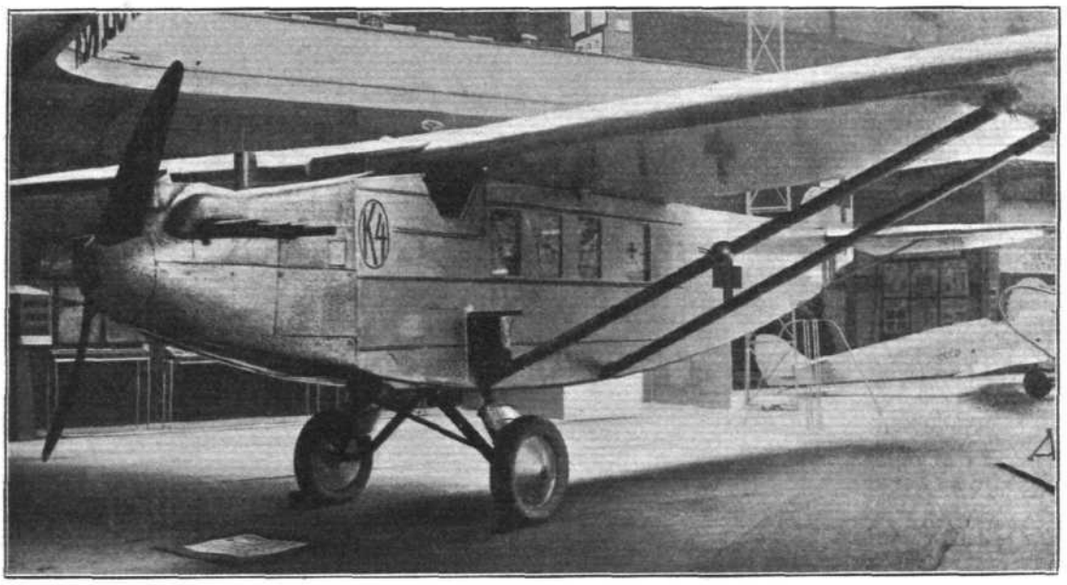

The Russian ambulance machine, type K.4, is mainly of metal construction. The two side radiators are retractable.

Two Russian Machines

Of the two larger Russian machines exhibited at the Berlin Show, one was a mail 'plane while the other was an ambulance machine. Both were to a large extent of metal construction, but little could be seen of the detail, and no information was available on the stand during our visit beyond some very brief data printed on placards exhibited on the stand.

The Rusian mail 'plane was a machine of rather pleasing appearance, and the workmanship and finish were very good. In the design of the A.N.T.3, as this machine was styled, there were traces of both German and French influence, and one received the impression that the designers of the A.N.T.3 had examined carefully a number of French and German aeroplanes of various types, and had then incorporated in their design such features as appeared to them to be worth developing. The result was, if one may judge from outward appearances, rather successful, and the machine did not suffer by comparison with aircraft produced by nations with many years' experience in aircraft design and construction. In the A.N.T.3, French influence was traceable in the general design, with the wings arranged *en sesquiplan*, while German influence was mostly to be found in the constructional features, which were rather reminiscent of Junkers' practice.

The A.N.T.3 was described as a mail 'plane, and the small cross-sectional area of the fuselage would probably result in the internal space being rather restricted. However, the space behind the pilot's cockpit, which had a sort of screw-down " lid " over it, presumably for the mail compartment, might be converted to take a gun, although the swelling found on all the Italian " commercial " machines was certainly absent. The fuselage, incidentally, was of triangular section, with the two longerons at the top and a single longeron at the bottom. The sides, however, were slightly curved, and covered with corrugated Duralumin sheet, after the Junkers fashion. The engine, a 12-cylinder water-cooled Vee, was described as a 400 h.p. " Aviatrust," but looked uncommonly like a good old " Liberty." Cooling was by two Lamblin radiators of the " lobster pot " type, mounted one on each side of the engine, near the bottom of the fuselage.

