

Perhaps the most remarkable tribute to the results being obtained by the guns lies in the fact that the A.O.C.-in-C. some weeks before the end of the attack withdrew all his squadrons, except two, for service overseas. The defence in these last weeks rested almost entirely on the guns.

101. Although this was in effect the end of the operational activities of Anti-Aircraft Command there was one more development with which I must deal. I refer to the attacks by long-range rockets, the first of which had fallen upon London on 8th September, 1944.

I had already been advised of the possibility of such attacks and twelve radar sets had been deployed on the south and south-east coasts to endeavour to track any rockets that were fired.

When the attacks were found to approach London from the east, the sets were re-sited on the east coast and though nine were subsequently withdrawn for use on the Continent, others were brought in to take their place.

It was established that the range was about 200 miles, the maximum height something over 50 miles, the maximum speed more than 3,000 m.p.h. and the landing speed about 1,800 m.p.h. In effect it was a high velocity shell of alarming explosive power, the flight of which was long enough to permit calculations to be made as to where it might land. These calculations were not always accurate but at the same time not widely inaccurate. It was, however, not possible to secure satisfactory plots of every rocket that was fired.

102. I felt convinced that this was the beginning of one of the great problems of the future and I considered whether I could take any steps to deal with it. On 12th December, 1944, I proposed that I should be allowed to try shooting at the rockets with a view to destroying them in the air. The idea of shooting at a shell was admittedly revolutionary, but there seemed to me to be no reason why it should not be anything more than a further development of the present unseen firing methods. My proposal was rejected as it was not considered that it had a theoretical background of success sufficient to justify the danger to the civil population beneath the barrage.

I argued that operational shooting was an essential corollary of scientific theory and that only by experience could scientific theory advance; moreover, it was necessary to attempt to make progress before a more powerful rocket came into operation and finally, that war experience was essential for post-war planning. I was asked to prove that there was so much as one chance in a hundred of success and my proposals might go forward.

Experiments both in the matter of plotting, for which special radar sets were now developed by my R.E.M.E. staff, and of gun control instruments were pressed on with.

103. Radar sets situated north and south of the rocket's flight and another set forward in Holland tracked the parabola of flight. During March, 1945, there was an increase in the number of missiles plotted from 44½ per cent. to 48 per cent. The accuracy of the plotting showed a greater improvement. London was divided into areas 2½ miles square; the number which were predicted as falling into the correct

square rose from 11 per cent. to 31 per cent., and there was also an increase in the number which were only one square out from 44 per cent. to 50 per cent., and an overall improvement from 55 per cent. to 81 per cent. of those that were plotted at all.

104. I applied again for permission to fire. If I aimed at one of every two rockets descending and hit, as I estimated, one in 30, the chances were within the limits I had been set, although as 3 in 30 already burst in the air it would be some time before results could be proved. On the 28th March, 1945, I gave orders to the guns to be ready to fire but on the 27th March, 1945, the last rocket had fallen. On 30th March, 1945, the Chiefs of Staff again refused permission for the guns to fire at rockets.

105. The advance in the science of anti-aircraft defence since the beginning of the war has been prodigious, but I believe we are still only touching the fringe of future possibilities.

Air Defence is of such paramount importance that we must spare no effort and no expense to maintain our scientific lead.

106. On 15th April, 1945, I handed over my command to my successor.

107. I would add three names to the few already mentioned as having given outstanding service. There were many others but these can only be dealt with on a separate list.

Major-General P. H. Mitchiner, C.B., C.B.E., T.D., M.D., M.S., organized the Medical services in the Command. He was an administrator of a very high order as well as a first class Medical Officer. He rendered great services to the State.

The late Major-General Sir Hugh T. MacMullen, K.C.B., C.B.E., M.C., was Major-General in charge of Administration during the most difficult period of the war. He was outstanding. It was largely due to his administrative skill and tact that the Mixed Batteries settled down so easily and efficiently. Only sickness deprived me of his services.

Major-General R. H. Allen, C.B., M.C., was an outstanding Divisional Commander. He was responsible for the Anti-Aircraft Defences of the West Country. He made up for the limited resources of equipment by his great knowledge of Anti-Aircraft technique and by his skill.

When an attack took place it was always at only a matter of a few seconds warning yet both Gun and Searchlight units were ever on their toes.

Their discipline, judged by percentages of courts-martial and absence without leave cases, was twice as good as that of any other Command or Service.

The Corps of Royal Engineers rendered considerable service in that it trained and supplied the original Regular and Territorial Army Searchlight Units before they became part of the Royal Regiment of Artillery in August, 1940.

Other works carried out by the Royal Engineers included the designing of static emplacements and command posts, and making arrangements for a supervision of the construction of gun sites and hutted camps.