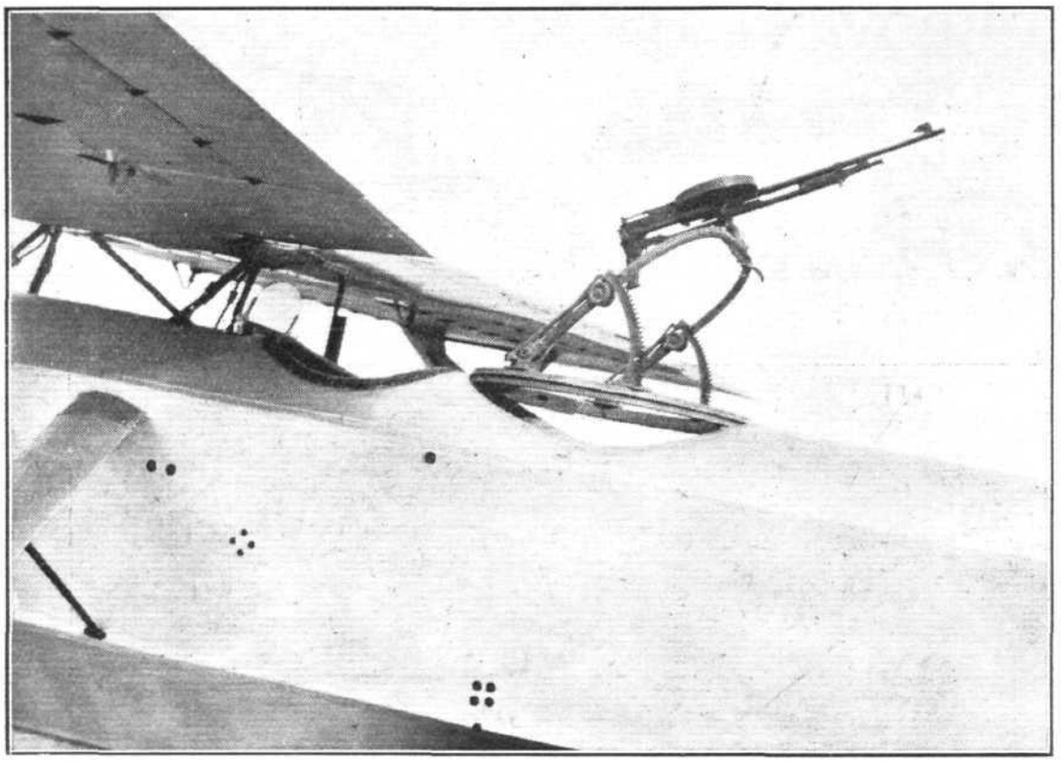

The machine gun and its Scarff ring mounting on the Beardmore W.B. XXVI.

a designer that the machine was actually ordered on the strength of the general lay-out and estimated performances, while still in the design stage. It is not often that a customer is prepared to buy a machine which is still only "on paper," even if it is made a stipulation of the order that certain specified performances have to be attained. In the case of the W.B. XXVI the performances promised were not only attained but actually, we believe, exceeded in every instance.

As regards the machine itself, as we have already given a general description it will only be necessary to give here the briefest outline of the main features. The W.B. XXVI is, as already stated, a two-seater fighter fitted with Rolls-Royce "Eagle IX" engine. Both in its aerodynamic and constructional features, particularly the latter, noted departures from normal practice are to be found. Thus the wing bracing is unorthodox in that the usual wire bracing has been replaced by rigid strut bracing, the lower plane being braced on each side by two struts in compression, lift loads from the top plane being transmitted by single I-struts in tension. The wing-section used is a thick one, which has been found by Mr. Shackleton to give very good efficiency combined with a high k_L max.

The ply-wood covered fuselage is placed high in the gap between the planes, the lower wings being attached to a fin built integral with the fuselage.

Great attention has been given to simplicity in service, and the use everywhere of rigid bracing should greatly facilitate maintenance work in the field, as there are no wires to stretch and necessitate trueing up.

The general design of the Beardmore W.B. XXVI has been planned with the object of giving a good view and field of fire, and the accompanying photographs seem to indicate that this object has been achieved. The pilot is provided with two machine guns housed inside the fuselage, while the gunner, placed close behind the pilot, is able to fire straight down, forward between the wings, upward over the top plane, and aft past a tail without bracing on top.

The general dimensions of the W.B. XXVI are: Length o.a., 27 ft. 10½ in.; span, 37 ft.; wing area, 356 ft. sq. The weight of the machine empty is 2,555 lb., useful load, 1,425 lb. Total loaded weight, 3,980 lb. Weight per h.p., 10 lb. Weight per sq. ft., 11·18 lb.

If desired, the machine can be obtained fitted with the Napier "Lion" engine, and it is claimed that this version will have a performance equal to that of any similar type at present constructed in any country.

London-Dublin Flight in a "Moth"

ONCE again have the excellent qualities of the D.H. "Moth" light 'plane (60 h.p. A.D.C. "Cirrus" engine) been demonstrated by a remarkable flight from London to Dublin. It had previously been arranged that Col. the Master of Sempill should have left London for Ireland in a D.H. "Moth," carrying Sir Sefton Brancker as passenger, just before Christmas—Sir Sefton having arranged to visit the Free State for the purpose of studying the possibilities of passenger and mail air services, and other aeronautical problems connected with Ireland. Bad weather, unfortunately, prevented him from carrying out the flight as originally planned, and he proceeded to Ireland by the usual land and sea route. On December 23, however, the Master of Sempill left Stag Lane aerodrome in the "Moth" at 10.10 a.m., in spite of the fact that a strong head wind prevailed, and with only one stop *en route* covered the 300 or so miles to Dublin in 4 hr. 45 min. The most remarkable feature of this flight consisted of the fact that instead of flying *via* Stranraer and Belfast, which involved a sea crossing of only 25 miles, as originally planned, the Master of Sempill flew the direct route to Dublin *via* Holyhead, entailing a sea crossing of 70 miles! We understand that during their stay in Ireland Sir Sefton and the Master of Sempill will visit various Free State aerodromes in the "Moth," and will finally fly back to England. Sir Sefton stated that he thought there were great possibilities as regards air services in and to and from Ireland, both for passengers and mails. It may be of interest to note that the Free State Air Force is planning a flight to America during the coming year. Whether they intend to use a D.H. "Moth" or not, we do not know!

London-Cape Town Survey Flight

HAVING spent the night of December 21 at Atbara (Sudan) Mr. Alan Cobham and his companions, Mr. Elliott and Mr. Emmott, continued on their way to Cape Town in the D.H. 50J (Siddeley "Jaguar") the following morning. After a pleasant and uneventful flight lasting an hour and a half, they landed at Khartoum. Here they stayed over Christmas, Mr. Cobham again having a busy time attending to matters relating to future air service possibilities. He says that he is convinced that the route from Cairo to Khartoum offers splendid opportunities for an air service and forms what he considers to be the most ideal airway in the world. The journey was resumed on December 28, the next stage being one of 430 miles to Melakal.

Helium in Canada

IT is reported that Prof. J. C. McLennan, of Toronto University, has located helium wells at Inglewood in the Peel Country, not far from Toronto. Their yield is estimated at 100,000 cub. ft. per year. It is expected that the National Research Council of Canada will establish a helium extraction plant at Inglewood.