

of ocean from the United States. As a result, the first task of the infant 8th Air Force was to bomb German U boat yards, for the submarine was then such a menace to shipping in the Atlantic that, unless it could be controlled, it would take us forever to build up a bomber force large enough to be effective. Accordingly, the 8th got its first real taste of warfare during attacks at Lorient, St. Nazaire and Brest, coordinating its blows with missions by the RAF to Kiel, Wilhelmshaven and Bremen. These in themselves were not conclusive. Germany had great numbers of submarines. Her construction and repair were done largely in huge concrete pens which were almost impervious to the type of bomb which the Allies were then using. All together, the campaign cost Germany something under 15 percent in submarine construction, plus a general lowering of the number of subs operational at any given time, by lengthening the time necessary for reconditioning and refitting. The real payoff, also by air, came from the provision of an umbrella of protective planes over the convoys themselves, which, together with the blows at construction and the activities of the RAF Coastal Command, enabled our ground and air forces in England to grow. However, it was not until the summer of 1943 that the 8th was large enough to set out on missions against critical targets deep in Germany itself. By November 1943 a growing 15th Air Force was based in southern Italy.

Aircraft Factories The first target system of fundamental importance which was assigned to the 8th and 15th was the German aircraft industry. The enemy, belatedly realizing the disaster awaiting him if our bomber forces could carry out their proposed program, had begun to expand his production of fighter aircraft in an effort to knock us out of the sky. If we were to proceed with the dismantling of her industry, the Luftwaffe would have to be disposed of first. This called for pinpoint bombing of the highest order, because most aircraft plants were located in the suburbs of large cities or else out in the country, and were not seriously affected by the saturation attacks of the RAF. The ensuing struggle for the mastery of the air went on for about a year. We absorbed some fearful pastings and for a time were consuming our entire 8th Air Force in battle at the rate of two and a half times a year. By the spring of 1944, however, just in time for the Normandy invasion, the Luftwaffe was done for. It never seriously interfered with our ground operations in Europe. Our plane losses due to enemy air action dwindled to insignificant proportions.

Transportation Next In March 1944 aircraft production ceased to be No. 1 priority. Further attacks being largely of a policing nature. Its place was taken by transportation. In addition to clogging the movement of enemy troops to parry our invasion thrusts the blows at rail centers had the benefit of being indirect blows at all industry. This is because, in a highly industrialized nation like Germany, coal, steel heavy chemicals, petroleum and many other products must be shipped to the manufacturing centers before any production of finished goods can be achieved. The effects of the transportation cam-

aign were slow in making themselves felt, due to the fact that the rail network in northwest Europe was the most highly developed in the world. It took many months of slogging through excess capacity both, in trackage and rolling stock, before the Germans began to experience serious difficulties in moving goods from one place to another. However, the statements of captured military and industrial leaders testify to the overall effectiveness of a campaign which for a long time appeared to be wasted effort. Germany kept her rail system in operation until the end of the war, but only through the most superhuman efforts, all of which meant the withdrawal from the army and other industry of an enormous amount of manpower and materiel, at a time when all of these could least be spared. And, despite these sacrifices, Germany fought the last six months of the war with a rail system wholly inadequate to her needs.

In May 1944 transportation fell to second priority for the American Air Forces, its place being taken by oil. As a matter of actual fact, this meant only a slight reduction of the effort expended on rail yards. The reason for this is that these targets are easy to find, easy to hit and hard to defend. As a result, on many days, rail yards were hit as secondary targets by formations which had been weathered out of their primary targets. And all through this period the RAF continued

to deal out tremendous blows of its own against rails.

Finally Oil The oil campaign proved to be the most immediately catastrophic of all to German hopes. It immobilized the remnants of the Luftwaffe. It stalled the Wehrmacht. It forced the home front, already clogged by the rail campaign, to rely on charcoal-burning and horse drawn vehicles. It was the most fiercely protected of all German industrial systems.

Refineries were ringed with dense concentrations of flak, and the dying GAF seldom rose to oppose our missions unless when they were directed at oil targets. In view of the immense success of this campaign it is reasonable to ask why we didn't go after oil earlier. The answer is that it was necessary to beat down the Luftwaffe before we could strike at other targets. If we had not done so, our battle attrition might well have been so high that the assembling of a large enough bomber force for decisive daily blows might have been deferred indefinitely. Therefore, oil could not be considered for first priority until the spring of 1944. It might then have been put ahead of transportation, but the demands of the ground forces for a rail campaign to implement the looming Normandy invasion deferred it for another two months. Rail attacks could be expected to have immediate tactical results, whereas destruction of refineries and synthetic plants would be effective only when several months' stocks of already produced fuel were exhausted.

As a sort of somber undertone to this symphony of air craft-rail-oil destruction, the Allies conducted a continuing campaign against German manufacturing in general. The Ruhr, which was one expanse of heavy industry and heavier flak, became known as "Happy Valley"

