

James Watt, we are told, suggested the screw propeller in 1770; half a century later it commenced to come into use, and now it is almost universally adopted in all new construction.

It is a very interesting and curious fact to note that in the first instance, and for many years, the screw was driven by spur gearing from a very slow-speed engine, presumably because the builders of engines were afraid to design the engines to run so fast as the screw required to be driven. Now for forty years or more gearing has been entirely abandoned, and the high-speed reciprocating engine has worked well.

The turbine has now come on the scene, and its best speed of revolutions is faster than that of the screw, excepting in fast vessels; for the larger portion of the tonnage of the world it is at present unsuited, except to take a secondary but excellent part in the combination system.

We may naturally speculate as to the future, and inquire if there is a possibility of the turbine being constructed to run more slowly and without loss of economy, or whether the propeller can be modified to allow of higher speed of revolution.

Or, again, may a solution be found in reverting to some description of gearing, not to the primitive wooden spur gearing of half a century ago, but to steel gearing cut by modern machinery with extreme accuracy and running in an oil bath, helical tooth gearing or chain gearing, or, again, some form of electrical or hydraulic gearing?

These are questions which are receiving attention in some quarters at the present time, and if a satisfactory solution can be found, then the field of the turbine at sea will be further extended.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

CAMBRIDGE.—It is proposed to confer the honorary degree of Sc.D. on Dr. Sven Hedin on Thursday, March 4. Dr. Sven Hedin will lecture before the Senate on that date in the Senate House. Before the ceremony he will be entertained at lunch by the master and fellows of Gonville and Caius College.

The Isaac Newton studentship, tenable from April 15, 1909, to April 15, 1812, has been awarded to Mr. W. J. Harrison, of Clare College.

The Lowndean professor, Sir Robert Ball, F.R.S., will lecture on "Ancient and Modern Views of the Constitution of the Milky Way" before the Cambridge Antiquarian Society on Monday, March 1, at 4.30 p.m.

In July of last year letters signed by the Chancellor were sent to more than 300 universities, colleges, academies, and other corporate bodies, inviting them to appoint delegates to attend the Darwin celebration from June 22-24 next. In answer to these invitations more than 200 delegates have been appointed. The expense likely to be incurred in carrying out the programme amounts to considerably more than 500*l.*, but it is hoped that it may be possible to provide the excess above that sum by private subscriptions, and the Senate will therefore not be asked to authorise the expenditure of more than 500*l.* from the University chest.

MR. E. C. WILLS has given 10,000*l.* to the Bristol University Fund, thus raising the fund to practically 200,000*l.*

WE learn from a recent number of *Science* that Mrs. E. G. Hood has given the University of Pennsylvania 20,000*l.* to establish graduate fellowships in the law department. Mr. Adolphus Busch, who last August promised to contribute 10,000*l.* towards the 60,000*l.* necessary for the erection of the new building for the Germanic Museum at Harvard University, has increased his gift to 20,000*l.* The General Education Board has offered to give Bryn Mawr College 50,000*l.* on condition that friends of the college subscribe 56,000*l.* by June, 1910. This is in addition to the 20,000*l.* recently given by the alumnæ. Of this sum, 26,000*l.* is to be used to pay the debt of the college, and the balance is to be reserved as an endowment fund.

NO. 2052, VOL. 79]

A ROYAL COMMISSION has been appointed to consider the position and organisation of university education in London. The terms of the reference to the commission are:—to inquire into the working of the present organisation of the University of London, and into other facilities for advanced education (general, professional, and technical) existing in London for persons of either sex above secondary-school age; to consider what provision should exist in the metropolis for university teaching and research; to make recommendations as to the relations which should in consequence subsist between the University of London, its incorporated colleges, the Imperial College of Science and Technology, the other schools of the University, and the various public institutions and bodies concerned; and further to recommend as to any changes of constitution and organisation which appear desirable. In considering these matters, regard should also be had to the facilities for education and research which the metropolis should afford for specialist and advanced students in connection with the provision existing in other parts of the United Kingdom and of His Majesty's dominions beyond the seas. The chairman of the commission is Mr. R. B. Haldane, K.C., M.P., and the other members are Viscount Milner, G.C.B., G.C.M.G., Sir Robert Romer, G.C.B., Sir R. L. Morant, K.C.B., Mr. Laurence Currie, Dr. W. S. McCormick, Mr. E. B. Sargant, and Mrs. Creighton. The joint secretaries are Mr. J. Kemp and Dr. H. F. Heath.

SOCIETIES AND ACADEMIES.

LONDON.

Royal Society, January 28.—Mr. A. R. Kempe, treasurer, in the chair.—The action of the venom of *Sepedon haemachates* of South Africa: Sir T. R. Fraser and Dr. J. A. Gunn.—The colours and pigments of flowers, with special reference to genetics: Miss M. Wheldale. The communication gives an account of investigations made upon plant pigments, with a view to the elucidation of phenomena observed in the genetics of flower-colour. A primary classification is made into plastid pigments and pigments soluble in the cell-sap. Of the former, several kinds are shown to exist, in addition to carotin and xanthin. When the type of a species contains more than one plastid pigment, the power to produce each pigment is expressible as a Mendelian factor. Loss of the factors in turn gives rise to varieties of the type. Soluble pigments are classified as red-purple-blue (anthocyanin) and yellow (xanthin) and of both; various kinds can be differentiated by means of chemical reagents. There is evidence, moreover, of a relationship between the behaviour of the pigments in genetics and their chemical reactions. Colourless tannin or glucoside-like substances are found to be widely distributed in plants, and such substances appear to take part in the formation of some kinds of anthocyanin. This conclusion is based upon examination of pigments of varieties of *Antirrhinum majus*, of which the inheritance of flower-colour has been worked out by the author (previous communication to Roy. Soc.); the results of the present paper show that in this genus both a glucoside-like substance and a reddening factor are essential to the production of anthocyanin of the type. Loss of glucoside gives rise to an albino variety still capable of carrying the reddening factor; loss of the reddening factor gives a variety bearing ivory-white flowers, distinguishable from the albino, and containing the glucoside. Experiments on the same genus further indicate that the xanthic pigment of a yellow variety is a derivative of the glucoside of the ivory-white, to which it is also hypostatic. Examples are given of genera resembling *Antirrhinum* in their series of varieties derived from the anthocyanic type, and also of genera forming another series, from which the xanthic variety is absent. In this connection, stress is laid upon the conception of two forms of albinism, one due to loss of anthocyanin only, the other to loss of both anthocyanin and xanthin.—The variations in the pressure and composition of the blood in cholera, and their bearing on the success of hypertonic saline transfusion in its treatment: Prof. L. Rogers. This communication contains some points of