qualities of lightness and rigidity recommend it. Aluminum is the most abundant of all the metals. It is an essential constituent of all important rocks except sandstones and limestones. It is found chiefly in the silicates such as the feldspars, micas, clays, etc.; and as the hydroxide in the mineral bauxite, from which it is now produced on a commercial scale. Its oxide makes up between 15 and 16 per cent. of the earth's crust. In spite of this great abundance the metal itself was, up to 1880, a chemical curiosity, and one of the early reports of the United States Geological Survey quotes it at $1.25 a Troy ounce—$15 a pound. The reason for its rarity and high price was the lack of a commercial method of extracting it easily and cheaply from its chemical combination with oxygen, for which it has a remarkable affinity. With the introduction of electrolytic processes the metal has now taken a high place among the commercial metals, and from a production of 83 pounds in 1883 its consumption amounted in 1909 to the enormous total of 34,210,000 pounds, valued at approximately 23 cents a pound for ingot metal.

UNIVERSITY AND EDUCATIONAL NEWS

HARVARD UNIVERSITY has received the hundred thousand dollars required for the Wolcott Gibbs Memorial Laboratory which is to form the first building of the new chemical laboratories to be erected south of the university museum. It is understood that half of the sum was given by Dr. Morris Loeb and Mr. James Loeb. It is estimated that about $65,000 will be needed for the construction of the building. The rest of the $100,000 will be used for maintenance.

AT a stated meeting of the trustees of Princeton University on April 13, gifts amounting to more than $90,000 were announced.

DR. DANIEL K. PEARSONS, the Chicago philanthropist, whose benefactions to the various colleges and benevolent institutions have exceeded $6,000,000, celebrated his ninety-first birthday on April 14 and marked the occasion by distributing $300,000, including $100,000 to Berea College, $25,000 to Deane College and $10,000 to McKendree College.

THE North Carolina legislature at its last meeting appropriated to the University of North Carolina $200,000 for equipment and increased the appropriation for maintenance to $87,000 a year. The trustees have decided to erect first a medical laboratory costing $50,000.

As has been announced in SCIENCE a bill proposing one board of control for the three educational institutions of Kansas was vetoed recently by Governor Stubbs. He had proposed to the legislature a commission form of government for the institutions, five members to take the place of the eighteen now acting as regents, but a bill was passed providing for a board of three, each to receive $2,500 a year, to give their whole time to the management of the State University at Lawrence, the State Normal School at Emporia and the State Agricultural College at Manhattan. As these institutions have within their walls approximately seven thousand students, Governor Stubbs believed that one man competent to plan the educational and business program for each of them would be worth much more than $2,500. This opinion was confirmed when he attempted to fill the positions and found out that the present incumbents, serving for no salaries, would not agree to continue their services. The leading educators of the country telegraphed to Governor Stubbs, in response to inquiries, that the one-board principle was advisable, but the methods about to be pursued by Kansas in adopting that system were faulty, particularly in the number of members proposed and the remuneration offered. The strongest opinions against the measure came from states where a similar plan is being tried or has in the past been tried. Governor Stubbs did not care to take upon himself, he said, the responsibility for disorganizing the educational system of the state and therefore he vetoed the bill.

GOVERNOR LEE CRUCE, of Oklahoma, has appointed a board of education consisting of six men, to take charge of all of the state educational and charitable institutions. This board

was ordered by the recent legislature, and succeeds the boards of regents of the university, the normal schools, the deaf and dumb school, the blind school, the girls' industrial school, the university preparatory schools, the various charitable institutions, etc.; and also succeeds the former text book commission. Governor Cruce, in his address to the members of this board, said in part: "I regard this board as the most important public body which has ever been, or ever will be constituted in this state. This is a radical departure from established methods, and it is impossible for me to overstate the interest and anxiety I feel for the successful outcome of your labors. I want to say, with all the emphasis that I can command, that politics absolutely be eliminated from educational matters in Oklahoma—as thoroughly as church and state are now divorced. Members of this board may be removed for cause, and I should regard it as good and ample cause for removal if any member should permit political or personal motives to influence him in the employment or discharge of persons connected with the state schools, or in any other matters coming within the jurisdiction of this board."

AT its recent session the legislature of Kansas appropriated approximately one million dollars for the State Agricultural College at Manhattan for the next biennium. The funds provide for one wing of an agricultural building, with a detached laboratory for the cutting and curing of meats. The first wing of the new building is to cost $125,000. Two more wings are to be added as the money is appropriated, each complete in itself. The legislature also provided a special fund of $22,000 to complete the armory and gymnasium, which included literary society halls, swimming pools, and complete equipment for the whole; money for experiments in the western part of the state in cooperation with the federal government; for soil surveys, also in cooperation with the United States government, $5,000 a year; for experiments in producing improved wheat, corn and other crops, $7,500 a year. The college has this year approximately 2,500 students, more, it is said, than are enrolled in any similar institution in the world. The cost per student in this institution in 1910 was $107. Kansas, with a population of less than 1¾ millions, had, in 1910, more students in colleges than had Missouri, with more than 4 million population. Illinois, in its agricultural college and university combined, had 4,638 students in 1910. Kansas, with its agricultural college and university separate, had 4,608 students, thirty fewer than Illinois, which has 6 million population.

MR. ANDREW CARNEGIE has given $25,000 to the faculty of medical sciences of London for the section of a building to be devoted to pharmacology.

AS has been noted here M. Loutreuil bequeathed $500,000 to the University of Paris. The bequest is on condition that the provincial universities also shall benefit by the revenue which is to be devoted to the encouragement of scientific studies, the equipment of laboratories, the formation of a library and the foundation of additional lectureships on scientific subjects.

DR. LAJOS SCHLESINGER, of the University of Budapesth, has been called to the chair of mathematics in Giessen as successor of Dr. Moritz Pasch.

AT Princeton University Dr. H. N. Russell has been promoted to be professor of astronomy.

DISCUSSION AND CORRESPONDENCE

THE MEANING OF VITALISM

PROFESSOR RITTER'S interesting address as vice-president of Section F of the American Association[1] makes manifest once more a difficulty which confronts every one who would discuss the question of vitalism: namely, the lack of either clear or generally accepted definitions of the terms ("vitalism" and "mechanism") used to designate the opposing doctrines under discussion. Professor Ritter himself is so sensible of this difficulty that he frankly gives up attempting any complete conformity to "lexicographical authority and historical usage," and simply puts forward

[1] SCIENCE, Vol. XXXIII., No. 847, March 17, 1911, pp. 437–441.