Pile, I now arranged for them to be more widely spaced to form a "G.L. Carpet," designed to extend over the whole of Southern England from Kent to Bristol and ultimately, we hoped, over a still wider area. I also arranged with General Pile that the search-lights should be grouped in clusters of three, instead of singly, in order to provide a stronger illumination. In addition, I earmarked a number of airfields as night-fighter bases and took steps to equip them with every available aid to night flying.

- 29. It became clear in December that for the adequate defence of the Kingdom more specialist night squadrons were needed, and I therefore asked the Air Ministry to provide, as soon as possible, a total of 20 such squadrons, to include twelve twin-engined squadrons. Although it was some time before this figure was achieved, substantial additions were made to the night-fighter force during the ensuing months.
- 30. In the second week of December I was informed that the Air Ministry wished me ultimately to accept responsibility for the "Security Patrols" which had hitherto been flown by aircraft of No. 2 Group, Bomber Command, over airfields in Northern France and the Low Countries.
- 31. The use of fighters for this work had already been discussed by my Staff with No. 2 Group, and arrangements were being made for aircraft of No. 23 Squadron to supplement the efforts of No. 2 Group's Blenheims. On receipt of the Air Ministry's letter, I ordered that the whole of No. 23 Squadron should be turned over to this duty, to which the name "Intruder" was now applied. The A.I., whose capture could not be risked, was removed from the squadron's aircraft, navigators were posted to the squadron, and some crews were sent to one of No. 2 Group's Stations to learn all that they could about the operation. The squadron was ready to operate by 18th December and the first patrols were flown on the 21st.
- 32. A further account of operation "Intruder" is given below, under a separate heading. (Paras. 68 to 72.)
- 33. On 29th December, the Capital suffered one of its worse raids of the war when a determined attempt was made to destroy the cities of London and Westminster by the dropping of large numbers of incendiary bombs. Nearly 1,500 separate fires were started, some of them of vast dimensions. The weather was poor and the night-fighter force had no success.
 - (c) Operations, January to May, 1941.
- 34. Early in the New Year the efforts made to apply the principles of Radar to the special problems of night defence began to yield results. Radar equipment began to be available in increasing quantities, although it was some time before the S.L.C. sets needed by the searchlights arrived in anything like sufficient numbers. The performance of the heavy A.A. guns at night, measured by the number of rounds required to bring down one enemy aircraft, quickly improved and soon surpassed the standard achieved in daylight at the end of the 1914-1918 war.
- 35. For the fighter force an important step forward was the arrival of G.C.I. sets—hitherto

only in the development stage—which enabled a ground controller to follow on a fluorescent screen the track in the horizontal plane both of a selected bomber and of the fighter sent to intercept it.

in the standing definition in the second

- 36. At first these sets could not read height with any accuracy, but their performance in this respect was soon improved.
- 37. For some time progress was slow, but by March substantial results were being achieved by the night-fighters, and indeed in that month their claims exceeded those of the A.A. gunners for the first time since June, 1940. Of the 43 night bombers whose destruction was claimed that month, 22 were claimed by the night-fighter forces, and half of these by twinengined fighters using their A.I.
- 38. From this moment the A.I. fighter became the principal weapon of the night-fighter force. Unlike the single-engined fighter, it was not dependent on moonlight or artificial illumination and could therefore be used in weather which put the single-engined fighter out of court. From March onwards the steadiest results were claimed by A.I. fighters. On the other hand, a number of clear moonlit nights in Spring, on which German aircraft were to be found in large numbers over their target and along the route thereto, gave the single-engined fighters opportunities which enabled them to surpass, for short periods, the performance of their twin-engined rivals.
- 39. From that moment, too, the fighter rather than the A.A. gun became the chief means of inflicting casualties on the night bomber But it would be unwise to draw any hasty conclusion from this fact. Although there was always a friendly rivalry between guns and fighters, it was recognised throughout the war that together—and in conjunction with the balloon defences—they formed a team of which all the members were indispensable. The value of what may conveniently be called the static defences was not to be measured solely, or even mainly, by the casualties which they inflicted on the enemy. Their deterrent effect, not only in causing some bombers to turn away before reaching their target, but in preventing leisurely and methodical bombing from low altitudes by the remainder, was always of inestimable value. The experience of the Baedeker " raids (which came after the end of the period now under review) proves that if important objectives had been deprived in 1941 of their gun and balloon defences, they could very quickly have been destroyed, regardless of any action by night-fighters. Moreover, it must be remembered that the limitations of Radar at this time made interception at low altitudes extremely difficult. If the guns had not helped to keep the enemy up, successful interceptions at night would have been rare.
- 40. On the other hand, the guns and balloons were equally incapable of acting as a complete defence in themselves, but required the cooperation of the more mobile fighter, which was capable of harrying the bomber wherever he flew.
- 41. In January and February bad weather frequently defeated all the enemy's attempts to make his bombers independent of extraneous circumstances, by rendering many airfields unserviceable. Chiefly on this account, the German effort declined considerably. March