

and dropped 54 tons of bombs in the course of them. In these operations no effort was spared to ensure that the bombs were dropped with a skill and precision rivalling that displayed by the picked crews of No. 2 Group in some of their spectacular attacks on buildings used as headquarters by the Germans. A characteristic attack delivered during this phase was one made by Nos. 453, 229 and 602 Squadrons, on Christmas Eve, on a block of flats near the centre of the Hague, which the Germans were using to house the firing troops in that district. The building was so badly damaged that the Germans had to leave it.

210. To all appearances the influence of these operations on the rate and quality of the enemy's fire was considerable. The scale of attack declined from an average of nearly seven rockets a day at the end of November to four a day in the middle of December and three-and-a-half at the end of the month. Moreover, the enemy took to doing most of his firing at night, and the apparent accuracy of the shooting decreased. A statistical analysis of the rocket effort and our counter-measures led to the belief that sustained attacks on the firing areas by day and night would exercise a cumulative effect on the enemy and hence on the number of rockets that reached London.

211. At the time I was not altogether prepared to accept this conclusion. In the light of subsequent experience I feel quite sure that to do so would have been to claim too much for our efforts. The chief factor in limiting the scale of attack was almost certainly the rate at which supplies could be brought to the firing areas; and this in turn must have been mainly determined by the frequency and success of the armed reconnaissance and rail interdiction sorties flown by the Second Tactical Air Force over the enemy's lines of communication. Preparations for the German offensive in the Ardennes—which was accompanied by an increased scale of rocket attack on Antwerp—may also have helped to diminish the attack on London towards the end of 1944. The simultaneous decline in accuracy is not so easily accounted for; and its significance in view of the comparative smallness of the figures analysed is open to question.

212. On the other hand the enemy's new tendency to fire most of his shots at night was definite and unmistakable. For this change of habit by the Germans our fighter-bombers may perhaps claim the credit, since it cannot readily be explained on any other grounds than a desire to evade their attention. Admittedly the gain was an indirect one, seeing that fire at night was no more inaccurate than by day; in fact, as a general rule a higher proportion of the rounds fired in darkness hit the target than of those fired by day; but casualties were generally lower after dark, when most people were at home, than in the daytime, when they were massed together in factories and offices and in the streets. Thus, from our point of view the preponderance of night firing was definitely favourable.

(j) *The Attacks: Fifth Phase (London, 1st January to 27th March, 1945).*

213. However, the respite was short-lived. In the New Year the scale of attack went up again. During the first half of January an

average of more than eight rockets a day reached this country. Thereafter the rate of fire declined a little, only to rise again early in February, until an average of ten rockets a day was attained in the middle of the month. Moreover, the Germans again took to doing more than half their firing in daylight, and their accuracy improved. In an average week in January and the first half of February, twice as many people were killed or seriously injured by rockets as in a corresponding period in December.

214. Clearly, our fighter-bomber programme was not such an effective deterrent as we had hoped. This was not to say that our methods were wrong: without the fighter-bomber attacks, the rate of fire might have risen still more sharply. But evidently something more was needed if the German offensive was to be kept down.

215. What form that something more should take was not so obvious. In December the Air Ministry had asked the Foreign Office and the Ministry of Economic Warfare to investigate the possibility of curtailing supplies of fuel for the A-4 by attacking factories where liquid oxygen was made. The experts reported that there was no means of knowing which of the many factories in German hands or under German control were supplying liquid oxygen for that particular purpose. There were, however, eight factories in Holland, five in western Germany, and five elsewhere in Germany which might fill the bill. As a sequel to this investigation, the Air Ministry invited me to consider attacking three factories in Holland. One of them, at Alblasterdam, near Dordrecht, was successfully attacked by the Second Tactical Air Force on the 22nd January. Another, at Ijmuiden, consisted of two buildings so closely surrounded by other factories that the prospect of a successful attack with the means at my disposal was remote. The third, at Loosduinen, on the outskirts of the Hague, was adjoined on three sides by Dutch civilian property. Hence I was reluctant to attack it, especially as there was no certainty that its destruction would cause the Germans to fire even one less rocket at this country. However, in view of the Air Ministry's request and my desire to leave nothing undone which offered a chance of hampering the enemy, I agreed to do so. In order to reduce the risk to civilian property to a minimum, the pilots chosen for the job were instructed to use methods which can best be described as "trickling their bombs towards the target". This technique necessitated five separate attacks of which all but one were made from the direction in which there were no houses adjoining the factory. Two attacks were made on the 3rd February, two on the 9th February, and one on the 8th. After the last attack on the 9th we judged that the target had suffered enough damage to be left alone in future.

216. In January bad weather limited the number of fighter-bomber sorties that we could make to a little more than half the number made in December. In February the weather was better and during the first half of the month we made more fighter-bomber sorties than in the whole of January. Besides delivering the five attacks on the oxygen factory at Loosduinen to which I have alluded, we made six attacks on the Haagsche Bosch, a