In July 1916, a new type of twin engined flying boat was delivered by the Curtiss Factory, the H.5 flying boat, the only H.5, starting with 889, a slightly angled version went into production as the H.12, some of which were equipped with 750 hp Rolls Royce engines in place of their 160 HP Curtiss built ones. The H.12’s were known as the “Large America” and a term decried to cause much confusion as it was used indiscriminately for Felixstowe Boats of the period.

The H.12, all but one, were delivered in 1917.

At Great Yarmouth, Lowestoff and Felixstowe, the bases from where others boats flew into areas where strong opposition was to be expected from Embaumbuc W.29 twin float, low wing two-seater fighter seaplanes, modifications were carried out on station to improve their fighting qualities. In order to improve all round vision, the pilot’s “glass house” was removed, the deflection, behind lowered being lowered.

Although both prototypes, the F.2 and the F.3 were designed in the same time, the F.2A entered service in December 1917 whereas the F.3 did not go into service until the following April. It was a slightly enlarged F.2A able to carry a useful load of 420 lbs as against the F.2A’s 390 lbs and it had an endurance of nearly twelve hours as against nine. It was slower and was less manoeuvrable, which made it more suitable for long range patrol work such as in the Western Approaches area. Where fighting abilities were of prime importance, the open cockpit F.2A had the advantage.

The F.5 was the last type of the Porte boats, which, together with the F.2A, was to form the backbone of the post war flying boat squadrons. For it came to too late to see war service. Although never seeing service as a twin engine, the first prototype was the F.2A’s immediate descendant and the F.2A was in production even prior to the Wing Commander Porte who was killed in action in April 1918.

DAZZLE PAINTING
F.2A N.481. The hull of the F.2A was painted in a dazzle camouflage of yellow and dark brown, a form of visual deception painting with a glossy finish. The wings, tail, struts, engines etc remained standard scheme as for N.425. Not modified aleron.

The paint coverings in F.2A N.481 were the camouflage used on the port side. The hull was painted a yellow and dark brown, a form of visual deception painting with a glossy finish. The wings, tail, struts, engines etc remained standard scheme as for N.425. Not modified aleron.

The Cover painting
F.2A N.481, painted with carborundum grey, the camouflage used on the port side. The hull was painted a yellow and dark brown, a form of visual deception painting with a glossy finish. The wings, tail, struts, engines etc remained standard scheme as for N.425. Not modified aleron.

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Unlike most aircraft of the period, the pilot's seats were not the usual wirework bucket seats. The first pilot's seat on the starboard, had a simple flat oiled wooden seat, upholstered with a cushion covered with a waterproof black "feather" cloth. The back-rest was a simple horizontal board, fixed to the starboard end to the hull and to a central upright at the other and it also was upholstered with the same material. The Second Pilot's seat was the mirror image and differed only in that it was made to fold, the seat upward against the port side and the back rest backwards, out of the way. Various engine controls were situated between the two seats. The elevators were actuated by "wiring wheels" that of the lift pilot's being mounted on an inverted U and that of the 2nd pilot, at the top of a column. This column could be folded forwards out of the way to give access to the nose gunning. The dash board was the normal mahogany with dull black compass, altimeter, clock, speedometer (in knots), fuel gauges, inclinometer, and tachometer. The figures and graduations on the black faces were the usual pale green lumi-

ous paint. All interior woodwork was Marine varnished and metal fittings were Battleship Grey. The cable attached to the keel below the pilot's cockpit, is the towing rope. It was found necessary to attach it here to ensure satisfactory towing characteristics. In this awkward position, it was out of reach of the crew therefore it was permanently attached. On cast off, it was pulled taut. After alighting, in order to re-embark to the launch, the cable was hauled aboard this plane by a thin line which was attached to a rope round the tow rope. During flight, the free end was secured to a cleat on the star-

board nose, close to the gun ring.

Just below the rudder there was a second towing strap consisting of a steel cable loop, to which a hawser was hoisted in order to haul it tailfirst up the launching ramp.

Doping Treatment and Colour

The fabric was given several coats of transparent cellulose acetate shrinking dope, and all wood including the interior several coats of Marine Varnish, which was a high quality glossy Copal varnish. It had a slight hue of its own, giving a deep and slightly more golden
tinge to the material under it. This same Marine Varnish was also applied to the undersides of wings and tailplane. Saunders-built boats had the inner covers flanked and decking of the hull also treated with Marine Varnished but most other builders doped the hull fabric Dark Green. The upper surfaces of wings, tailplane, wing fins, above the top wing, and the tail fin were also painted Dark Green, an earlier form of Nivo and not unlike Dark Green of the last war, this was pigmented Marine Varnish. The engines were left bare metal, aluminium crankcase, steel cylinders, exhausts etc. The radiators, oil tanks left of the engines, were all Battleship Grey.

