

UNIVERSAL TRANSPORT



Economy and Strength Characterise the New G.A.L. 60 Freighter.

Features associated with the loading and stowage of freight in the Universal have been the principal concern of the artist in this Flight drawing.

THE design and construction of a four-engined transport aircraft of 162ft span and 95,000 lb gross weight is a task demanding substantial technical resources. That these are not lacking in the General Aircraft organization, now engaged in building a machine of this description, is suggested by the following resumé of the firm's activities in recent years, and can be confirmed by a visit to the works at Feltham, Middlesex.

When it became evident that the scant support from operators would not warrant quantity production of the 10-passenger Croydon of 1935-6, a design study was prepared to meet Civil Specification 15/38 for a long-range, four-engined aircraft to carry thirty passengers. Some very advanced features—a pressure cabin, for example, with auxiliary power units for the blowers, and a nose-wheel undercarriage having twin-wheel units—were embodied in this little-known project.

Its programme of civil aircraft development having been rudely disturbed by the imminence of war, General Aircraft undertook, on behalf of the Ministry of Aircraft Production, the development of military gliders, of which the Hotspur was the first. There followed the more ambitious Hamilcar I, and this, being capable of transporting a $7\frac{1}{2}$ -ton tank, prompted the firm to consider the possibility of towed gliders for commercial use. After due deliberation it was concluded that the economic solution resided in the "self-contained" powered aircraft and the design department embarked on a study for a series of freight-carrying machines with two, four and six engines, ranging in weight from 45,000 lb to 195,000 lb, and having payloads for a 500-miles range of 15,200 lb to 65,800 lb. An interim proposal was the Hamilcar X power-assisted glider with two Mercury XXXI engines which, with a Halifax tug, proved capable of carrying an 18,000-lb load. In solo flight, however, the corresponding load was little more than 3,000 lb, confirming Service users and General Aircraft in their joint belief that there was an immediate need for a large four-engined freight-carrying aircraft. In

