must be inhaled with every breath of the dwellers there. But every man in Leadville believes himself potentially rich, and has a mine or a claim for sale. Speculation in claims, and mere gambling in fractional ownerships, is the principal business. Prof. Newberry had seen the law papers in the examination of a mining property where no less than 14 claims overlapped one another. There is really valuable mining property in abundance, not yet developed, in Colorado and Utah; but the properties that are put on the market for sale in New York are generally worth little or nothing, and will tend to discredit investment in all Western mines.

Prof. J. Lawrence Smith gave an informal account of some recent researches for new elements. A few years ago he found a field of research in the cerium and yttrium minerals, and was well satisfied that he had obtained a new substance, which he named mosandrum, in the cerium group. Since then he has been studying the components of samarskite, and has found, he believes, two new elements, one of which he calls columbium, and the other he proposes to name in honour of his friend and the instructor of his youth, Prof. William B. Rogers. But having much other business requiring his attention, Prof. Smith has done little in that line of research, since then, except to purify some mosandrum. Not wishing to delay the progress of discovery, he turned over a mass of the earthy material to Messrs. Lafontaine and Lecoq Boisbaudran, who have since announced several discoveries. The new elements are not yet separated; the supposition of their existence is based upon observations on their absorption spectra. Prof. Smith has great doubts whether this method is trustworthy. He found that a given solution showed a different spectrum the second day from that of the day before. The addition of nitric acid in greater or less strength was found to alter a spectrum to an extent fully as great as would be considered indicative of the presence of a new metal. But in nitric acid itself there is nothing to provide these new spectra. Hence a doubt is thrown over all discoveries that rest exclusively upon absorption lines. There are probably 8 or 10 new earths in the yttria group. Of the newly announced metals, Prof. Smith thought philippium was more likely to prove real than most of the others. In the discussion that followed, Dr. Barker pointed out that the colour of a solution affected its spectrum. He regarded the discoveries based solely on absorption spectra as not to be trusted until supplemented by chemical tests.

The other papers read at the meeting were as follows: "On the Mean Pressure of the Atmosphere over the United States at Different Seasons of the Year," by Prof. Elias Loomis; "Questions as to a very Direct and Simple Method of Ascertaining the Ellipticity of the Terrestrial Spheroid," and "The Completion of the Theory of Parallel Straight Lines," by Prof. Stephen Alexander.

The meeting closed with a brief address by its presiding officer, Prof. Rogers. In the course of his remarks he expressed a wish that hereafter some measures should be taken for a more general and widespread invitation to the public to be present at the meetings of the Academy. This suggestion will probably be adopted.

WM. C. WYCKOFF

UNIVERSITY AND EDUCATIONAL INTELLIGENCE

CAMBRIDGE.—The following Statutes, which the University of Cambridge Commissioners contemplate making for the University, having been communicated to the Council of the Senate, the Vice-Chancellor hereby gives public notice thereof in the University.

"The University shall have power to adopt as an affiliated College in any place within the United Kingdom or in any part of the British Dominion any institution founded for the education of adult students, with such conditions as to the provision of lectures, and as to the rules and arrangements for the students, as may be determined from time to time by Grace of the Senate. Students of the institution who shall have continued members of it for such length of time, not less than two years, and shall have attended such lectures, and passed such examinations, as may be required from time to time by Grace of the Senate shall, if admitted as members of the University, be deemed to have kept already three of the terms required for any degree."

"Students in Science, who having already taken a degree in Arts, Law, Medicine, or Surgery, have given proofs of distinction in Science by some original contribution to the advancement of Science, and having done all that is required by the statutes and Ordinances of the University, may be admitted to the title of Doctor designate in Science, and shall afterwards be created Doctors at the time prescribed by the University."

"The management and regulation of the Botanic Garden, together with the appointment and removal of the Curators, Superintendents, Officers, and servants employed therein, shall henceforth be vested in a Syndicate consisting of the five Governors and Visitors appointed by Dr. Walker, that is to say, the Chancellor, or in his absence the Vice-Chancellor of the University, the Master of Trinity College, the Provost of King's College, the Master of St. John's College, and the Regius Professor of Physic, together with such other persons as may be appointed from time to time by Grace of the Senate."

The Syndicate appointed on May 31, 1877, to consider how to encourage students to read for honours in more than one tripos, in consequence of urgent representations on the part of head masters of public schools, have made a sixth and final report, leaving the Board of Natural Science Studies to propose the necessary and more than formal changes required in the regulations. With this exception, the Syndicate consider the duties committed to them to have been completely discharged.

Lord Rayleigh, we are glad to learn, has consented to become a candidate for the Chair of Experimental Physics at Cambridge; the election takes place to-morrow.

Mr. E. B. Tawney, F.G.S., Assistant to the Woodwardian Professor, who has made most valuable donations to the Woodwardian Museum, has had the degree of Master of Arts conferred upon him. Every geologist and palæontologist who knows Mr. Tawney will be glad to see this recognition of his merits.

THE number of matriculated students attending the University of Edinburgh this season is 2,510, the number of students in medicine being 1,138, in law 363, and in divinity 74. There is an increase, as compared with last year, in all the faculties, that in medicine being 96, and the total increase 178.

THE Court of Assistants of the Cordwainers' Company being impressed with the importance of the City Guilds employing part of their funds in the establishment of a central institution for the promotion of technical education, have, in addition to a grant of 250*l.* per annum already made, voted a donation of 500*l.* towards the building fund, on condition that the total sum agreed to be subscribed for that purpose be in their opinion adequate to the satisfactory fulfilment of the object contemplated.

SCIENTIFIC SERIALS

Gazetta Chimica Italiana, fasc. viii. and ix.—On cimene of cuminic alcohol, by SS. Paterno and Spica.—Decomposition of chlorhydrates of ethylamine by means of heat, by SS. Fileti and Piccini.—Gasometric analysis and methods, by SS. Amalo and Figuera.—Artificial improvement of leaves of indigenous tobacco by means of the sap of exotic leaves, by S. De Negri.—On phenoltolylates, by Dr. Mazzara.—On meta-amido-cinnamic acid, by the same.—Synthesis of phenyl-cumarine, by Dr. Ozliaboro.—On sulph-acids of cumene and on a new cumophenol, by Dr. Spica.—On insecticide powders from the flowers of *Chrysanthemum cinerieæfolium*, Trev., by Prof. Dal Sie.—Artificial production of the oligiste of Vesuvian lava, by S. Coppola.—Researches on the products of oxidation of alcoholic derivatives of natural and synthetic thymol, by SS. Paterno and Canzoneri.—On a new organic acid, lithobilic acid, found in oriental bezoar, with lithofellic acid, by Dr. Roster.—On a new method of preparing phenolglycolic acid and on pyrogallotriglycolic acid, by Dr. Giacosa.—Resistance of seeds (especially clover) to prolonged action of gaseous and liquid agents, by S. Giglioli.—On lapacic acid, by S. Paterno.

Journal of the Franklin Institute, November.—We note here the following:—A general differential equation in the theory of the deformation of surfaces, by Mr. Craig.—Future water supply of Philadelphia, by Mr. Bukinbine.—A new illustration of persistence of vision, by Prof. Tobin.

SOCIETIES AND ACADEMIES

LONDON

Royal Society, November 27.—"On the Structure of Serous Glands in Rest and Activity." By J. N. Langley, M.A., Fellow of Trinity College, Cambridge. Communicated by Prof. Michael Foster, M.D., F.R.S.