The sesquiplane wings were of all-metal construction, the covering being corrugated Duralumin. The two halves of the top plane were bolted to short streamline stubs rising from the fuselage deck, while the lower wing halves were bolted to the single lower longeron. The interplane struts were of " L "-shape, with a light strut running from the curve of the foot of the " L " to the top rear spar, as shown in one of our sketches.

The undercarriage was of the " split " type, without axle and the telescopic legs were attached at their upper ends to the fireproof bulkhead behind the engine.

The following particulars of the machine were given on a placard : Tare weight 1,350 kg. (2,970 lbs.) ; permissible load, 750 kg. (1,650 lbs.) ; gross weight, 2,100 kg. (4,620 lbs.) ; maximum speed, 210 km./h. (130 m.p.h.) ; landing speed, 90 km./h. (56 m.p.h.) ; climb to 1,000 m. (3,280 ft.), in 3·5 mins. ; to 3,000 m. (9,840 ft.) in 15 mins.

The Russian ambulance 'plane, type K.4, was a high-wing, strut-braced monoplane, apparently of mixed construction, as although the fuselage was a tubular structure, the wing was fabric covered and apparently of wood construction as regards its main structure.

The internal arrangement of the fuselage was such as to permit of a stretcher case being accommodated, with a doctor or nurse in attendance. The engine fitted was described as a 300 h.p. M.6, but had all the appearances of being a Hispano.

The particulars of the K.4 given on a placard were : Tare weight, 1,420 kg. (3,125 lbs.) ; ambulance load, 640 kg. (1,410 lbs.) ; Maximum permissible load, 1,000 kg. (2,200 lbs.) ; gross weight (maximum), 2,420 kg. (5,325 lbs.) ; maximum speed, 185 km./h. (115 m.p.h.) ; cruising speed, 160 km/h. (100 m.p.h.) ; landing speed, 70-75 km./h (44–51 m.p.h.) ; climb to 1,000 m. (3,280 ft.), in 5·5 mins. ; to 3,000 m. (9,840 ft.) in 21 mins.

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THE ZEPPELIN'S RETURN

AFTER having been reported over the Bay of Biscay on the morning of October 31 (as recorded in our last issue) the " Graf Zeppelin " made the following progress in the final stages of the return flight from Lakehurst, N.J. At 3.30 p.m. (October 31) she was seen over the north part of the Bay, some 150 miles from the French coast. Passed over Nantes at 6.45 p.m. Over Tours at 8.20 p.m. Passed 60 miles E.S.E. of Paris at 10 p.m. At about 11.30 p.m. she signalled that owing to bad weather, a course was being set for Basel, and at midnight the airship was reported over Dijon. When over Basel at 3.45 a.m. on November 1, a message was sent out to Friedrichshafen announcing its approach, and an hour later, the " Graf Zeppelin " arrived over the landing ground. It was not until 7.15 a.m., however, that the airship was safely landed, the huge crowd gathered on the ground simultaneously, singing " Deutschland über Alles " as she did so. As might be expected, there were scenes of considerable enthusiasm—especially concerning the boy stowaway Clarence Terhune. The return journey took just over 71 hrs. Dr. Eckener later stated the return trip was far more difficult than the outward one ; they encountered a violent storm and fog over Newfoundland. He added that while he considered airship travel across the Atlantic would become regular in time, they would require bigger and more powerful airships. In the evening, a banquet was given in honour of the officers and crew of the " Graf Zeppelin," and a telegram of congratulation was sent to Dr. Eckener by President von Hindenburg.

On November 5, the airship flew from Friedrichshafen to Berlin, and later was—with some difficulty—moored to the mast at Staaken. After speeches of welcome, Dr. Eckener and some of the officers were driven through large and cheering crowds to Berlin, where they were received at the President's Palace by Field-Marshal von Hindenburg. On November 6, the " Graf Zeppelin " returned to Friedrichshafen, visiting several towns en route.