

of the Germans; and, while there must be casualties where there is fighting, our early superiority has been more than regained.

CHARGE 7.—VARIOUS DEFECTS IN AERODROMES AND SYSTEM OF LIGHTING LANDING GROUNDS.

97. The chief complaints against aerodromes and night landing places were that they were insufficient in number, some of them too small, and some of them unsafe by reason of the surface being rough, such as ridge and furrow, or intersected by hedgerows or dykes.

98. Most of these complaints related to the earlier period of the war, and, except as to size, were probably well founded. They afford another instance of the unpreparedness of the Flying Corps for a war of this magnitude.

99. We are satisfied that the Royal Flying Corps has done all that could be expected of it in the way of increasing the number of aerodromes and landing places, and in the way of their improvement, especially when the shortage of available labour is taken into account.

100. Perhaps Hythe is the least satisfactory instance, where the trouble from dykes is only just being surmounted.

101. The Dover aerodrome was criticised because of its situation on the top of high cliffs. It was stated that, in landing, inexperienced pilots had difficulty in keeping the nose of the machine sufficiently high. On the other hand, pilots whom we interviewed on the subject were quite satisfied with it. Some of them indeed were loud in its praises. We see no reason for closing it.

102. The only aerodrome which can be criticised on account of its size is Croydon, which measures 500 yards by 460 yards. This is, judging by other aerodromes, on the small side, but is, we think, reasonably sufficient.

103. Night-flying is, as far as possible, forbidden at aerodromes where the state of the surface is such as to present unusual difficulties on landing.

104. We think the landing ground and aerodrome problem has been, upon the whole, energetically and skilfully tackled.

105. The complaint about lighting is that the British system is inferior to the French and German systems.

106. All three systems are different. The British is by petrol flares. The French is by electric light. The German is said to be by powerful searchlights slightly shaded, directed up wind along an aerodrome.

107. It is inadvisable to discuss the British or French systems in detail. Of the German system little is known. There is an unanimous consensus of opinion among all the many pilots whose opinion we asked that the British system is a good one, that they are satisfied with it and do not desire a change. Many of them pointed out the well-known fact that, when the weather is at all thick, the yellowish flame of a petrol flare is easier to see than an electric light, even though the latter is transmitted through coloured glass.

In a recent experiment at Upavon, a new system, called "Triplex glass landing lights," proved to be inferior to petrol flares.

108. We see no reason to suggest any change, and find no present ground of complaint.

CHARGE 8.—THE INADEQUATE ARMING OF AEROPLANES.

109. When this great war was sprung upon the country, the question of using aeroplanes for more than reconnaissance and observing artillery fire, as also the important part machine guns were going to play both in the air and on land, had hardly been considered. Provision had only been made for an extremely limited number of machine guns for existing cavalry regiments and infantry battalions, and none for the enormous quantities which were to be required later. It was a long time before the necessary machinery for meeting this great increase in output could be provided, and, as the guns became available, the comparative urgency of supplying the land and air had to be dealt with. Thus, it was March or April, 1915, before the squadrons at the front got four-fifths of their complement of machine guns. Even then, however, and indeed up to a much later date, it was not considered possible to supply the requirements at home.

110. In the absence of machine guns there was nothing for it but to arm the men in the machines with rifles, and this is what really happened; it is on this largely that the complaints appear to be based.

111. The provision of weapons such as machine guns, bombs, hand grenades, darts, &c., fell under the able hand of the Master-General of the Ordnance; and the Committee are unable to find any delay on the part of the Royal Flying Corps in making use of any of these, or in providing mountings, racks, &c., for them, within a reasonable time of their being allotted to the Corps. Experiments had to be made; and in some matters considerable time spent, before the most suitable way of carrying the several war requirements in aeroplanes was discovered, if indeed it has been discovered yet.

112. We have now dealt with what we have described as the charges of a general character against the Royal Flying Corps, and proceed to a number of specific charges of alleged maladministration and slackness.

Specific Charges.

113. The specific charges and criticism which we propose to discuss are:—

- (a) (1) Pilots are allowed to fly "dud" machines home from France.
- (2) Insufficient attention is paid to the condition of training machines and of their equipment.
- (3) Machines are, or have been, flown at the front overloaded with all kinds of equipment and apparatus. They are called "Christmas Tree" machines.
- (b) (1) Failure to buy machines and engines from America.
- (2) Failure to utilise English firms to the best advantage, e.g., The Sunbeam, The Vauxhall and the Rolls-Royce.
- (c) The representatives in Paris of the Royal Flying Corps and the Royal Naval Air Service worked very badly together, and were not on speaking terms.
- (d) Zeppelins ought to be raided in their sheds.
- (e) All machines carrying an observer should be fitted with dual control.
- (f) Pilots have not been provided with proper maps, compasses or altimeters.
- (g) General Henderson opposed the building of airships.
- (h) General Trenchard had no sufficient training in flying.
- (k) General Henderson declined to allow Lewis guns to be sent to the French in exchange for engines.
- (l) General Henderson
- (m) There is excessive flying in order to create a misleading record.
- (n) No machines went up on the occasion of the Dover raid in January last.
- (o) The day after Mr. Pemberton Billing's election, 74 pilots were sent home for further training.
- (p) The following cases of accidents and misadventures:—
 - (1) The mishaps to machines on January 31st last.
 - (2) The mishap to the De Havilland Squadron.
 - (3) The landing of an F.E. 2D machine with a Rolls-Royce engine at Lille, instead of St. Omer, on June 1st last.
 - (4) The death of Second Lieutenant Yates (No. 14 Squadron) in Egypt. Wings of aeroplane folded up in the air.
 - (5) The deaths of Lieutenant H. A. V. Hobbs and Second Lieutenant Tudor Jones, flying a Morane Parasol in December, 1915; and later, Lieutenant Palmer, engaged in a long reconnaissance, accompanied by a Morane Scout, shot down by the enemy flying a faster machine.
 - (6) Second Lieutenant Tennant's case.
 - (7) Second Lieutenant Chamberlain's case. Killed owing to the breaking of the right wing of his aeroplane in the air.
 - (8) Second Lieutenant Collier, said to have lost his way on October 22nd, 1915, owing to the absence of suitable map and compass. He landed with new Morane at Louvain, and was captured by the enemy.
 - (9) Lieutenant Downer: Alleged faulty construction of aeroplane.
 - (10) The faulty machine sent from Beaulieu to Hythe.
 - (11) The fatal accident to Captain Allen and Mr. Burrows.

(To be continued.)

Aircraft and Artillery.

WRITING in the *Journal* of December 30th on his visit to the British front, M. André Tudesq says:—

"During the last forty-eight hours the English cannon thunders furiously to the north of the Somme. We see in these operations the direct effect of the clear weather, which for the last two days has favoured aeroplane reconnaissances,

and the contact with the enemy artillery has not remained without its reaction. In the only sector bombarded we have been able to locate a large number of their batteries, which tried to counter the English batteries, but the duel turned to the confusion of the Germans. The positions of their big mortars are notified by our airmen as entirely destroyed, and the German trenches also have suffered greatly."