and nature of tests are defined. The circular concludes with general instructions to applicants for tests and gives the schedule of fees for reference standards, working standards, commercial standards, metal tapes, contact standards, precision screws and calipers, areas and area measuring instruments and thermal expansion of materials. For educational and scientific institutions and societies a discount of 50 per cent. will be allowed on all tests under the schedules stated.

UNIVERSITY AND EDUCATIONAL NEWS

Sir Julius Wernher bequeathed £250,000 to the treasurer of the Union of South Africa for the purpose of assisting in building, and, if sufficient, partly endowing, a university at Groote Schuur, near Cape Town, and £100,000 to the Imperial College of Science and Technology, South Kensington, together with two-twelfth parts of his residuary estate, but not exceeding £50,000.

Professor Newton H. Winchell, of Minneapolis, for many years state geologist of the Minnesota Geological and Natural History Survey, has presented his geological library to the University of Minnesota. This library is probably one of the best private collections of geological literature in this country and was built up through the years when Professor Winchell, as editor of the *American Geologist*, had unusual opportunities for obtaining the earlier serial and regional reports of this and foreign countries. Many of its volumes are priceless. The library is now being installed in the department of geology at the University of Minnesota and will be known as the "Winchell Library of Geology," to which hereafter donations and exchanges should be addressed.

Dr. Eugene L. Opie, professor of pathology in Washington University, has been appointed dean of the medical school to succeed Dr. George Dock, relieved of this duty at his own request.

Samuel N. Spring, forester of Connecticut and lecturer in the Yale Forest School, has been appointed professor of forestry in the New York State College of Agriculture, Cornell University.

Dr. J. W. Jenks, professor of political economy at Cornell University since 1891, will become professor of government and public administration and director of political studies in the School of Commerce, Accounts and Finance of New York University.

Dean Walter R. Crane, of the School of Mines, Pennsylvania State College, has been granted a year's leave of absence and left June 13 to spend the coming year in the study of the coal fields of Alaska and the northwest. Dr. Elwood S. Moore, professor of geology, will be acting dean during Dr. Crane's absence. Assistant Professor Thomas C. Brown, department of geology, has resigned to accept a similar position at Bryn Mawr College. Mr. H. N. Eaton, instructor in geology and petrography, University of Pittsburgh, has been appointed to succeed him. Associate Professor of Mining William M. Weigel has resigned to accept the position of general superintendent of the North American Smelting Company, Ltd., Kingston, Ontario, Canada. Hugh D. Pallister, instructor in metallurgy, has been appointed to succeed Professor Weigel with the title of assistant professor of mining. Harry B. Northrup and William A. Royce have been promoted from assistants to instructors in mining. Carroll A. Garner has been appointed instructor in mining.

The following appointments have been made for the coming year in the North Carolina College of Agriculture and Mechanic Arts: instructor in chemistry, J. W. Nowell, A.B. (Wake Forest), Ph.D. (Hopkins), and F. B. Sherwood, B.S. (North Carolina College).

At the Indiana University the following promotions from assistant professorships to associate professorships have been made: Robert D. Carmichael, in mathematics; Melvin E. Haggerty, in psychology; Clarence E. May and Frank C. Mathers, in chemistry; Fernandus Payne, in zoology.

Dr. Daniel Starch has been promoted to the rank of assistant professor of psychology at the University of Wisconsin.

DR. JOHN SATTERLY has been appointed lecturer in physics at the University of Toronto.

MISS CARRIE M. DERICK, who has been acting-head of the department of botany at McGill University, Montreal, for two years, has been appointed professor of morphological botany. She is the first woman who has been made a full professor in a Canadian university.

DISCUSSION AND CORRESPONDENCE

OBLIQUE ORIENTATION OF MAPS AND HALF-TONES

IT is a well-nigh universal custom of cartographers, in constructing maps on the orthogonal, conic, or any other projection with converging meridians, to draw the central meridian straight in each case and place it parallel to the lateral edges of the paper, except when dealing with small areas considerably elongated in a direction oblique to the meridians, such as Manhattan Island or some portions of the coast. In recent years, however, there have appeared in scientific literature quite a number of sketch-maps of the eastern United States with the central meridian inclined several degrees to the perpendicular, without any apology or explanation. One of the latest examples is the map of the chestnut-bark disease on page 420 of SCIENCE for March 15, 1912.

Evidently the persons who have submitted such maps for publication simply took base-maps of the whole United States and cut them parallel to the edges without taking the trouble to orient them in accordance with the cartographic principle above mentioned, and the result is rather offensive to the eye of the geographer. In the case mentioned less than half the original base-map was used, with the result that even the western edge of the published map is inclined a little to the left, and the central meridian is about 10° out of plumb. (There is a correctly oriented map on page 406 of the same issue of SCIENCE.)

Of course if the meridians were shown on such maps their curvature (in some of the projections commonly employed) would still reveal the fact that part of the original had been cut away, even if the central meridian of the part used were placed as nearly upright as possible; but on the maps in question the meridians are not shown, and there are no north-and-south lines long enough to have any perceptible curvature. Neither is there any horizontal lettering that had to be kept in the same position when the map was trimmed; and even if there was a legend in one corner it would be a simple matter to cut it out and place it in a new position.

A somewhat similar disregard for appearances is often exhibited by persons who use half-tone illustrations. It goes without saying that a rectangular photograph should have its horizon (if any) and all its vertical lines parallel to its edges, unless there is some special reason for treating it otherwise; but photographs several degrees out of plumb are very often published in text-books, scientific reports and magazines, even in some magazines which seem to take pride in the quality of their illustrations.

The principal cause of this rather annoying condition is probably in many cases too much division of responsibility. A traveler who makes photographs, especially if he is working for some institution which pays his expenses and furnishes the photographic material, often has them developed and printed without his personal supervision, by some human "machine" who treats all the views alike, no matter if some of them are a little out of plumb, as is almost certain to be the case, especially with snap-shots. When the time comes to supply illustrations for a manuscript the average author perhaps looks over his negatives, or a list of them, and gives orders for prints of certain ones, without noticing that some might be improved by judicious trimming, either to make the horizon level or to cut out superfluous portions. Then the editor, even if he notices that some of the prints need trimming, may be too busy to attend to it, or more likely not equipped with suitable apparatus, so he passes them on to the engraver, who naturally reproduces each picture just as it is, in the absence of instructions to the contrary.