

Science News a Century Ago

Anniversary Meeting of the Royal Society

THE anniversary meeting of the Royal Society was held on November 30, 1835, J. W. Lubbock, vice-president and treasurer, being in the chair. The secretaries' report stated that the Copley Medal had been awarded to William Snow Harris for his "Experimental Investigations of the Forces of Electricity of high Intensity", while one of the Royal Medals had been awarded to Michael Faraday for his "Experimental Researches in Electricity" and the other to Sir William Rowan Hamilton for papers published by him in the *Transactions of the Royal Irish Academy*, vols. 16 and 17, entitled "Supplement to an Essay on the Theory of System of Rays". The report also announced the appointment of Mr. Robertson as assistant secretary "at a salary of £160 per annum with the use of a bed-room, sitting-room, coals and candles", and of Mr. Schuckard as librarian at a salary of £50 per annum. Mr. Schuckard was to attend from 12 to 4 o'clock on two days of the week. The Society consisted of 10 Royal personages, 48 foreign members and 735 home members, of whom 598 had compounded for life.

Culture of Grapes by Lord Tyrconnel

At a meeting of the Horticultural Society on December 1, "a paper was read containing notes and observations on many kinds of grapes, cultivated at the seat of the Earl of Tyrconnel, near Catterick Bridge, in Yorkshire, the vineries at which place seem very rich in varieties of this fruit, placed under circumstances highly favourable for comparison; any remarks like these, have been the result of long experience by Mr. Whiting, Lord T's gardener, cannot fail to aid in clearing up the confusion which reigns over the nomenclature, etc. of nearly 200 supposed different sorts of grapes, and further the establishment of a standard of certainty among so much conflict of opinion". (*Athenæum*.)

The London Mechanics' Institution

ON Friday, December 4, *The Times* recorded that this Institution held its usual quarterly meeting on Wednesday evening, in its theatre, Southampton Buildings, Dr. Clutterbuck, vice-president, being in the chair. A report of the committee of managers said that the present number of members was 1,211, an increase of 180 on the preceding quarter. The funds of the Institution appeared to be in a prosperous condition, between £200 and £300 having been paid to lecturers during the preceding twelve months. The chairman congratulated the meeting on the Institution having arrived at its twelfth anniversary, and said he believed a more favourable report on its condition had not been presented before. Votes of thanks were given to Dr. Birkbeck, the president, for his exertions on behalf of the Institution, to lecturers and teachers of classes who had given their services free of charge and to the donors of books, etc.

Education in Italy

In its column of Weekly Gossip on Literature and Art, the *Athenæum* of December 5 said, "In Italy, Silkworms, Wine-making and Education seem to occupy public attention. Silkworms, it appears, are

subject to some sort of infection disease, the nature of which it is important to discover, that precautions may be taken to guard against it. . . . The attention to education we have before noticed; since then, we have seen announced in the periodicals, a 'Manual of Instruction for Infant Schools', a 'Course of Instruction for Girls', and more books for the use of young persons than we can recollect, besides sundry essays upon the subject of Education. We trust, therefore, that the rising generation of Italians will improve accordingly. . . . From Sicily we learn that not less than nine periodicals literary and scientific now flourish there. . . ."

Electrostatics: Faraday Borrows a Copper

"HAVE borrowed a copper from Mr. Kipp. It is a new one, not quite finished, and having no cock fixed in it, so that its shape and condition is regular." Thus wrote Faraday on December 5, 1835, and with the borrowed copper proceeded to make the first of his electrostatic experiments. The vessel, a large one of 31 inches diameter, was set up on an insulating stool and charged by means of a frictional electrical machine. Then with a carrier ball—a small sphere covered with tinfoil and suspended by a silk thread—he examined the state of electrification at various points of the surface inside and outside the copper. The surface was touched and the charge taken by the ball transferred to a test electrometer. A series of trials soon showed him that projecting parts of the outside, for example, the edge or rim of the copper, were the most highly electrified. Very little electricity could be obtained from any point inside: the walls near the top were feebly charged, but the bottom showed no charge at all.

Societies and Academies

LONDON

Royal Society, November 21. A. R. UBBELOHDE, J. W. DRINKWATER and A. EGERTON: 'Pro-knocks' and hydrocarbon combustion. Former arrangements for sampling the gases from the engine cylinder have been so modified that the samples can be taken when ignition is made to occur every alternate cycle either in the firing or non-firing strokes. Aldehydes are formed at the end of the compression stroke in the non-fired cycle, but the concentration is much smaller than in the firing stroke. The quantities of formaldehyde and of total aldehydes have been measured when running on various fuels; the amounts produced are insufficient to account for 'knock'; for this, another source of peroxides is therefore needed. Experiments are described which suggest that most hydrocarbon fuels can be made to 'knock', provided molecules which can disrupt and give rise to a branched chain reaction are produced or made available. The main source of the nitrogen peroxide found in the previous experiments is probably the hot active surface of the exhaust valve, and is proved not to be the flame. D. T. A. TOWNEND and E. A. C. CHAMBERLAIN: The influence of pressure on the spontaneous ignition of inflammable gas-air mixtures. (4) Methane, ethane and propane-air mixtures. Whereas with the higher paraffins previously reported on, the ignition points were found to lie in two well-defined temperature ranges, location in the higher range occurring at low pressures, and in the lower