

ordinary flexibility of control of the fighter bombers on army co-operation was maintained. Another interesting development in technique was provided by the use of the American M.E.W. mobile Radar station, which, because of its ability to locate low-flying aircraft and of its range of detection, proved of great assistance to the fighter forces covering the battle areas. However, I feel that the chief value of the tactical air forces during this first period lay in their ability to smash up the enemy's attempted concentrations of tanks and vehicles before a counter-attack could be launched.

288. *The Break-through of the Allied Armies.*

—When the United States armies achieved their break-through which carried them to the Brittany Peninsula and on into the country north of the Loire, the close support work of the air forces took on a new aspect. Continuous fighter cover was provided to the advancing armoured spearheads. This cover, not only protected them from enemy air attack, but also reached out, destroying enemy tanks, M/T and gun positions that lay in the path and along the flanks of the advancing armies. In this respect the work of the United States Ninth Air Force, particularly of the IXth and XIXth Tactical Air Commands, deserves special mention. Fighter pilots of this force destroyed hundreds of enemy tanks and vehicles. They had developed a technique of attacking tanks from the rear, which experience had shown was most vulnerable to their .50 calibre machine gun bullets.

289. It was to hold up this break-through that the enemy, under personal orders from Hitler, attempted, on 7th August, his really large scale armoured counter-attack, launched against Mortain in an effort to reach the sea at Avranches and split the advancing American armies from their main bases. This concentration of armour gave the tactical squadrons of A.E.A.F. a great chance to inflict a crushing blow on the enemy and prove the superiority of their weapons and training. The opportunity was fully accepted, particularly by the Typhoon squadrons of R.A.F. Second Tactical Air Force.

290. On 7th August there were nineteen squadrons of Typhoons operating from French airfields. These squadrons carried out 59 missions, flying 458 sorties in all during that day. 294 of these sorties were in the Mortain area. No less than 2,088 rocket projectiles were fired, and 80 tons of bombs were dropped; and the pilots claimed very large numbers of tanks, A.F.V., and M.T. destroyed and damaged.

291. This tremendous blow at the Nazi armour was achieved at the cost of 5 aircraft lost and 10 damaged, and was one of the most vital factors in defeating the enemy attacks.

292. The scale of effort of these Typhoon squadrons is indicative of the sustained activity of the tactical air forces. The number of missions flown by Typhoons in the five-day period, 7th-11th August, rose to 298, involving 2,193 sorties. 9,850 rocket projectiles and 398 tons of bombs were aimed at enemy targets, and many more enemy tanks and vehicles were destroyed. These results were achieved at the cost of 13 Typhoons destroyed and 16 damaged.

293. After the Typhoon attacks on the first day, the fighter-bombers of the United States Ninth Air Force took over the responsibility for the Mortain area, and in many attacks accounted for many more of the enemy armoured vehicles. By this effort, the air forces broke up and partly destroyed the enemy concentrations of armour, and although a number of spearheads did penetrate our forward positions, they were effectively dealt with by the ground forces. In this counter-attack Hitler threw away the one force of armour which could have enabled him to extricate his army. As a result, the disaster to the Army was complete. Between 8th and 14th August, the IXth Tactical Air Command flew a total of 4,012 sorties; virtually all of them in co-operation with ground action in the Mortain region. On 12th August 673 sorties were flown and 310.8 tons of bombs dropped.

294. To the outstanding success of these attacks on the enemy armour, the weather effectively contributed, not only because it cleared and remained fine during the critical days from 7th to 11th August, but also because it had been so bad earlier. This bad weather had drastically restricted air operations and, there seems reason to suppose, had lulled the enemy into a sense of false security.

295. It is difficult to find any other reason why he should have abandoned first principles and moved his armour head to tail in long convoys over roads in daylight. These convoys, once the weather cleared, gave the tactical air forces their unique chance of scoring an outstanding success.

296. *The Encirclement.*—During the period in which the German 7th Army was rapidly becoming encircled by the sweep of the American ground forces to Alençon and Argentan and by the pressure of the British and Canadian forces towards Falaise, the German Commander had to decide whether to withdraw before the gap was closed or to stay and fight it out. I feel certain that any such withdrawal in the face of the overwhelming air superiority of the Allied air forces would have been disastrous, and it would appear that the German Commander also had serious misgivings as to the practicability of such a withdrawal. In large part, the enemy army stood to fight. While the front was more or less clearly defined, the air forces were able to inflict destruction on the concentrations of enemy troops. However, when the encirclement became complete, the ground position naturally became confused. In these conditions it was inevitable that our air forces should have once or twice attacked our own troops in error. Such misfortune could not be avoided. As a result, however, the Army Commanders eventually fixed bomb lines which automatically severely restricted attacks in close support of the land forces and thus denied to the fighter bombers many excellent targets. I pressed for revision of these bomb lines to allow more freedom to operate closer to the fighting, but the Army Commanders maintained their caution. I am convinced that, as a result of this action, the reasons for which I fully appreciate, the air forces let through a great deal of enemy material and troops that would otherwise not have escaped.