- Feb. 11, MR. CARL HERING, Electrical Engineer, Philadelphia, "Electricity: The Different Forms in which it Manifests Itself."
 " 14, PROF. WHITE, "Hygiene."
 " 18, MR. HERING, "The Electrical Transmission of Energy."
 " 21, MR. WM. F. DURFEE, M. E., United States Mitis Company, New York, "Hero of Alexandria and the Arts and Mechanism of his Times."
 " 25, PROF. L. D'AURIA, U. S. Hydrographer, Philadelphia, "Some Peculiarities of Tidal Rivers, with Especial Reference to the Delaware River."
 " 28, MR. C. O. MAILLOUX, Electrical Engineer, Brooklyn, N. Y., "The Storage of Electrical Energy."
 Mar. 4, MR. BIRKINBINE, "Iron Smelting in the United States."
 " 7, COMMANDER J. R. BARTLETT, Chief of the Hydrographic Bureau, U. S. N., Washington, D. C., "The Physical Geography of the Sea."
 " 11, CAPT. OTHO ERNEST MICHAELIS, U. S. A., Watervliet Arsenal, W. Troy, N. Y., "The Army of Kukuangland."

Franklin Institute

[*Proceedings of the Stated Meeting, held Wednesday, October 20, 1886.*]

HALL OF THE INSTITUTE, October 20, 1886.

Vice-President CHAS. BULLOCK, in the Chair.

Present, 152 members and sixteen visitors.

Additions to membership since the previous meeting, four.

The Secretary reported the following recommendations from the Committee on Science and the Arts, viz.:

The *Elliot Cresson Medal* to MR. HUGO BILGRAM, of Philadelphia, for his "Bevel-Gear Cutter;" and to the PRATT & WHITNEY COMPANY, of Hartford, Conn., for their "System of Interchangeable Gears."

The *John Scott Legacy Premium and Medal* to PHILIP J. GRAU, of Philadelphia, for his "Improvement in Feed-Water Purifiers;" CYPRIEN CHABOT, of Philadelphia, for his "Method of Forming Bevelled Rims on Watch-Cases;" and HUGO BILGRAM, of Philadelphia, for his "Bevel-Gear Cutter."

The above-named recommendations were severally approved, and the Secretary was directed to take the usual measures in the premises.

The Special Committee on Reorganization reported the following resolutions, with a recommendation that they be adopted, viz.:

"*Resolved*, That the chairman be authorized to increase the number of the committee, at his discretion.

"*Resolved*, That the committee be authorized to solicit subscriptions for the purpose of purchasing a site, and for the erection of new buildings suitable for the enlarged work of the INSTITUTE.

"*Resolved*, That when *bona-fide* subscriptions, amounting to \$100,000,

shall have been obtained, the committee shall be authorized to contract for a suitable piece of real estate."

The resolutions were unanimously adopted. The Secretary presented the following :

At a conference of the officers of the United States Signal Office and the Committee on Meteorology of the FRANKLIN INSTITUTE, held Tuesday, October 19th, to consider the feasibility of establishing a State Weather Service, the following was unanimously adopted :

Whereas, The FRANKLIN INSTITUTE ceased the direction and management of meteorological observations in the State of Pennsylvania, because of the establishment of a National Weather Bureau, and

Whereas, It is believed that the time has arrived when the INSTITUTE may largely aid the people of this state and the United States Signal Service in disseminating their forecasts and weather statistics, collect climatic and other data that will be of much importance to our agricultural, manufacturing and commercial interests ; therefore, it is resolved by this meeting, to recommend to the INSTITUTE the passage of the following resolution :

" *Resolved*, That the subject of organizing a State Weather Service be referred to a special committee, to be appointed by the President, with the request to report a plan for the same to the stated meeting in November."

The resolution was adopted.

The Secretary reported the receipt of a communication from Mr. P. B. DELANY, of New York, and at present in Berlin, in reply to the protest of Mr. PAUL LACOUR, of Copenhagen, referred to in the proceedings of the September meeting.

On motion of Professor Houston, a special committee was appointed to inquire into the respective merits of the claims of Messrs. LaCour and Delany, with instructions to report as early as possible. The Chairman appointed Mr. E. Alex. Scott, Prof. E. J. Houston, Mr. W. W. Griscom, Mr. Alex. E. Outerbridge, Jr., and Dr. Wm. H. Wahl, to constitute the committee.

Mr. W. M. SCHLESINGER, of Bradford, Eng., then read a paper on " The Schlesinger System of Electric Transmission," with an account of the trials of the same, on the line of the Ridge Avenue Passenger Railway Company. The paper, with discussion thereon, appears in the November impression of the JOURNAL.

Mr. WM. F. DUFEE, of New York, by special invitation, gave an interesting description of the process of making " mitis " castings of wrought-iron and steel. Mr. Durfee illustrated the subject by means of a diagram of the melting furnace employed, and by the exhibition of a number of characteristic specimens.

The Secretary's Report embraced an account of certain evidences of earthquake action near Haddonfield, N. J. ; a description of the Castner process of producing the metals of the alkalis ; a statement of the comparative production of iron and steel in Great Britain and the United States in the first half of 1886 ; and the exhibition of interesting specimens of composite photography, made by Mr. W. Curtis Taylor, and of isochromatic photography, by Mr. Fred. E. Ives.

The meeting was then adjourned.

WM. H. WAHL, *Secretary*.