remarkable specimens in the collection are the wooden portrait statues of past rulers, which throw a new light on savage art in Africa. Next in importance are a splendid carved throne of the paramount chiefs, wooden caskets and cups, and specimens of remarkable textiles resembling velvet, made from the fiber of the upper skin of the palm leaf (*raphia*). This collection was made before the almost complete disappearance of native art work due to the importation of cheap European productions.

COURSES in wood technology and the mechanical engineering of wood manufacturing plants are to be added to the curriculum of the University of Wisconsin for the coming year, the college of engineering cooperating with the new U. S. forest products laboratory in the instruction. The courses are to be primarily of a technical nature, arranged especially to meet the needs of students in the mechanical and chemical engineering courses who wish to prepare themselves for positions in the wood manufacturing industries. Three phases of the forest utilization problem are to be dealt with in these courses, including a study of the physical and chemical properties of wood, of the utilization of such wood products as are now wasted and the preservation of timber, and of engineering operations of manufacturing and preservative processes. Four courses in wood technology, including work in wood distillation, wood preservation, the chemical constituents of wood, and the physical properties of wood, are to be given by various members of the staff of twenty government experts at the laboratory. In addition there are to be lectures and demonstrations of the different operations in logging and wood manufacturing machinery, at the college of engineering, by Professor Robert McArdle Keown, of the department of machine design. In the course on the properties of wood, which will be given the first semester, the elementary structure of wood of various species will be studied, and the relation of its physical properties and its uses in the arts and industries. Lectures and demonstrations will also be given regarding methods of testing and conditioning wood. The course in constituents and fibers of wood, to be given the same semester, will deal with the chemical construction, lignoceric materials and fibers with their bearing on industrial and art uses of wood. The utilization of the waste in the lumber industry will be the special aim of the study of the principles, processes and products of hardwood and softwood distillation in the course in wood distillation to be given the second semester. The work in wood preservation will cover the structure and properties of different kinds of timber as regards their resistance to destructive agencies and conditions of deterioration. Both surface applications and antiseptic impregnation will be tested in the study of preservative processes, when the theory and effect of pressure in these treatments will also be considered.

UNIVERSITY AND EDUCATIONAL NEWS

HORACE RUSSELL, '65, president of the Dartmouth Alumni Association, has made a conditional gift of $10,000 to Dartmouth College toward an endowment fund to be used for the early increase of salaries of full professors, provided that additional sums can be raised to make the amount $100,000.

AT the commencement exercises of the University of Pittsburgh, on June 15, a School of Engineering was dedicated, the principal address being made by E. K. Morse, president of the Engineers Society of Western Pennsylvania. At the same time the cornerstone of the building for the School of Medicine was laid, an address being given by Dr. James Ewing, of the Cornell Medical School.

AT Stanford University Dr. Albert C. Crawford, of the Bureau of Animal Industry, has been appointed professor of pharmacology, and Dr. Hans Zinsser, of Columbia University, has been appointed associate professor in charge of bacteriology.

AT the University of Illinois Mr. Frank C. Becht, of the University of Chicago, has been appointed acting head of the department of physiology in place of Dr. J. H. McClellan, who resigns to complete his medical studies.

DR. WALTER M. MITCHELL, of Philadelphia, has been appointed assistant professor of astronomy in the University of Michigan.

PROFESSOR L. S. GRISWOLD has resigned the chair of geology at the Missouri School of Mines, to give his entire time to consulting work. Professor Guy Henry Cox, formerly assistant professor of mineralogy and petrography, has been placed in charge of the department of geology and mineralogy. Mr. J. W. Eggleston has been appointed assistant professor of geology and mineralogy. He is a graduate of Amherst and of Harvard and has taught geology and mineralogy in the Colorado School of Mines and Harvard University.

THE following changes occur this year in the biological department of the North Carolina College of Agricultural and Mechanical Arts and Experiment Station. Mr. P. L. Gainey, assistant soil bacteriologist, resigns to accept a fellowship in the Shaw School of Botany. Mr. B. B. Higgins, assistant botanist, resigns to accept the position as assistant in Cornell University. Mr. T. B. Stansel is appointed as assistant in soil bacteriology (experiment station). Mr. Warren C. Norton is appointed as assistant in botany (college).

DR. LAWRENCE I. HEWES has been appointed assistant professor of mathematics at Whitman College.

MAURICE L. DOLT, instructor in industrial chemistry at Lehigh University, has been appointed assistant professor at the University of North Dakota.

MR. J. W. MAVOR, A.M. (Harvard), has been appointed instructor of zoology at Syracuse University.

DR. L. ASCHOFF, professor of pathology at Freiburg, has been called to Würzburg.

DISCUSSION AND CORRESPONDENCE

WATER VAPOR ON MARS

TO THE EDITOR OF SCIENCE: I venture to hope that you will regard the following communications as of interest to your readers.

C. G. ABBOT

ASTROPHYSICAL OBSERVATORY,
SMITHSONIAN INSTITUTION

LOWELL OBSERVATORY
SUPPLEMENT TO BULLETIN NO. 43

Quotation from C. G. Abbot, "A Shelter for Observers on Mount Whitney," Smithsonian Miscellaneous Collections, Quarterly Issue, Vol. 5, Part 4 (p. 506): "The observations of Director Campbell on the spectrum of Mars were entirely conclusive in showing that water vapor, if present at all in the atmosphere of Mars, is in less quantity than is contained in the extremely rare and dry part of the earth's atmosphere which is above Mount Whitney. In fact, no evidence at all of water-vapor on Mars was detected by Campbell."

. . . . . .

"Unfortunately, both Director Campbell and myself were on Mount Whitney during unusually unfavorable weather, for the whole southwest, including northern Mexico, was just at that time visited by floods of rain and cloudy weather. Such a condition would not probably be met with at that season one year in ten."

This admission speaks for itself. The excessive moisture must have pervaded the air generally to the masking of moisture on Mars. Even ordinarily summer is the most unfavorable time for getting any results, because the earth's moisture is then at a maximum.

SMITHSONIAN INSTITUTION
WASHINGTON, D. C.,
March 24, 1910.

Dear Sir: I have read Lowell Observatory Supplement to Bulletin No. 43. The supplement is unsigned and I do not know but it may have escaped your endorsement. I wish its author might have added in fairness the following facts given in Lick Observatory Bulletin No. 169, viz., Professor Campbell made spectrograms No. 1 and No. 2 on September 1, between $10^h\,30^m$ and 15^h Pac. St. time. Of spectrogram No. 1 he says, "Little *a* shows plainly but very faintly in the Martian and both lunar spectra; less intensely than on No. 3 and more strongly than on No. 2; essentially equal in *Mars* and moon, and certainly not perceptibly stronger in *Mars* than in the moon." Of spectrogram No. 2, he says, "In the Martian spectrum *a* is difficult to see; if we were examining this Martian spectrum as an unknown spectrum, *we should almost certainly pass over the a band without suspecting its existence.*" Professor McAdie's sling psychometer was read on Mt. Whitney at $9^h\,00^m$, $11^h\,30^m$, $12^h\,30^m$ and