Survey having increased in production, against 21 which showed a decrease. Thus, anthracite coal increased to the value of nearly $15,000,000; lead and zinc each increased more than $3,500,000; silver increased $1,750,000; petroleum more than $6,000,000; natural gas nearly $3,500,000, and sulphuric acid nearly $3,000,000. The products showing the greatest decreases were pig iron, more than $84,000,000; bituminous coal, about $18,000,000; clay products, nearly $8,000,000, and cement, $2,000,000, although the amount of cement produced was 1,750,000 barrels in excess of that produced in 1910.

An interesting fact in connection with the production of coal in the United States, according to the U. S. Geological Survey, is that in each successive decade the output is practically doubled. If the production of bituminous coal alone were considered, the record for the last fifty years would show an increase somewhat in excess of this ratio. The increase in the production of anthracite has been much less rapid on account of the limited area of the fields, the conditions under which the industry is carried on, and the restriction of the prepared sizes to domestic consumption. It has been estimated that the output of anthracite will reach 100,000,000 long tons annually before it begins to decline. The maximum production up to the present time has been 80,771,488 long tons. An increase in the annual production of bituminous coal may be anticipated for some time to come. The statistics of coal production in the past show that up to the close of 1865 the total output had amounted to 284,890,055 short tons. In the decade from 1866 to 1875, inclusive, the production amounted to 419,425,104 tons, making the total production up to the close of 1875, 704,315,159 tons. In the following decade, from 1876 to 1885, inclusive, the output amounted to 847,760,319 tons, somewhat more than double the total production during the preceding decade. At the close of 1885 the total production amounted to 1,552,075,478 tons, and the production during the ten years ended in 1895 was 1,586,098,641 tons, the total production at the close of 1895 amounting to 3,138,174,119 short tons. In the decade ended December 31, 1905, the total production amounted to 2,832,402,746 short tons, and the grand total from the beginning of recorded coal mining in the United States amounted to 5,970,576,865 short tons. The average annual production from 1896 to 1905 was 283,240,275 short tons; the average production from 1906 to 1911, inclusive, was 461,499,260 short tons, showing an increase of 178,258,985 short tons, or 63 per cent.

UNIVERSITY AND EDUCATIONAL NEWS

Mr. Peter Makoushin has founded at Tomsk, Siberia, an institution on a large scale, to be called the House of Science, intended to provide instruction of all kinds, including university courses.

By the will of Mr. Thomas Bartlett, Liverpool University receives £20,000 for scholarships for engineering students.

The South African Union has awarded five government scholarships in agriculture for study abroad. The holders of these scholarships will receive $750 per year during the three or four years for which provision is made. The successful applicants were obliged to pledge themselves to enter the service of the South African Union after completing their studies, and to remain in the service for at least three years at a salary not less than $1,500 per annum. Only sons of parents permanently domiciled in South Africa were eligible for the scholarships.

Plans for the new Gilman Hall of the Johns Hopkins University have been accepted by the trustees. The actual work of building will begin in the spring. Gilman Hall will be the largest building to be erected in the group at Homewood, the new site of the university. It will contain the library, seminary rooms for history, economics, philosophy and the languages.

Northwestern University has signed contracts for the erection of nine of the new dormitories which are to form a part of the

residence quadrangle system in the proposed development of the campus, and the foundations of the buildings are now being laid. Five of these houses will be owned by fraternities, and will be gifts of the alumni to the university for the use of their respective chapters. The nine buildings will accommodate nearly three hundred men, and will be open to students in the Evanston schools and also to those in the professional schools in Chicago. Buildings to be completed within the next two years will cost about $350,000. Alumni have agreed to give about $222,000 of this sum for the construction of houses for their fraternities.

THE new household arts and science building at the College of Industrial Arts, Denton, Texas, which is now in the course of erection at an expenditure of over $75,000, will be completed in the early spring. This building will be devoted exclusively to applied science and art as they relate to the home. Provision has been made for laboratories of food chemistry, textile chemistry and experimental dietetics. Also rooms are provided for mechanical drawing and home architecture, including china painting, clay modeling, pottery and other phases of ceramics. An auditorium with a seating capacity of about 1,100 is also included. The formal opening in April will also be designed to celebrate the tenth anniversary of the college, and several noted scientific men will be invited to be present and make addresses.

THE Faculty of Arts and Sciences of Harvard University has established a degree with distinction in natural history. The work of candidates for this degree will be supervised by a committee consisting of the chairmen of the divisions of geology and biology. The requirements for this degree are eight courses in the sciences, at least six of which must be in the divisions of geology and biology. Of the courses so designated, not less than three must be in the middle or higher groups; and not less than one must be taken in each of the divisions of geology and biology.

IN the department of geology at the University of Chicago, Albert Dudley Brokaw has been made an instructor in mineralogy and economic geology.

MR. WILHELM MILLER has been appointed assistant professor of landscape horticulture at the University of Illinois. The name of the appointee was incorrectly given in a recent issue of SCIENCE.

IN the University of Manitoba, Winnipeg, Canada, the following promotions have been made: R. C. Wallace, Ph.D., D.Sc., to be professor of geology and mineralogy; R. K. McClung, D.Sc., to be assistant professor of physics; L. A. H. Warren, M.A., to be assistant professor of mathematics. The following new appointments have been made: R. W. Moffat, B.A.Sc., of the faculty of applied science of Toronto University, to be lecturer in masonry construction and drawing; E. E. Bankson, B.S., the University of Pittsburgh, to be lecturer in materials and hydraulics.

DISCUSSION AND CORRESPONDENCE

PROFESSOR DE GROOT ON AMERICAN SINOLOGY

EUROPEAN scholars justly reproach us for our lack of interest in and knowledge of the far east. We admit that our position in this regard is not what it should be, but we claim to have made a beginning, and that, too, on sound lines, and we feel that we should have the credit for this. At any rate, we are not prepared for the insolent criticism recently passed upon us by Professor J. J. M. de Groot, lately of Leiden, now professor of Chinese in the University of Berlin. Professor de Groot is a self-styled sinologue. We are quite content that that type of sinology is not represented in this country, and we trust never will be. The present state of mental stagnation and petrifaction in sinology, justly ridiculed by the world at large, owes much to such pseudo-scholars of the oil lamp who must be regarded as relics of a past age. Professor de Groot no doubt can read a Chinese sentence; but that would seem about all. He certainly