Calendar of Discovery and Invention.

November 13, 1807.—The inaugural meeting of the Geological Society was held at the Freemasons' Tavern, Great Queen Street, on Nov. 13, 1807. Among the eleven gentlemen present were Davy, Babington, Count Bournon, Greenough, William Allen, and Richard Phillips. At this meeting a resolution was passed "That there be forthwith instituted a Geological Society, for the purpose of making geologists acquainted with each other, of stimulating their zeal, of inducing them to adopt one nomenclature, of facilitating the communication of new facts, and of ascertaining what is known of their science, and what remains to be discovered."

November 14, 1894.—Ten years after Sir Charles Parsons patented his steam turbine, the pioneer steam turbine vessel *Turbinia* was constructed on the Tyne, and on Nov. 14, 1894, carried out her preliminary trial. The *Turbinia* was 100 feet long and 44½ tons displacement. Her first engine was a single radial flow turbine giving 960 h.p. at 2400 r.p.m., but this was afterwards replaced by three turbines developing 2000 h.p. and giving the vessel the extraordinary speed of 34½ knots. The after part of the vessel and both sets of machinery have recently been presented to the Science Museum.

November 15, 1850.—In the ring of Saturn, first observed by Galileo, can be distinguished three rings, an outer ring called A, a middle ring B, and an inner ring C. This inner, or dusky ring, some 11,000 miles across, was first distinguished by Bond on Nov. 15, 1850.

November 16, 1492.—In the parish church of Ensisheim in Alsace hangs the oldest known meteorite. Of this a contemporary document says, "On the 16th of November 1492, a singular miracle happened; for between eleven and twelve in the forenoon, with a loud crash of thunder and a prolonged noise, there fell in the town of Ensisheim a stone weighing 260 pounds. . . . It was taken to the church as being a miraculous object."

November 17, 1893.—Heaviside's writings are contained in his "Electrical Papers," covering the period 1872 to 1892, and his "Electro-magnetic Theory" containing his work up to 1912. In the latter is his historic paper of Nov. 17, 1893, in which he laid down the principles of the use of inductance coils in telephone circuits.

November 18, 1846.—Sulphuric ether had been known in the thirteenth century. It was recommended as an inhalant for asthma by Pearson of Birmingham in 1785, and it is said that Faraday in 1818 noted the effects of inhaling it. It was Prof. Jackson of Harvard who suggested to W. T. G. Morton the possibilities of ether as an anæsthetic, and on Oct. 16, 1846, Morton successfully administered it to a patient in the General Hospital of Boston, while the discovery was made known to the world by Dr. Bigelow on Nov. 18, 1846.

November 19, 1787.—"The advance of astronomy in the eighteenth century," wrote Miss Clerke, "ran in general an even and logical course. The age succeeding Newton's had for its special task to demonstrate the universal validity, and trace the complex results of the law of gravitation. The accomplishment of that task occupied just one hundred years. It was virtually brought to a close when Laplace explained to the French Academy, November 19, 1787, the cause of the moon's accelerated motion." With this work, says another writer, "the last anomaly and the last threat of stability thus disappeared from the solar system."

E. C. S.

Societies and Academies.

LONDON.

Royal Society, Nov. 3.—Hans Spemann (Croonian Lecture): Organisers in animal development. The conception of 'organisers in development' has been derived from experiments in amphibian embryos in the earliest stages. The different regions of such an embryo have not the same value for development; most of them are relatively indifferent and do not carry their destiny in themselves. This can be shown by transplantation of these parts into other regions of the embryo; they follow the development of their new environments. But there is a certain region in the embryo, parts of which, when transplanted into an indifferent region of the embryo, do not adapt themselves to their new environment, but retain their own character, and force, as it were, the others to follow them. Such parts organise a new embryo, which is built up partly by the transplanted cells, partly by the cells of the host. Therefore they were called 'organisers,' and the region where they lie together in those early stages of development the 'centre of organisation.' Further experiments have been made to determine the extent of this centre, its origin, its intimate structure, and the nature of the organising influence.

PARIS.

Academy of Sciences, Oct. 3.—Mesnager: Observations on a note by M. de Sèze.—H. **Deslandres**: The law of distribution of magnetic storms and of their elements. Consequences to be deduced regarding the constitution of the sun.—Paul **Helbronner**: The operations of the detailed geometrical description of the French Alps (twenty-third season, 1927).—Paul **Montel**: Subharmonic functions and their relations with convex functions.—Pierre **Humbert**: Spherical prepotential.—L. d'**Azambuja**: The structure of the solar chromosphere.—E. M. **Antoniadi**: The rotation of the third satellite of Jupiter. Observations made on this satellite during the last year with the 83 cm. telescope at Meudon Observatory show that this moon always presents the same face to Jupiter, except for a possible libration in latitude. It is concluded that the period of rotation of the third satellite of Jupiter is equal to that of its revolution round the planet.—G. W. **Ritchey**: Some mechanical and other advantages of the small length and compact structure of the Ritchey-Chrétien type of a planatic telescope.—Jean **Thibaud** and A. **Soltan**: Spectrographic measurements in the intermediate domain (series *K*, *L*, *M*, *N*).—Fred **Vlès**: The optical properties of certain colouring matters susceptible of changing colour in concentrated solutions of neutral salts.—W. **Ipatieff** and B. **Mouromtseff**: The formation of crystallised silicates in aqueous solution under high temperatures and pressures. Silica gel, after heating for 30 to 40 hours at 310°-320° C., under a hydrogen pressure of 200 atmospheres gives hexagonal prisms and pyramids of SiO_2. Replacing hydrogen by carbon dioxide, a crystallised hydrate, 5 SiO_2, 2 H_2O is obtained. The preparation of crystallised silicates of magnesia, calcium, manganese, and zinc is described.—Erling **Botolfsen**: The sublimation of iron in a vacuum. When iron is heated in a high vacuum at 1300° C., below its melting point, it slowly sublimes. In one experiment under these conditions the velocity of sublimation of iron was 0·07 per cent. per hour.—Jean **Cournot** and Macedo Soares **Silva**: The viscosity of nickel, aluminium, and the light alloys.—P. **Lebeau** and A. **Damiens**: