News Letter, October 17, 1942

ARCHAEOLOGY

New Find Helps Date Prehistoric American

➤ A NEW discovery, which may lead to more complete knowledge of our prehistoric North American ancestors and help bridge the 10,000-year gap in archaeological knowledge, has been made by Dr. Frank H. H. Roberts, Jr., Smithsonian Institution archaeologist.



PITCHING INTO THE SCRAP—These are steel shavings thrown off in making propellers for U. S. warplanes at the Curtiss-Wright Corporation's propeller plants in New Jersey. The shavings are being pitched onto a truck for shipment to a plant for re-claiming—and that isn't hay.