

## NAVAL AIRCRAFT

ton also mentioned the Blackburn Firebrand, with its double flap.

Another interesting example of the use of high-lift devices was the Supermarine S. 24/37 which developed a maximum lift coefficient of 2.6, engine-off, or about 50 per cent greater than a Spitfire. This was achieved by the use of full-span Handley Page slots in conjunction with a part-span slotted flap. Engine on, a lift coefficient of 3.9 was measured in flight. The slats increased the permissible angle of incidence for maximum lift. The wing was therefore provided with variable-incidence gear which enabled the fuselage to stay at a normal incidence when the increased wing incidence and high lift were being used for landing.

A successor to the Sea Otter was being built embodying the variable-incidence principle. The design max. lift coefficient, engine-off, was 3.5.

Finally, a torpedo was an awkward thing to stow on a moderate-sized aircraft and it was a nice point to decide

whether to leave it outside so as to have the best performance when it had been dropped, or put it inside to have a cleaner machine when it was stowed. Mr. Clifton did not think that the torpedo would be superseded for a long time and we must put up with the trouble of stowing it. A possible rival to the torpedo was the rocket-propelled bomb.

### The Future

Concluding his lecture, Mr. Clifton indulged in a little speculation as to the future of naval aircraft. Two developments, he thought, were likely to have a profound effect, namely, the atom bomb, and the jet-propelled rocket or missile directed by radio. The atom bomb conferred a special advantage on the Navy, for warships and carriers were really mobile fortresses and airfields, and their mobility made them more difficult to knock out. Radio-directed missiles might eventually displace the piloted naval aircraft for defensive or offensive purposes. In these circumstances the carrier would become a battleship with a store of expendable missiles, and a complicated radio "brain" for direct-

ing them and for detecting the approach of hostile objects.

The obvious advantages of mobility might lead us in the direction of giant flying boats, capable of long-range taxiing, and of taking to the air when attacking or in danger of being attacked. Refuelling and re-arming from remote bases specially chosen and built to resist atom bomb attack, a fleet of such craft might converge and deal a devastating reply in a short space of time to a threat from any quarter. These flying boats might increase their operational range and endurance by travelling as surface ships. The fundamental reason for this was that the best L/D we could hope for from an aircraft was about 15, whereas at low speed  $v$  could attain 100 from a ship. Therefore, and hence fuel load, to travel A to B was inversely proportional to L/D.

The day might come when the Royal Navy would consist primarily of aircraft with possibly some attendant submarines for servicing and refuelling purposes. Would the men who manned these aircraft be known as sailors?

## T. R. THOMAS

### An Appreciation by Sir Frederick Handley Page

EVERYONE connected with civil aviation will learn with the greatest regret of the sudden death of T. R. Thomas, the Secretary of the Air Registration Board.

I first met Thomas when he was Joint Secretary of the Joint Advisory Committee of Lloyd's Register and the British Corporation Register, a committee which dealt with the inspection of private owners' aircraft and the renewal of their certificate of airworthiness. Later, in 1936, when the recommendations of the Gorell Committee were adopted, Thomas was the secretary of the small committee of operators, manufacturers and insurers, of which I was Chairman, who, with official representatives, drafted the constitution of what is now the Air Registration Board.

The Air Registration Board came into being in 1937 and Thomas was appointed its first Secretary, a post which he filled until his untimely death last week.

Thomas has left us at the comparatively young age of 53, loved and mourned by all who knew him. His closest friends and associates, and he himself, knew this was likely to happen suddenly, but we all preferred to ignore the inevitable. His greatness was housed in the frailest of bodies, and during the past twenty years he spent much of his time literally fighting for breath. I have seen him on many occasions enter a meeting and for some minutes be incapable of speech because he had climbed half a dozen steps. In spite of this great physical handicap, I have never known him shirk any duty—and he has encountered many tough propositions in the creation and operation of the Air Registration Board.

I know of no one who could draft a clearer memorandum setting out fundamental principles and expanding policy

decisions into executive detail. The Board and British civil aviation owe a great debt of gratitude to Sir Maurice Denny, the first Chairman, and T. R. Thomas, the first Secretary, for the sound way in which the organization has been built up and the long hours which they have spent in its initial administration, to say nothing of the difficulties which were met at the onset of the war when the Air Registration Board was only just beginning to feel its feet. One never thought of the Board without seeing T. R. Thomas and his characteristic signature, and except for his love for fly-fishing, and a stolen hour in his little workshop, he gave his whole to the Board. Many have cause to bless T. R. Thomas for his help and kindness, and he and his wife were responsible for many charitable acts. After the tragic loss of their only son in 1941, the Thomases adopted a small boy who is now 11 years of age.

Tom Roberts Thomas was born on the 1st of March, 1893 in Glasgow. He entered the shipbuilding industry and served his apprenticeship with the Sunderland Shipbuilding Company, and took a degree in Naval Architecture and Marine Engineering at King's College, Newcastle, in 1912. He was awarded an 1851 Exhibition which he held at Harland and Wolff, Belfast. Thomas subsequently worked on light cruisers at Fairfield, Govan, and in the submarine yard of Messrs. Cammell Laird and Co., Birkenhead.

In 1916 he joined the British Corporation Register of Shipping and Aircraft, and almost at the same time joined the Royal Engineers. He served in Palestine and was responsible for building and maintaining transport on the Nile. As a result of his service he spent much time in hospital and was invalided out of the

Army in 1919 and returned to the British Corporation the following year. He was sent to London in 1927 by the British Corporation to organize their aircraft committee, and in 1932, was appointed Joint Secretary of the Joint Aviation Advisory Committee of Lloyd's Register and the British Corporation Register.

Thomas's death is a great loss to British civil aviation, but to-day our thoughts are those of the deepest sympathy with his widow in her great bereavement.

### DEATH OF DOROTHY SPICER

WITH the death of Mrs. Richard Pearse, who was killed, with her husband, when the F.A.M.A. York airliner in which they were travelling to Buenos Aires crashed near Rio de Janeiro on December 3rd, there passes one of the best-known women in British aviation during the 1930s.

Before her marriage in 1938, Mrs. Pearse was Miss Dorothy Spicer, and although she held both "A" and "B" pilots' licences, it was in the rôle of an aircraft engineer that her name came widely before the public. This was when she was associated with Miss Pauline Gower in the operation of an air charter concern and had the distinction of being the first woman (and for some time the only woman) to be a fully qualified "ground engineer," as they were then called. Miss Gower and Miss Spicer at one period travelled about the country with their own air-circus (the former using chiefly a three-seater Spartan biplane for joy-riding), and this all-woman venture captured the headlines in the Provinces wherever they went.

Mr. Richard Pearse was on his way to take up the post of South American representative of British Aviation Services, Ltd., having previously been with the Ministry of Civil Aviation.