

insurmountable difficulty. To provide an area of safety a very large tract is required—and this is not easy to acquire in a thickly populated country like the British Isles—but the problem should, we think, have been solved long ere this.

73. There have been many cases of pilots and observers having to fight in the air without a sufficient knowledge of their weapons; but although all receive a fair training in this respect now, the training would become much more efficient if special aerodromes were developed for the purpose.

74. In reading the records of the flying in France, we have been much struck by the frequency with which the machine guns are reported to have jammed in the earlier days of the serious fighting in the air, as well as by the apparent inaccuracy of the shooting. The latter view we have formed from the large number of rounds fired—often at very close quarters—without apparently any effect; and we may remark that inaccuracy of fire from the German guns is equally apparent. It is well known that jamming of machine guns is, and always has been, a matter of common occurrence, and, further, that accurate fire from one rapidly moving object against another rapidly moving object is extremely difficult; but it is also known that improvement in both directions comes with careful training. It was largely a result of the careful musketry training of the Army in peace that British troops were able to hold their own against the superior numbers and the less expert riflemen of the Germans in the first battles of the war, and we consider that similar careful training of British airmen in aerial musketry would prove an equally important factor in battles in the air.

75. It is gratifying to note that while during this year there have been a very great number of fights in the air the number of reported cases of jamming of machine guns has very greatly diminished, and, indeed has now, so far as we have been able to ascertain, become almost negligible.

76. In connection with the training of pilots, it has been suggested that a school should be established in some place where the climate would admit of more hours flying per day than does our own especially in winter. The south of France was spoken of. We understand this is a suggestion which has been receiving attention and is being acted upon.

77. Some complaint was made that civilian training schools for pilots had not been taken advantage of to the full extent. We are satisfied that this is not so, and that everything possible has been done and is being done in this respect.

78. Observers, in the early days of the war, were of necessity employed without experience. As the war proceeded, this defect was gradually remedied. Observers are mostly drawn from the fighting officer ranks of the Army, and now they become observers on probation before qualifying for the post of trained observers. The training seems to us fairly satisfactory, except in regard to the use of the machine gun and fighting in the air.

79. The importance of the observer cannot be over-estimated, and this work is said, on unimpeachable authority, to be more difficult and more trying to the nerves than that of the pilot. The observer too must have sufficient military training to be able to recognise what is of real military interest, such as formation of troops, trenches, batteries, suspicious hostile movements and the like. He must also have sufficient knowledge of artillery fire to be able to judge its effect and report for the guidance of the gunners below. In addition, he must understand photography, bomb-dropping and his machine gun.

80. A very special combination of knowledge and alertness is thus required, and it seems strange that no encouragement by way of promotion is offered to the observer, unless he becomes a duly qualified pilot. The result is that observers of experience frequently give up their duties at the front, where their experience is badly wanted, and come home to learn to fly and take a pilot's certificate.

81. We consider that, after the war, the ideal to be aimed at is that pilots and observers should be interchangeable. Meanwhile, we think more encouragement should be given to the observers to remain observers, and we later make a recommendation to that end.

CHARGE 5.—HOME DEFENCE.

82. A good deal of confusion has arisen upon the subject as to whether the air services of the Army or the Navy are responsible for Home Defence, or whether the responsibility is divided. The truth is that the Navy was entirely responsible till the middle of February last. Since that date the responsibility has been divided. The Navy is responsible until hostile aircraft reach our shores. From that time the Army is responsible. It is hardly necessary to state that if a Naval machine was attacking hostile aircraft it would not cease to do so because the aircraft crossed the boundary line

(high water mark), nor would an Army machine cease to pursue hostile aircraft when it passed over the line seawards.

83. The Royal Flying Corps is not responsible for anti-aircraft guns. It has no control over them. Nor has it any responsibility for or control over the searchlights which work in connection with those guns. The Royal Flying Corps now has, however, its own searchlights wherever Home Defence machines are maintained.

84. The defence of the London Area is under the immediate control of the Commander-in-Chief for Home Defence. In other areas, subject to his general control, it is under that of the Army officers in command of the particular anti-aircraft defence areas. Those areas are not co-terminous with the districts commanded by the officers in charge of Home Defence from attacks other than by aircraft.

85. We have appended a Memorandum on the subject of Home Defence* going more into detail than seems advisable in the body of this Report.

86. It seems desirable to mention that, while the Navy was still solely responsible for Home Defence, Lord Kitchener issued an order that Army aeroplanes were to render all possible assistance, an order which was very willingly obeyed.

87. The Navy have aerodromes for their own purposes along the coast, and we think it reasonable to assume, although we have no knowledge on the subject, that, now that the Army is responsible for Home Defence from the coast inwards, a similar order has been issued to the Navy.

88. Having regard to the limitations imposed by the number of aeroplanes, pilots and night landing-places as yet available, we do not know that, so far as the Royal Flying Corps is concerned, anything more can be done.

89. It ought, we think, to be generally known that Home Defence machines and pilots are not now stationed at every aerodrome. It must not be supposed that, because aeroplanes are seen flying freely day by day from a given aerodrome, there are necessarily any aeroplanes kept at that aerodrome fit for night-flying or any night-flying pilots there to fly them. Home Defence machines, with their pilots, are now grouped at various centres, a plan which, after careful consideration, we approve.

CHARGE 6.—LOSS OF MASTERY IN THE AIR.

90. This charge relates to the period of some six months, beginning in about October, 1915, when the German Fokker machine made its appearance.

91. For more than a year after the beginning of the war there was practically no fighting in the air. Our machines made their reconnaissances with regularity and without serious molestation. Then suddenly the German tactics changed. They produced the Fokkers—fast, handy, fighting machines that lay in wait for our machines and mobbed them. We were slow in recognising this change of tactics and slow in adopting means to protect our reconnaissance machines, with the result that we suffered many casualties. As an instance, there were 12 deaths in the first half of March last. The casualties, however, were not all on our side. The German losses during the six months in question were heavier than ours, and equally heavy in any given month, which is remarkable, as it is clear from the evidence that British airmen carried out far more work over the enemy's lines than the Germans did over ours.

92. The B.E. 2c was our chief reconnaissance machine, and it was to fliers of that machine that most harm was done. The B.E. 2c was not so fast or so handy as the Fokker, and needed, after the appearance of the Fokker, to be escorted by fighting machines. This is now being done.

93. Reports from the front are singularly diverse as to the extent to which superiority was for a time lost. The battle-front was a long one, and it is obvious that, as was to be expected, the state of affairs differed considerably at various parts of the line. In some places the German superiority for a time seemed marked, in others it was non-existent.

94. Such local inferiority as there was seems to have been chiefly due to our tardy recognition of the change brought about by the Fokker, but we think that, although we had at the front at all times machines capable of dealing with the Fokker on at least equal terms, these machines were not at first available in sufficient numbers.

95. Our temporary loss of superiority has been described in language of such gross exaggeration as to make us at first disposed to think there was nothing in it; but a careful examination of all the facts leads us to the conclusion that the charge is true to a limited extent, and in the sense indicated.*

96. Our newer aeroplanes, which are now coming forward in greater numbers, are proving individually superior to those

* Not printed.