November 20—"Comets I have Known," Professor F. P. Leavenworth.

November 27—"Thunder and Lightning," Professor John Zeleny.

December 4—"Radium, its use in Physics and Medicine," Assistant Professor Alois F. Kovarik.

December 11—"Electrical Transmission of Intelligence," Professor G. D. Shepardson.

December 18—"Some Advances in Modern Bridge Engineering," Professor Frank H. Constant.

January 15—"The Air We Breathe," Dean George B. Frankforter.

January 22—"A Geological Exploration in Southwest Colorado," Professor W. H. Emmons.

January 29—"American Metal Mining," Professor Chas. E. van Barneveld.

February 5—"Geographical Studies in Glacier National Park," Assistant Professor E. M. Lehnerts.

February 19—"The Influence of the Study of Fossils—Paleontology," Assistant Professor F. W. Sardeson.

February 26—"Heredity and Eugenics," Professor H. F. Nachtrieb.

March 5—"Plants and the Cost of Living," Professor F. E. Clements.

March 12—"Sickness in Plants—Causes and Remedies," Professor E. M. Freeman.

March 19—"Modern Warfare against Grasshoppers; and Protective Coloration and Mimicry of Insects," Professor F. L. Washburn.

April 2—"Some Recent Developments in the Study of the Nervous System," Professor J. B. Johnston.

April 9—"The Special Child," Professor J. B. Miner.

April 16—"Recent Progress in the Study and Cure of Cancer," Dr. H. E. Robertson.

April 23—"Modern Surgery," Dr. A. T. Mann.

April 30—"The Two Most Important Epochs in the History of Modern Medicine: the Discovery of Vaccination and the Discovery of the Relation of Microorganisms to Disease and the Application of the Antiseptic Principle to the Practise of Surgery," Dr. Burnside Foster.

May 7—"Living with Head Hunters," Professor Albert E. Jenks.

We learn from the *Geographical Journal* that the attention directed of late years to the antiquarian remains at Tiahuanacu has led the Bolivian Minister of Public Instruction, at the instance of Señor Ballivián, to provide funds for the systematic excavation of the site of the ruins, with a view to saving them from further depredations of a kind to which they have been subject in the past. The work has been carried out under the supervision of the director of the National Museum, Dr. Otto Buchtien, and a report on the results so far gained has been circulated by Señor Ballivián. At a depth of from 3 to 10 feet below the surface a large quantity of pottery was found, of pre-Inca age, many of the objects being in a perfect state of preservation. They at once rivet the attention by the fineness of the material, and in the case of the cups, bowls, etc., by their artistic form as well as by the excellence and freshness of the coloring. The diversity of the ideographs and pictographs represented on them will demand special study by experts. Among the smaller objects, a human figure in silver is interesting as showing the nature of the garments worn in that ancient time. Worked stones have also been found, and skulls showing distinct traces of deformation. One of the latest discoveries had been a skull, belonging apparently to an ancient race, and showing the frontal suture and larger in all its dimensions than skulls of the present day. Further reports are promised as the work progresses.

UNIVERSITY AND EDUCATIONAL NEWS

The Hamburg senate has adopted the proposal to found a university there consisting of three faculties—law, philosophy and colonial science. These are to be supported by the interest on $6,250,000, which has been appropriated for the purpose by the city.

The program for the exercises at the dedication of Lincoln Hall, University of Illinois, to be held on February 12, includes addresses by Mr. Hugh Black, Governor Deneen and Bishop McDowell of Chicago. Lincoln Hall was made possible by an appropriation of $250,000 by the legislature in 1909, the one hundredth anniversary of Lincoln's birth and it was decided to give the building its present name and dedicate it to the study of humanities.

DR. BURT L. HARTWELL, professor of agricultural chemistry in the Rhode Island State College, has been appointed director of the station to succeed Dr. Homer H. Wheeler, who recently resigned.

MR. E. G. ARZBERGER, H. R. Watts, J. B. Demaree, L. E. Melchers and J. T. Rogers, assistant botanists in the botanical department of the Ohio Agricultural Experiment Station, have resigned from their positions.

DR. J. W. NICHOLSON, M.A., Trinity College, Cambridge, has been appointed professor of mathematics in London University, being attached to King's College.

DR. W. H. PERKIN, F.R.S., professor of chemistry at Manchester University, has been elected Waynflete professor of chemistry at Oxford. A grant of £15,000 towards the erection of the new chemical laboratory, as well as a further loan, has been promised by the trustees of the chancellor's endowment fund.

DISCUSSION AND CORRESPONDENCE

A NEW WEED EXTERMINATOR

WILD garlic (*Allium vineale*) has become a serious farm pest, especially in the belt of territory extending from Maryland to Missouri. Beside having the usual competitive action as a weed in cultivated fields, the presence of bulblets in wheat lowers the market value, as the bulblets are about the size and color of the grains, and difficult to separate. The weed also gives an unpleasant taint to the milk and flesh of animals feeding on the leaves, and to flour made from wheat containing the bulblets.

Owing to the remarkable tenacity of life possessed by the bulbs and bulblets no practical method to rid the soil of the pest has heretofore been found, and in some localities fields have been abandoned and given over to the weed.

Nearly two years ago an investigation of the wild garlic was taken up as a special problem by the Botanical Department of the Indiana Experiment Station. The field tests were carried on in cooperation with Dr. H. E. Horton, agronomist of the American Steel & Wire Co., and Mr. Jacob Cronbach, of Mount Vernon, Ind. After various chemical sprays and cultural methods had been tried to little purpose, Mr. F. J. Pipal, assistant botanist in the Indiana Station and in direct charge of the work, suggested the use of orchard heating oil, as supplied by the Standard Oil Co., applied as a spray.

Remarkable results were obtained from the beginning of the tests. It was found that when the oil was distributed over the field in a fine spray by a sufficiently powerful spraying machine, that all growing vegetation was killed, not only above ground but below ground as well, except the long horizontal rootstocks of such plants as *Tecoma radicans* and *Solanum carolinense,* and the extra large roots of such plants as *Ipomœa pandurata,* the latter requiring a correspondingly larger amount of oil. It destroyed the bulbs of the wild garlic, however deep below the surface, and the bulblets at the tops of the stalks as well. The oil appeared to produce no lasting effects upon the soil, and new growth from seeds already in the soil and from subsequently sowed cereals possessed the usual vigor. The best times and methods for the application are now being tested.

The introduction of this new material for killing weeds is accompanied by a new method of application. Heretofore chemical sprays have been differential, and intended to kill only the weeds while leaving the crops essentially unharmed. Orchard heating oil acts as a complete spray, killing all vegetation, like plowing or fire, only more effectively than these, as it follows the stems and roots well into the ground.

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GREEK REFINEMENTS IN ARCHITECTURE

THE existence of subtleties of line and spacing in Greek architecture is now well known. A very interesting point is how much of the classic practise was lost in the Dark Ages and how much preserved. The following extract from "Evelyn's Diary" seems to bear upon the point. It shows, at least, that