

THE INDUSTRY

Tyre Procedure

THE latest additional loose leaves for the *Dunlop Aeroplane Equipment Manual* (Aviation Department, Fort Dunlop, Birmingham) deal with the fitting of tyres to detachable-flange hubs.

Oil and the F.B.I.

FOR the tenth year in succession Mr. H. Bell Thompson, managing director of Sternol, Ltd., the well-known oil refiners, has been elected to represent the lubricating oil trade of the United Kingdom (Main Group 17) on the Grand Council of the Federation of British Industries.

Forty Years of Bearings

THE many intricate processes involved in ball and roller bearing manufacture are described and illustrated in a most interesting fashion in a booklet recently issued by the Hoffmann Manufacturing Co., Ltd., Chelmsford, to celebrate their forty years of existence.

Mr. D. B. Mirk

MR. D. B. MIRK, lately radio manager of Standard Telephones and Cables, Ltd., recently received presentations from his colleagues and the radio-shop employees on resigning in order to become a partner in the firm of Urwick Orr and Partners, Consulting Industrial Engineers, of St. James's Square, London, S.W.1.

"Going Up, Please"

MANY a ft.-lb. of tedious work must have been swiftly and conveniently dealt with by one or other of the Morris lifts. Several different models of passenger and goods lifts for flats, factories and warehouses have been installed, not to mention less elaborate hoists, hand or electrically operated, for use to cellars or basements. The firm of Herbert Morris, Ltd., has its works at Loughborough.

The Right Way

A PRAISEWORTHY policy of exploiting the export trade without neglecting the needs of the Air Ministry, or vice versa, has been consistently pursued by the Williamson Mfg. Co., Ltd., and a photograph received by *Flight* shows that there is no weakening of that attitude. A large and a small lorry, piled high with crates, are seen leaving the Willesden works for the docks. In the crates are over six tons of "Eagle" aircraft cameras.

The Aspin Engine

A REVISED edition of the Aspin rotary-combustion-chamber engine is nearing completion. The flat-four arrangement is preserved and the same cylinder blocks and heads are used. A three-throw crankshaft, however, will replace the original two-throw shaft to eliminate a couple which was apparent when the unit was flexibly mounted.

Since the new crankshaft necessitated a redesigned crankcase the opportunity has been taken to set the two magnetos transversely at the rear instead of on top of the case at the forward end, thus bringing the c.g. back or down somewhat.

Forthcoming Events

- April 21. R.Ae.S. Lecture* : "High Altitude Flying," by Prof. A. E. Younger.
- April 28. R.Ae.S. Lecture* : "Factors Controlling the Development of Electrical Ignition on Aero Engines," by Dr. G. E. Baird.
- April 30. Aero Golfing Society: R.A.F. Match, Felixstowe.
- May 8. R.Ae.S. Garden Party, Great West Aerodrome.
- May 14-22. Finnish Aero Show, Helsinki.
- May 17. Air League of the British Empire: Annual Dinner, Grosvenor House, London.
- May 17. Aero Golfing Society: "Flight" Trophy, Royal Ashdown Forest.
- May 28. Air League of the British Empire: Empire Air Day.
- June 11. Bristol and Wessex Aeroplane Club: Garden Party.

* All these lectures take place at the Institution of Mechanical Engineers, Storey's Gate, St. James's Park, London, S.W.1, beginning at 6.30 p.m.



FOR METALLURGICAL RESEARCH: Sir William Bragg, O.M., D.Sc., F.R.S., famous for his X-ray metallurgical investigations, is the first recipient of the new medal of the Institute of Metals, awarded for outstanding services to non-ferrous metallurgy. The medal, obverse and reverse of which are seen above, was designed by Harold Stabler and made of pure platinum by the Mond Nickel Co., Ltd. A silver reproduction, by the Goldsmiths and Silversmiths Co., Ltd., is being presented to the British Museum.

