

engine now in production. This engine, known as the Pegasus X, gives an output of 920 horse-power at ground-level, and maintains 875 horse-power at 6,000 ft. altitude, with a remarkable weight of only 995 lb., completely equipped. This figure of 1.08 lb. per H.P. is the least weight/power ratio ever reached in a production type of aero engine, designed to stand up to the conditions of everyday use. The Rolls-Royce racing engine produced for the last Schneider Trophy race had a ratio of only 0.7 lb. per H.P., but this was not a production type. The fuel consumption of the Pegasus X is also as good as any other type in existence; earlier air-cooled engines compared badly with contemporary liquid-cooled types in this respect. It also standardises a controllable pitch airscrew, carrying the fittings for the hydraulic control gear integral with itself. It is interesting to note the progress in weight reduction in aero engine practice since the adaptation of the internal combustion engine to flying requirements. In 1903 the Wright Bros. original engine weighed 12.7 lb. per H.P. In 1913 the average was about 4.9 lb., while during the War period, 1914-18, rotary engines were produced as low as 2.5 lb. The lowest weight to-day, previous to the new Bristol engine, was 1.15 lb. per H.P.

Increase of Power Output in Aeroplanes

SCIENCE SERVICE, of Washington, D.C., reports that, in future, U.S. Army aeroplanes will be delivering approximately 70 per cent more power per pound of gasoline than was the case seven years ago. In 1928 an increase of 33 per cent in power output was obtained by alteration of engine design to utilise 92 instead of 50 octane gasoline; and now a further increase is envisaged by the substitution of special lead blended iso-octane for the 92 octane gasoline. Petroleum will still be used as a raw material in the production of this fuel, but the molecules will be 'torn down' and 'rebuilt' into new fuels. The composition of such fuels will be half *iso*-octane, which is now being manufactured in substantial quantities by several refineries, and half good quality ordinary aviation spirit with the addition of 'ethyl'. The cost per gallon of the final product will be higher than that of present aviation fuels, but since its power per pound is greater it ought in the long run to prove more economical. The practical result of its utilisation will be to enable aeroplanes to fly farther and faster without increasing the weight of fuel carried.

Parliamentary Science Committee

A MEETING of the general committee of the Parliamentary Science Committee was held at the House of Commons on May 14, Sir Arnold Wilson in the chair. It was reported that recent accessions to the list of bodies allied to the Committee include the Institution of Civil Engineers, the Institute of Chemistry and the National Veterinary Medical Association. In the period reviewed in the Honorary Secretary's report, special mention was made of the Committee's successful efforts to secure consideration of the claims of scientific research in connexion with

the Metropolitan Water Board Bill now before Parliament. Other activities reported included certain aspects of the Government of India Bill, the exemption from income tax of funds expended on industrial research, and the claims of science and technology to representation in the higher administrative posts in Government service. Sir Arnold Wilson addressed the Committee and in his concluding remarks said: "It will take time to evolve a suitable mechanism and a live organisation, but, if sufficient support is forthcoming and the membership widened to cover science as a whole, there is no reason why we should not be of real use and value to the nation; for it is in Parliament, and nowhere else, that the balance between science and ethics has to be settled, day by day, in terms of statutes and regulations".

British Postgraduate Medical School

H.M. THE KING formerly opened the British Postgraduate Medical School at the L.C.C. Hospital, Ducane Road, Hammersmith, on May 13. It will be recalled that the School arose out of a recommendation of a committee under the Earl of Athlone that London should have a centre for medical postgraduate work comparable with the great continental medical schools, which should be attached to the University and receive substantial Government support. By the co-operation of the Government, the University of London and the London County Council, one of the hospitals under the last-mentioned body was allocated and specially enlarged and equipped for the purpose (see NATURE, April 21, 1934, p. 600). Their Majesties were received by Sir Austen Chamberlain, chairman of the governing body of the School, who described its inception, stating that the School has three great tasks: to enable general practitioners to become familiar with the latest developments in diagnosis and treatment; to provide instruction for graduates undertaking specialist studies; and to promote research and advance medical knowledge. The King, in his reply, said that "The provision within the University of London of a new centre for clinical teaching marks a notable advance in the continuous effort of the medical profession to increase its capacity for service to mankind". He concluded by expressing the hope that "this school, with its happy union of ward and laboratory, university and local authority, drawing students and teachers alike from all parts of our Empire, and . . . from regions even more widely spread . . . [may] play an imperial rôle in the winning and dissemination of medical knowledge, in the relief of suffering . . . and in enabling the doctors of all lands to come together in a task where all must be allies and helpers."

Mechanisation of Industry

IN an article in the Royal Jubilee number of *Engineering* published on May 3, Sir Richard Redmayne says that the mechanisation of industry tends to increase both the wages and the time available for leisure of the operatives, and thus increases their material welfare without the application of what are