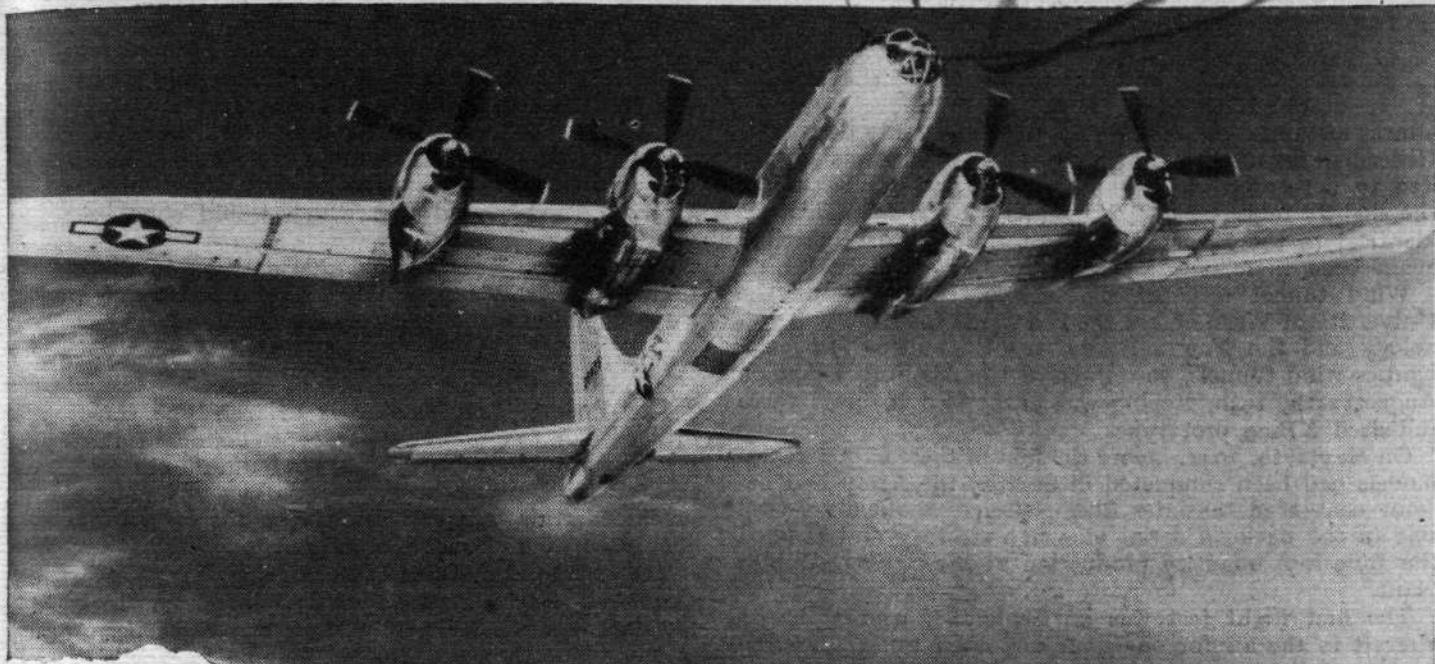


Barrett 7734



The B-29

Novel Features of the Superfortress Tested on Reduced Scale on Fortresses : Ordered "Off the Drawing Board" : Success a Splendid Memorial to Edmund T. Allen

FURTHER interesting particulars of the inception and evolution of the Boeing Superfortress, which was described and illustrated in our issue of July 6th, have now become available. They relate particularly to the vast research undertaken in order to ensure that everything that went into the new type should have been thoroughly tested and tried-out beforehand so that the number of snags brought to light once production had started might be reduced to a minimum. The B-29, it must be remembered, was virtually "ordered off the drawing board."

Conception and History of the Boeing B-29

The story of the development of the Boeing B-29 Superfortress dates back to the winter of 1938, when staff officers of the U.S. Army Air Corps asked the Boeing firm to submit ideas for major modifications of the Flying Fortress, which the Boeing Company had introduced three years before.

At that time the Boeing Company was engaged in improving the design of the Flying Fortress; was manufacturing the Boeing Stratoliner; had just built a larger super-bomber, the B-15, for the Army, and had presented to the Army in 1936, 1937 and early 1938 tentative designs for three other large bombers.

The B-15, of which only one was built, had set records for range and load-carrying capacities, but the Army was lukewarm about the machine because it lacked the speed and altitude performance desired. At that time more powerful engines were not available to keep pace with the increase in aircraft size. There had been little response to the other three designs submitted, principally because funds then available for purchase of military aircraft were extremely limited.

Boeing engineers reported that the requested modifications of the Flying Fortress cabin were not practical. But the study of the performance desired opened the way for definite discussions with the Army on the need for a faster

bomber with greater altitude, longer range and carrying a much greater military load.

These discussions with the Army began to crystallise in the latter part of 1939, and on January 29th, 1940, Boeing received from the War Department a circular containing general specifications and a request that Boeing bid on an experimental four-engined bomber. This was the opportunity for which Boeing had been waiting four years.

Boeing engineers had already been at work on such a design, and the company's answer to this invitation was the Model 341. This proposed bomber had a gross weight of 73,000 pounds with an alternate gross weight of 85,672 pounds, substantially greater than the Flying Fortress. Described by the late Edmund T. Allen as a cleaner machine (aerodynamically) than ever had been designed and the smallest aircraft capable of very long range, the Model 341 was powered by four engines. It had tricycle landing gear. Sikorsky, Martin, Douglas, Consolidated and Lockheed also submitted designs.

But France and England already had been at war with Germany some ninety days. As a result, the United States Army Air Forces' ideas of aircraft design were changing rapidly. The Army believed that the Model 341 and other designs submitted did not go far enough. The Army wanted an advanced design which, when it finally got into quantity production, would be the best in the world. In February, 1940, 30 days before Hitler invaded the Low Countries—the Army issued a supplement to its specifications, increasing requirements and asking builders to submit new ideas. Most of the other contestants dropped out.

Boeing, however, in March, began enlarging the Model 341 into the Model 345. This also was a four-engine bomber. But its gross weight was increased. Competition was keen and Boeing put into its design every mile of range and speed, every pound of carrying capacity and every foot of ceiling that was possible. The design met

AS THE JAPS SAW THEM: Two Superfortresses of the type which bombed the Japanese island of Kyushu on June 15th.