PUBLICATIONS RECEIVED

- Cooks Holidays Abroad*, 1938. Thos. Cook and Son, Ltd.
- Air Rule of the Road and Air Legislation*, by Lt. Cdr. R. Sunnucks, Esq. Brown, Son and Ferguson, Ltd., 52-58, Darnley Street, Glasgow, S.1.
- The Air Annual of the British Empire*, 1938: 21s., Sir Isaac Pitman and Sons, Ltd.
- The Air Almanac*; *Ephemeral Sheets for 1938, April 1 to July 1*; 2s. 6d., H.M. Stationery Office.
- Twenty-third Annual Report of the National Advisory Committee for Aeronautics*, 1937; 15 cents, Superintendent of Documents, Washington, D.C., U.S.A.
- The Climate of the British Isles*, by E. C. Bilham; 21s., Macmillan and Co., Ltd. St. Martin's Street, London, W.C.2.
- Magneto Manual*, by H. R. Langman, 6s., The Technical Press Ltd., Ave Maria Lane, Ludgate Hill, London, E.C.4.
- Handbook of Aeronautics*, Vol. 1, Third edition; 30s., Sir Isaac Pitman and Sons Ltd.
- Birmingham Auxiliary Fire Service* (Air Raid Precautions Monthly Review). Fire Brigade H.Q., Corporation Street, Birmingham, 4.
- Airplane Maintenance*, by J. H. Younger, A. F. Bonnalle and N. F. Ward, 15s. McGraw-Hill Publishing Co., Ltd., Aldwych House, London, W.C.2.

NEW COMPANIES

In the notes below, for reasons of space, the "objects" of new companies are usually somewhat abbreviated.

AIR SCHOOLS LTD.—Private company. Registered April 7. Capital, £4,000 in 4,000 shares of £1 each. Objects: To carry on business as instructors in aviation, aerial navigation, aerial and ground signalling, dealers in and importers and exporters of aircraft and aircraft engines of all kinds, etc. The permanent directors are: Norman R. Harben, D.F.C. (director of Frillcard Manufacturing Co., Ltd.); Air Commodore B. C. H. Drew, C.M.G., C.V.O., C.B.E. (retd.) (director of Avimo, Ltd.). Registered office: 4, New Court, Lincoln's Inn, London, W.C.2.

WITNEY AERODROME LTD.—Private company, registered April 7. Capital, £3,000 in 3,000 shares of £1 each. Objects: To carry on the business of proprietors of aerodromes, hangars, repairing and petrol filling stations, etc. The permanent directors are: Mrs. Beatrice S. Macdonald, The Hythe Croft, Eynsham, Oxon.; Ernest B. Taylor, 75, High Street, Witney.

DUGOUTS LTD.—Private company, registered April 9. Capital, £1,000 in 1,000 shares of £1 each. Objects: To carry on the business of manufacturers of dugout and all concrete products, including shelters against all forms of aerial attack. The first directors are not named. Solicitors: Warren and Warren 31, Bedford Row, London, W.C.1.

AERONAUTICAL PATENT SPECIFICATIONS.

(The numbers in brackets are those under which the Specifications will be printed and abridged, etc.)

- 19276. BENDIX AVIATION CORPORATION: Brakes (481,594).
- 25580. BENDIX, LTD., and ROBERTS, G. P.: Control of Aircraft brakes (481,946).
- 32201. CONTRAVES AKT.-GES.: Method for measuring photogrammetrically the aiming and firing error in firing exercises against moving targets, more especially aircraft, and apparatus for carrying out the method (481,820).
- 10071. SERVO-FREIN DEWANDRE SOC. ANON: Remote control apparatus for the successive release of bombs in aircraft (481,694).
- 17014. JUNKERS FLUGZEUG-UND-MOTORENWERKE AKT.-GES.: Mounting and sighting guns on aircraft and other vehicles (481,649).
- 26125. JUNKERS & Co., GES.: Combustion product outlets of gas-heated appliances (481,720).