uncommon. During the British Somme offensive, for instance, the shortage of infantry became so acute that men were being forwarded to the front with only two or three weeks' battle training and at Cambrai in 1917 companies were committed direct from a Field Recruit depot as an emergency measure. However, the most famous of these occurrences went into German military history as an unequalled example of patriotism when, at Langemarck in late 1914, infantry advanced in mass formation, singing as they marched, to attack the British lines. The truth behind this exploit was that the soldiers involved were part of the massive rush of untrained volunteers that flocked to the colours in August 1914, and their training was so incomplete that they did not even now how to deploy. Although these examples can be cited, the German Army was unaccustomed to such occurrences. Despite an undoubted decline in the quality of the Army, beginning in late 1916, as a result of the heavy losses suffered in the Battles of Verdun and the Somme, at no time until the final weeks of the war could it be considered unequal to the task that it faced.

300dpi color scan

Below: Trench life. A front line trench on Hill 60, June 1916. This is typical of much of the maze that extended from the Belgian coast to the Swiss Frontier. / IWM



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600dpi color scan

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1944 it was exceeded by 100 percent.

Some easement into the problems of increasing output was provided by foreign sales to England and France. For instance, Pratt & Whitney still, in 1979, called one of the units in its plant the French Building and another the English Building. They were built to furnish engines to these countries because the company's otherwise limited facilities were taxed by our own requirements. Astute negotiating that anticipated our forthcoming military needs enabled these capital plant expansions to be financed by surcharges on the engines delivered.

The problems of production expansion, known as "the numbers racket," are in retrospect, more or less self-evident. The term *racket* came from the serious questions involving numbers versus quality or performance. Both aspects of the problem stemmed from the insignificant base from which the buildup had to start. This was the result of meager support for procurement and development for the preceding 20 years. More subtle and more difficult was the problem of maintaining technical progress and having available the modern types of aircraft suitable for committing to 300dpi color scan d time from inception to the appearance of a type in appreciator quantity in the service varied from three to seven years, it is evident that most of what appeared in the war had to have been initiated in the mid-1930s.

From the late 1920s to the 1930s, aeronautical technology was changing rapidly and drastically. Materials, construction, aerodynamics, performance, complexity, and power-plant changes took place in a short time. Even if the service force had been modern at any one time, it would have become obsolescent in three or four

That woodworking was labor intensive is evident in this view of wing panels being constructed on a jig.



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