

His work on electric radiation has been collected in a book, "L'Optica delle oscillazioni elettriche," Bologna, 1897. He rendered fundamental service to exact experiment on this subject by simplifying the practical conditions of the problem; and he applied his improved apparatus to numerous investigations on the behaviour of electromagnetic waves, of short and therefore manageable wavelength, under very varied conditions, on their absorption, polarisation, reflection and refraction, and on the behaviour of dielectrics in the field of radiation. This work entitles him to a high place among those who developed the lines of experimental investigation opened up by the great discoveries of Hertz.

More recently he has contributed substantially to the study of the phenomena of radio-activity and the related ionisations.

THE DEATH-KNELL OF THE ATOM.¹

Old Time is a-flying; the atoms are dying;

Come, list to their parting oration:—

"We'll soon disappear to a heavenly sphere
On account of our disintegration.

"Our action's spontaneous in atoms uranious
Or radious, actinious or thorious:

But for others, the gleam of a heaven-sent beam
Must encourage their efforts laborious.

"For many a day we've been slipping away
While the savants still dozed in their slumbers;
Till at last came a man with gold-leaf and tin can
And detected our infinite numbers."

Thus the atoms in turn, we now clearly discern,
Fly to bits with the utmost facility;
They wend on their way, and in splitting, display
An absolute lack of stability.

'Tis clear they should halt on the grave of old Dalton
On their path to celestial spheres;
And a few thousand million—let's say a quadrillion—
Should bedew it with reverent tears.

There's nothing facetious in the way that Lucretius
Imagined the Chaos to quiver;
And electrons to blunder, together, asunder,
In building up atoms for ever!

W. R.

NOTES.

THE Hayden memorial gold medal has been awarded by the Academy of Natural Sciences of Philadelphia to Mr. C. D. Walcott, director of the U.S. Geological Survey, in recognition of the value of his individual contributions to geological science.

THE University of Basle, to which the late Prof. Dr. Georg W. A. Kahlbaum was attached for nearly twenty years, has received the sum of 100,000 francs from the mother of the deceased professor. Further, Prof. Kahlbaum's scientific library and physical instruments are also to be handed to the university.

FROM Berlin we learn, according to the *Chemiker-Zeitung*, that the German State grant for the support of scientific, technical, and similar undertakings is to be increased by 115,000 marks. The sum of 179,500 marks is to be spent upon increasing the accommodation for the permanent exhibition devoted to the interests of the working classes; 120,000 marks to be a first instalment for an

¹ Sung at the Chemical Laboratory dinner at University College, November 17.

investigation of sleeping sickness; 30,000 marks to be devoted to the development of the *Starkstrom*-laboratory of the Reichsanstalt; 43,850 marks to be contributed to the kite station on Lake Constance for experimental investigations of the higher air strata.

THE annual conference of the Pharmaceutical Society will be held in Birmingham in the week beginning July 23, 1906.

FOR the erection of a monument to Franz Reuleaux in the Charlottenburg Technical School, an appeal for subscriptions has been issued by the engineering department of the school.

MR. F. W. DYSON, F.R.S., chief assistant, Royal Observatory, Greenwich, has been appointed Astronomer Royal for Scotland, and also professor of practical astronomy, Edinburgh University, in succession to the late Dr. Copeland.

AN exhibition of electrical, optical, and other physical apparatus has been arranged by the Physical Society, and will be held on Friday evening, December 15, at the Royal College of Science, South Kensington. Admission will be by ticket only.

It is reported, *Science* says, that the Mexican Astronomical Society has awarded the prize offered by the Bishop of Leon for some notable astronomical discovery to Prof. W. H. Pickering, of Harvard College Observatory, for the discovery of the tenth satellite of Saturn.

AN archæological museum, which will devote special attention to Indo-Chinese matters, has been established by the French Government at Pnompenh. The museum will be under the scientific control of the *École française d'Extrême-Orient*, the chief of the archæological department of which school will act as director of the new museum.

A DESCRIPTION is given in the *Engineer* of December 1 of some interesting machine-tools, formerly the property of James Nasmyth, lately placed on view in the southern galleries of the Victoria and Albert Museum. Although associated primarily with the invention of the steam-hammer, James Nasmyth did valuable work in the improvement of machine-tools.

AN extensive landslip has occurred in the Danish island of Møen, destroying part of the beautiful scenery along Lille Klint. From the beach, steep slopes of Boulder-clay, thickly wooded, rise about 250 feet. The right bank of the valley from Liselund Chateau, and the coast-cliff for some 400 yards to the south of it, in all some fifteen or twenty acres of woodland, are described as having sunk bodily. The sea had been encroaching, but underground water is regarded as the cause.

A *Times* correspondent reports that a local Greek newspaper publishes details of the earthquake of November 8, which caused great damage to the various monasteries on Mount Athos. The shocks, which were extremely violent, occurred in the night. None of the monasteries escaped without serious injury. The shocks were not confined to the colony of monks. At Caryes the post-office, the police station, and other public buildings have been ruined, and at Cassandra, Jerissos, Gomate, and other villages within the districts affected the churches and many houses have been destroyed.

IN the course of a lecture delivered at the Armstrong College, Newcastle-on-Tyne, on December 2, the Hon. C. A. Parsons, F.R.S., dealt with the application of turbines to Atlantic passenger steamers, and described the