ican 'ice storm.' 'The Meteorological Optics of Professor J. M. Pernter' is a review of Pernter's standard work, recently published, by Professor R. W. Wood. 'The Meteorological Conditions Associated with the Cottage City Waterspout' (August, 1896), by Professor F. H. Bigelow. A full review and discussion of the weather conditions leads to the conclusion that a sheet of cold air, in front of an approaching anticyclone, overran the lower, warmer air, the cold air following at the surface a few hours later. This gave 'the exact conditions required to produce the observed powerful convection.' 'Variation in Temperature over a Limited Area,' by Professor W. I. Milham, of Williams College, embodies the results of studies at Williamstown, Mass., supplementary to those previously discussed in the *Monthly Weather Review* (July, 1905) by the same writer. 'Monthly Review of the Progress of Climatology throughout the World.' This is a comparatively recent addition to the regular contents of the *Review;* the notes are prepared by C. F. Talman, and will be found useful by teachers of meteorology and climatology. 'The First Daily Weather Map from China,' by the same writer, notes the publication of this new map on July 1, 1906.

CLIMATE OF FORT GRANT, ARIZONA.

We note the publication of a paper on 'The Climate of Fort Grant, Graham County, Arizona' in the *Journal of the Outdoor Life* for November. The writer is Dr. I. W. Brewer, and special attention is paid to the relations of this climate to disease.

R. DeC. Ward.

EVENING TECHNICAL COURSES AT COLUMBIA UNIVERSITY.

The Board of Extension Teaching of Columbia University announces a series of nine evening technical courses which will be given at the University this winter, beginning December 3, and lasting twenty weeks. The courses are under the immediate direction of Professor Walter Rautenstrauch, of the Faculty of Applied Science, and are to be given by professors and instructors of the university and other persons especially qualified. Moderate fees ($7.50 to $15) are charged and most of the courses are for two evenings a week. The courses are as follows:

Engineering Physics.—As illustrated in the mechanical plants of modern buildings. (1) An elementary study of physics: (2) a practical study of steam and electrical machinery, heating, ventilating, water system, wiring, elevators, etc., included in the plant of Columbia University. For two classes of students: those wishing an introductory study of physics as preparation to advanced study in electricity, steam, etc., another winter; those desiring practical training for positions as superintendents of buildings, engineers, janitors, etc.

Elementary Mathematics.—Those parts of arithmetic, algebra, geometry and trigonometry used in technical work. Practice with engineering hand-books, tables, etc.

Drafting.—A beginner's course; fits for positions as draftsmen; reading of drawings, etc.

Strength of Materials.—A lecture course for those who design or manufacture machinery, or modern structures. With this course should be taken either the first or second of the two following courses in design.

Machine Design.—Advanced drafting, computations, and designing for persons engaged in the design and manufacture of machinery.

Structural Design.—Advanced drafting, computations, and designing for those who do structural work.

Electrical Engineering.—A course especially for those engaged in electrical work of any sort.

Steam Engineering.—A course for those engaged in the manufacture or management of steam machinery of any sort.

Special Engineering Problems.—A study of any special elementary or advanced engineering problems desired by the student: Individual instruction will be arranged for such a period of time as the special problem may demand.

The courses will be given in the buildings of Teachers College, Columbia University, at West 120th Street and Broadway, which affords necessary lecture rooms, laboratories, drafting rooms, etc. A complete catalogue of these courses will be sent on request, by addressing Evening Technical Courses, Extension Teaching, Columbia University. Personal information may be secured on Tuesday

and Thursday evenings, between 7:30 and 9 o'clock from Mr. Benjamin R. Andrews, Room 111, Teachers College.

PROFESSOR OSBORN AND THE SECRETARYSHIP OF THE SMITHSONIAN INSTITUTION.

PROFESSOR HENRY FAIRFIELD OSBORN has declined the secretaryship of the Smithsonian Institution, to which he was elected by the regents on December 4. His letter to Hon. Melville W. Fuller, chancelor of the Smithsonian Institution, dated New York, December 11, contains a full statement of all the reasons which, after reconsideration, finally render Professor Osborn unable to accept the post of secretary. Chief among these reasons is the fact that he is nearing the completion of several monographs and books, the prosecution of which is dependent upon the collections which he has brought together in New York and the staff of trained assistants who are working with him. Among these works especially is the 'History of the Tertiary or Fossil Mammals of North America,' the 'Titanothere Monograph' and the 'Sauropoda Monograph' for the United States Geological Survey, which were begun by the late Professor O. C. Marsh, a monograph on the evolution of the horse in preparation for the American Museum of Natural History series, also a popular volume on the evolution of the horse to be published by Columbia University, in addition to a large number of minor or supplementary papers and researches. The main tenor of Professor Osborn's letter is shown in the following abstract:

I was absolutely taken by surprise and deeply moved by your generous action in voting to elect me to the most honorable post of Secretary of the Smithsonian Institution. It is the greatest honor I have received or expect to receive; yet after several days which I have devoted almost exclusively to reflection on this matter from every standpoint, I find myself unable to accept your invitation.

I desire to explain to you fully why I have reached this conclusion, and I trust I may be able to convince you it is through no lack of the sense of public duty which should inspire every American. I hope I may convince you also that acceptance would involve a change of career just at a time when I am trying to publish the results of thirty years of research. These results would have been partly or entirely in print at this time had it not been that for the past sixteen years I have been interrupted and drawn away by executive and administrative work of the *very* character which would be demanded of your new secretary on a grander scale. The possibility of *continuing and completing these researches and at the same time serving the office as it should be served* is the point on which my attention has been centered during the past few days.

As to *time for research*, my friend Dr. Alexander Graham Bell in the course of two conferences has assured me that the Regents especially desire an investigator as well as an administrator; in other words, that the secretary should continue his scientific researches, whatever they may happen to be, and I have tried to convince myself that even with my peculiar temperament I might be able to withdraw from time to time to pursue and complete these publications. On this point I have chiefly reflected, reviewing my experience here in far less responsible positions. Naturally there is some strong pressure here against my acceptance of the post; but to reach an impartial conclusion I have listened chiefly to those who *desire to see me accept*. In these conferences and among the numerous letters of congratulation which I have received from scientific workers in all parts of the country, I have not found one to hold out the hope or expectation that my scientific researches will continue even as they have in the past. I am myself convinced that even with the assured cooperation of a very able staff, the ideal development of the Smithsonian with all its auxiliary institutions will require nothing less than the entire time, thought, energy, and strength of the secretary for four or five years to come. The quiet days of Joseph Henry and even of Spencer F. Baird in this country have passed. The enormous growth of the country, the telephone, the telegraph, the wireless, the great newspaper, make the seclusion and quiet absolutely essential for research increasingly difficult every day.

Failure in the post or anything short of complete success would disappoint you and would disappoint the public, who naturally cannot appreciate the undisturbed conditions essential to the prosecution of successful intellectual work. Other men may be so constituted as to assume a grand office like the secretaryship, with its splendid possibilities for the future, and not have it