The ailerons had fabric covered blades painted Battleship Grey with bare sheet brass tips, mahogany boxes—the whole varnished. Locking plates and bolts, bare steel. Gravity petrol tank in centre section, strut sockets, windmill petrol pump, bomb racks and all other metal fittings were Battleship Grey. Bracing wires were left bare and simply greased.

Roundels and rudder stripes were the normal vermilion, white, and ultra-marine glossy finish, the roundels above the top wings painted above the wing extensions occupying the full chord, but not outlined white and the under wing roundels on the earlier "Large Americas" were immediately below it on the underside of the top wing. Like later types, N 4291 carried them below the bottom wing. The hull roundels of N 4291 were small and very far aft, they were located in height to the fabric and did not overlap the mahogany waistboard, later boats had larger ones, much farther forward and limited in height only by the spar available. Many "1st Americas" carried no hull roundel at all and this applied to H 12's as well as some F 24's too. N 4291 being an example as this was also built by Saunders and its under wing roundels were below the top wing extensions. Serials were on the tail end of the hull, black on clear doped fabric, white on dark green, others had the serial across the rudder stripes, outlined white, or both positions.

The craftsmanship which went into these boats and the finish was the best that British craftsmen could put into them which, at that period, meant something.

Dazzle Painting

Contrairement a general belief, only a very small number of boats were Dazzle painted, and were limited to Great Yarmouth and Felixstowe, the stations whose boats met so much opposition. They organised sorties especially to deal with this nuisance.

In one mixed formation of four H 12's and F 24's, the hull of one of the boats had been given a "Jazz Pattern" under its pilot's direction, he said, "to frighten the Hun", and the ease of its identification by the others, was found to be an advantage during a mix up. After this the
Felixstowe F2A Flying Boats

EXACTING DATA AND COLOUR NOTES BY C. RUPERT MOORE, A.R.C.A.

The Historical Background

It is surprising how little is generally known about the ancestry of the flying boats which served Coastal Command of the Royal Air Force and in particular to what end and to whom, we owe their introduction. It all began on 1st July 1914, with the formation of the Royal Naval Air Service, when the Royal Navy gained control of its own aircraft, including the aeroplanes and seaplanes of the R.F.C. Naval Wing. There were no flying boats at that date in the Naval Wing. The introduction of the flying boat was largely, if not entirely, due to Lieut. John Porte, born at Brandon, Co. Cork, in 1884 who entered the R.N. in 1896 and was invalided out in 1911 with tuberculosis. He promptly went to France, where he learnt to fly Dernandus monoplanes, becoming joint manager of the British Dernandus Co. Ltd., until his demise in 1913, when he joined White & Thompson & Co. of Bognor as test pilot. It was to this company that Glenn Curtiss of Hammondsport, New York, had sold the exclusive agency for the manufacture and sale of his first successful flying boat in this country, it was thus that this remarkable man met, which led to Lt. Porte going to the U.S.A. to join Curtiss early in 1914. Glenn Curtiss was at work on a new and larger twin engined flying boat, christened "The America", which was intended to attempt to fly the Atlantic Ocean with Lt. Porte as co-pilot. This was the prototype of the H.4, later renamed "Little AmericaⅡ". The "America" first flew in June 1914 but was underpowered. Before it could be re-engined the First World War started, in fact Lt. Porte returned to England on the very morning that war was declared – 4th August 1914, in order to re-join the Royal Navy if they would accept him. They did accept him and put him in charge of R.N.A.S. Hendon. In this capacity he recommended the purchase of two "AmericaⅡs", which arrived in November 1914, given the serial numbers 950 and 951 respectively, and thence sent to Felixstowe. Transferred there, Lt. Porte flew and tested these aircraft thoroughly. It was not long before he found that the design of the hull was unsatisfactory in the sense that resistance was too great before the critical speed for hydroplaning was reached so that, with any reasonable load, it was impossible to take off with the two 90 HP Curtiss Motors. The maximum lift for take off was when the wings attained an angle of 10° Incidence. In order to reach this angle, the tail had to be depressed until it dragged in the water, thus greatly increasing water resistance, as there was insufficient angle between the forebody and the tail of the hull to keep it clear. The hulls were so constructed that the tails were much weaker than the monocoque forebodies and they tended to break at the joint, particularly when alighting, as the tail could touch down first!

With official backing, Lt. Porte began experimental work with a view to producing a more seaworthy hull to replace the Curtiss built ones, and in order to do so he was put in command of the Felixstowe Air Station. His solution was simplicity itself, he abandoned the "boat built" monocoque hull in favour of a four-finned, slatted fuselage, with normal vertical and horizontal spars, diagonally braced forward and cross braced aft with steel cable or tie bars, the planing bottom was added below as a secondary structure and was built of cedar and mahogany with varnished linen sandpapered beneath. He also cocked up the tail in order to leave ample clearance for take off and landing. With this new hull the H.4 became the F.1, the first of the "Felixstowe Dusts".