

against attacks by Flying Bombs, was of exceptional value to the launching and maintenance of the assault. I deal with certain other features of this work later in this Despatch.

164. It was also of the utmost importance to deny to the enemy, air reconnaissance of Southern England. Special precautions had to be taken to this end.

165. Mastery of the air over the Channel, wrested from the enemy in earlier years by aircraft of R.A.F. Fighter Command (later Air Defence of Great Britain), had done much to ensure this end already. Daylight operations of enemy aircraft overland were almost unheard of and it was appreciated that only dire necessity would prompt the enemy to expose his aircraft and pilots to the heavy risk they would run in attempting to spy out our preparations. None the less, the enemy had now so much at stake that a great effort on his part was to be expected. To deal with possible enemy reconnaissance efforts, therefore, I directed that standing high and low level fighter patrols should be maintained by aircraft of Air Defence of Great Britain during daylight hours over certain coastal belts.

166. In the six weeks immediately prior to D-Day, however, the enemy flew only 125 reconnaissance sorties in the Channel area and 4 sorties over the Thames Estuary and the east coast. Very few of these sorties approached land, most of them being fleeting appearances in mid-Channel. Our fighters rarely got even a glimpse of these enemy aircraft, which could have seen very little and could only have taken back, therefore, information of very small value; but as an extra deterrent, standing patrols were maintained as far out as 40-50 miles south of the Isle of Wight and intruder aircraft were directed to the enemy airfields in the Dinard area, from which it was believed such enemy reconnaissance aircraft as appeared were operating. In the result, the enemy appears to have learnt very little.

167. These defensive measures, coupled with the others to which I have already referred, achieved for the assault a complete tactical surprise on D-Day and did much to ensure the safety of the cross-Channel movement of the assault forces. The weather factor relating to this aspect of the operations is considered in paras. 405 and 406.

168. On many days Allied air forces flew more photographic reconnaissance sorties in one day than the enemy flew in the whole of the vital period of six weeks prior to D-Day. In view of the fact that the enemy was aware, in general terms, of our intention to invade the Continent the small scale of his air reconnaissance effort is, to say the least, extraordinary.

#### *"Crossbow" Operations.*

169. It became known early in 1943 that the enemy was preparing an attack on the United Kingdom with flying bombs and rockets launched from the French coast. Much experimental work on these projectiles had been done in the Baltic Sea area, and it was believed that the enemy would shortly be in a position to begin constructing sites, from which the projectiles could be launched. Construction began chiefly in the Pas de Calais and the Cherbourg areas during the autumn of 1943.

170. Considerable research into the nature of these novel weapons was carried out by Opera-

tional Research Sections and by a special Committee set up in the Air Ministry, and it was concluded that they represented a potentially serious menace, both to the United Kingdom and to the preparation and build-up of forces for the projected Operation "Neptune". Accordingly, it became necessary to divert part of the available air effort to attacks on these constructional sites in order to prevent the threat becoming a reality.

171. At this time it was not considered desirable to divert any large part of the heavy bomber effort from the commitment on "Point-blank" targets. I was, therefore, made responsible for taking the necessary counter-measures with the forces of A.E.A.F. In addition, however, a proportion of the effort of the heavy bombers of the United States Eighth Air Force was made available to me for this task on days when weather was unsuitable for deep penetration raids into Germany. The United States IXth Bomber Command was committed, up to 1st April, to assist the strategical air forces with diversionary raids, and therefore, was not always available for these operations. R.A.F. Bomber Command was also originally allotted five sites for attack, but this commitment was subsequently re-allotted to A.E.A.F.

172. As is now known, the menace was not under-estimated, and the air effort prior to D-Day did not succeed wholly in removing it.

173. The sites were classified as follows:—

(a) Ski-sites—(so called because of a big store room construction which from the air looked very like a ski)—designed for launching flying bombs.

(b) Rocket sites—larger constructions designed for the launching of heavy rocket projectiles.

(c) Supply sites.

174. The sites were given the code word of "Noball" and operations against them were carried out under the code word "Crossbow". These operations began on 5th December, 1943, and accordingly the summary of activity in this section of the Despatch is shown from this date to D-Day.

175. On 5th December, 1943, 63 ski sites and 5 rocket sites had been identified. It appeared that the sites in the Pas de Calais area were aligned on London and those in the Cherbourg area on Bristol. It was calculated that the enemy was completing new sites at the rate of three every two days.

176. A schedule of priorities based on the British Air Ministry recommendations was carefully worked out. It was most important to ensure that no more bombs than were absolutely necessary to neutralise one target should be dropped before an attack was made against the next target on the priority list. A system was devised of "suspending" a site from further attack, whereby a Command which considered that it had inflicted sufficient damage to a site to neutralise it temporarily, was authorised to notify any authority concerned that the site was "suspended" from further attack, pending photographic confirmation of the damage done.

177. The attacks on sites prior to D-Day are listed below. At D-Day it was estimated that out of 97 identified flying bomb sites, 86 had been neutralised, and out of 7 identified rocket sites, 2 had been neutralised.