

will be possible to account for the sudden appearance of the plant in land that has been ploughed or cleared and whether it is due to buried seeds or to other causes.

### Mme. Lepaute : an Eighteenth Century Computer

ELIZABETH CONNOR, Mount Wilson Observatory, Carnegie Institution of Washington, has written (Leaf. 189, Astro. Soc. Pac., Nov. 1944) a short account of the astronomical work of Mme. Lepaute, whom Lalande considered "the only woman in France who had genuine knowledge of astronomy". As a child she was a voracious reader, and it was generally recognized by those who met her that she had a brilliant mind. When Lalande and Lepaute, to whom Mme. Lepaute (*née* Nicole-Reine Étable de la Brière) was married in 1748, collaborated in a treatise on clock-making, Mme. Lepaute calculated a table for the book containing a number of oscillations for pendulums of different lengths and the lengths of pendulums corresponding to a given number of vibrations. Her great work was the assistance that she rendered in the computations of the perturbations of Halley's Comet, and Lalande pays her a tribute when he affirms that without her help Clairaut and he would scarcely have undertaken this enormous task. In 1759, Lalande was placed in charge of the *Connaissance des Temps*, and Mme. Lepaute became one of his assistants. When this work was given to someone else in 1774, they concentrated their attention on volume 7 of the "Ephémérides", and Mme. Lepaute made all the calculations for the sun, moon and planets for both volumes 7 and 8, covering the period 1774-93. In addition to this, she devoted much time to eclipses, computing a table of parallactic angles which was useful in eclipse work. She also made computations for the observation of the transit of Venus in 1761, and wrote a memoir on the subject for the Academy at Béziers. For twenty-five years she was engaged continuously in astronomical work; but her eyesight was finally affected and during the last years of her life she was unable to apply herself closely to the subject.

### A 1,000-g Centrifuge

In connexion with recent development work, the Bell Laboratories have designed a centrifuge for the purpose of subjecting objects to high accelerations under conditions permitting the effects of the acceleration to be studied. The machine is described and illustrated by R. M. Pease in an article in the *Bell Laboratories Record* (22, No. 16; Dec. 1944). Machines of this general type have been built before; but there was none available that would develop high enough accelerations. For the required tests, an acceleration 1,000 times the earth's gravitational acceleration was needed. To secure this acceleration, two parallel steel rods are clamped at their midpoint and rotated by an adjustable speed D.C. motor. Fastened between the rods at their outer ends is a heavy steel plate to which is secured a mounting for the object under test. With the test object in place, the machine may be driven at the speed necessary to give the desired acceleration. After stopping the machine, the effect on the apparatus under test may be determined. Provisions are also made for observing the effect of the accelerations on the object as the speed of the machine is increased. A neon lamp is mounted to shine directly on the object when the arm is horizontal. At each rotation, this lamp lights for a few millionths of a second from an impulse generated in

a winding on a permanent magnet when a small iron bar attached to the rotating arm passes the pole pieces. For the rest of the time, the arm is in comparative darkness. This stroboscopic arrangement makes the arm appear to stand still in the horizontal position and any distortion of the test object can be observed while the acceleration is being increased.

### Electric Lighting Installations for Building Interiors

IN A PAPER on this subject read recently before the Institution of Electrical Engineers, R. O. Ackerley examines the methods which should be adopted in order to answer the various questions which arise when designing an electric lighting installation. The paper stresses the importance of careful task analysis in the first instance to determine exactly what is the visual problem for which suitable lighting must be provided, and goes on to discuss methods of lighting, factors affecting illumination requirements, the selection of appropriate lighting fittings and lamps, and the calculations necessary to determine their location and wattage. The paper also deals with probable trends in lighting in the post-war period and the light sources and materials for light-control that are likely to influence them.

### Modern Electric Lift Practice

A PAPER read by L. S. Atkinson before the Institution of Electrical Engineers reviews present-day electric lift practice by making brief reference to those aspects of the subjects which are the concern of the architect, and to the application of lift equipment to suit various classes of building. It explains the changes that have been made in general design from time to time to meet the problems created by the increasing height of buildings and their growing populations, and further describes the equipment as generally installed to-day.

### Summer School in Social Biology

A SUMMER SCHOOL in Social Biology and Human Affairs will be held by the British Social Hygiene Council at University College, Nottingham, during July 28-August 11, under the directorship of Prof. Winifred Cullis. This School is designed for teachers and social workers, health visitors, superintendents of children's homes, industrial nurses, etc. Special consideration will be given to educational problems in social biology presented by the coming increase in the school-leaving age. Further information can be obtained from the British Social Hygiene Council, Tavistock House North, Tavistock Square, London, W.C.1.

### Announcements

DR. W. Q. KENNEDY has been appointed professor of geology in the University of Leeds.

AT A MEETING of the Royal Astronomical Society held on April 13, the following officers were elected: *President*, Prof. H. H. Plaskett; *Vice-Presidents*, Dr. E. C. Bullard, Sir Harold Spencer Jones, Prof. E. A. Milne and Mr. F. J. Sellers; *Treasurer*, Mr. J. H. Reynolds; *Secretaries*, Dr. H. R. Hulme and Mr. D. H. Sadler; *Foreign Secretary*, Prof. F. J. M. Stratton; *Members of Council*, Miss M. G. Adam, Dr. H. A. Brück, Rev. M. Davidson, Dr. M. A. Ellison, Mr. F. J. Hargreaves, Dr. A. Hunter, Dr. E. M. Lindsay, Captain W. N. McClean, Prof. W. H. McCrea, Dr. G. C. McVittie, Mr. P. J. Melotte and Dr. R. Stoneley.