Calendar of Discovery and Invention.

January 1, 1801.—After the enunciation of Bode's law and the discovery of Uranus, it was thought there must be an undiscovered planet the path of which lay between the orbits of Mars and Jupiter. A group of astronomers, therefore, agreed to make a systematic search, and on January 1, 1801, Giuseppe Piazzi, at Palermo, saw Ceres, the first of the minor planets or asteroids. By 1845 four others had been discovered, but since the application of photography to astronomy many hundreds have been identified. Ceres, however, is the largest, being 485 miles in diameter.

January 1, 1855.—Among the methods used for determining the density of the earth is that introduced by Airy, who, in 1826 and 1828, with Whewell and Sheepshanks, made pendulum experiments at Dolcoath Mine, Cornwall. Later, he repeated these experiments at Harton Colliery, South Shields, at a depth of 1260 feet, and gave an account of these in a lecture at South Shields on January 1, 1855. The result he obtained gave 6·56 as the mean density—a value, however, considerably too high.

January 2, 1818.—The foundation of the Institution of Civil Engineers was due to six engineers, of whom the best known were William Maudslay, Joshua Field, and Henry Robinson Palmer. The first formal meeting was held at the Kendal Coffee House, Fleet Street, on January 2, 1818. On January 23, 1820, it was proposed to ask Thomas Telford to become president. He was formally installed on March 21 of that year, and held the presidency until his death in 1834. The first home of the Institution was at 15 Buckingham Street, Adelphi, and the first volume of *Proceedings* was issued in 1836.

January 3, 1752.—While spectrum analysis was due to Newton, it was the young divinity student Thomas Melvill who first used a prism for the examination of various flames; introducing sal-ammoniac, potash, alum, etc., into burning spirits. He gave an account of his experiments to the Medical Society of Edinburgh on January 3, 1752, while another paper of his was read to the Royal Society in 1753 by Bradley. (See NATURE, November 5, 1914, vol. 94, p. 263.)

January 4, 1896.—On this day Röntgen gave an account of his discovery of X-rays to the Physical Society of Berlin. His discovery was made on November 8, 1895, and was described in a paper entitled "On a New Kind of Rays," which appeared in the *Sitzungsberichte der Würzburger physik.-medic. Gesellschaft*. A translation of this paper was given in NATURE of January 23, 1896, together with an article and an X-ray photograph contributed by Mr. A. A. Campbell Swinton.

January 7, 1610.—No accidental discovery has had more far-reaching results than the discovery of the principle of the telescope. From the report of what Lippershey had done, Galileo made telescopes magnifying three, eight, and thirty times, and on January 7, 1610, at one o'clock in the morning, observed for the first time three of the satellites of Jupiter, and thus ushered in the era which has seen so vast an extension of our knowledge of the sky.

January 7, 1785.—The first to make a balloon ascent solely for scientific purposes, Dr. John Jeffries, on January 7, 1785, with the famous aeronaut Blanchard, crossed the English Channel from Dover to Calais, where a marble column was erected to commemorate the feat. On an ascent from London in 1784, Jeffries carried with him meteorological instruments and obtained samples of air at various heights for Cavendish. E. C. S.

Societies and Academies.

LONDON.

British Mycological Society, November 20.—**W. J. Dowson**: An unusual species of Botrytis attacking Narcissus. The fungus is the cause of 'fire,' marking the leaves with one or more yellow patches. The spores of the fungus are very large, and germinate with as many as thirteen germ tubes after up to one hour in water or in dilute glycerine.—**Miss A. Lorrain Smith**: A new family of lichens. The lichen *Cryptothecia subnidulans* was described by the late Dr. Stirton, and has led to much difficulty in assigning it to a systematic position. Stirton's herbarium has revealed three additional species of the genus and two closely allied ones for which a new genus is proposed; the two genera form a family characterised by the apparently double-walled ascus containing septate or muriform spores and embedded in a lax peridium of interwoven hyphæ. Affinity with the fungi Myriangiales and Gymnoascales is suggested; the nearest lichen allies appear to be Thelocarpaceæ and Mycoporaceæ.—**O. V. Darbishire**: Isidia and soralia of lichens. Isidia in *Peltigera prætextata* develop endogenously from special hyphæ which make their way to the surface, breaking through the cortex or making use of a crack. The mature isidia are very highly developed assimilators. There is a primary cortex on the upper surface with walls of wavy outline. The secondary cortex is similar to the cortex of the thallus. The gonidia are fairly closely packed towards the upper cortex with a very loose arrangement just inside the lower cortex. This cortex is of one layer of cells, with sinuate walls and interrupted here and there by pores. Soredia also have an endogenous origin. A few gonidia are gradually surrounded by the fungus and the differentiating soredium is raised to the surface of the sorial tissue, from which it becomes detached as a reproductive organ.—**W. R. I. Cook**: The genus Ligniera. Cross inoculations have shown that several species which have been described are merely host varieties. Infection takes place by zoospores entering root hairs. Spores serve as a resting stage and for propagation within the plant. Reduction division occurs at the formation both of spores and zoospores. Conjugation has not been seen.—**W. A. Roach**: On the nature of disease resistance in plants, with special reference to the wart disease of potatoes. Wart disease is an example of physiological resistance. Evidence at present suggests that immune and susceptible varieties form two distinct classes and not end members of a continuous series. The reaction towards wart disease is unaffected by grafting on either a foliage system, a root system, or of a complete plant of opposite reaction to the disease. Immunity from, or susceptibility to, wart disease is therefore probably innate to the cell and must be sought in compounds which cannot cross a graft fusion layer unchanged, and so probably cannot leave a cell. These compounds may be proteins.

Geological Society, December 1.—**Howel Williams**: The geology of the Snowdon massif (North Wales). The area described is limited on the north-east by the Pass of Llanberis, on the south-east by the Vale of Gwynant, on the south-west by the Colwyn and Gwyrfai Valleys to near the village of Salem, and on the north-west by the supposed line of junction between the Cambrian and the Ordovician rocks. The general stratigraphical succession is made out. The exact relationship between the Ordovician and the Cambrian systems on the northern flank of Snowdon is uncertain. Ramsay's threefold division of the