least exposure giving a good negative in the dark-room. This factor can certainly be trebled. A plate having any intermediate exposure can be developed either as a good positive in the light, or as a good negative in the dark-room.

It was stated that the best results with plates near the zero condition had been reached with a rather strong bath, with two drops of saturated hypo to the ounce of bath.

Three persons were elected to active membership.

WILLIAM TRELEASE,
Recording Secretary.

SCIENCE CLUB OF THE UNIVERSITY OF WISCONSIN.

THE January meeting of the Club was held on the evening of the 24th inst., President Birge in the chair. Professor J. M. Coulter, of the University of Chicago, delivered his address on 'The Teaching of Science' (substantially as published in this JOURNAL, Vol. XII., p. 281). At the close the president related an incident from his own early experience to show how completely scientific education was misunderstood by the classicists, and he expressed the opinion that the quality of science teaching in the universities is not so poor as Professor Coulter would have us believe. The president extended the very evident thanks of the audience to the speaker for his address.

E. R. MAURER,
Secretary.

DISCUSSION AND CORRESPONDENCE.

THE SIDGWICK MEMORIAL.

TO THE EDITOR OF SCIENCE: I have been asked to act in America for the English committee on a memorial to the late Professor Henry Sidgwick. Other Americans are probably acting also, but of this I do not know. A meeting in the interests of such a memorial was recently held at Cambridge, and an influential committee was appointed. The memorial will probably take the form of an endowed scholarship at Cambridge, though other projects are also before the committee. Seeing the services Sidgwick rendered to education—notably woman's education—and the very large use made of his books in American universities, it is hoped that a considerable sum will be raised in this country. Contributions, to be forwarded through me, may be sent direct to Princeton, New Jersey.

J. MARK BALDWIN.

SHORTER ARTICLES.

RADIO-ACTIVE MINERALS.

IN searching for radio-active substances with one of Professor Rood's new electrometers, an instrument particularly well adapted to the purpose, several minerals not hitherto noted were found to be radio-active. Professor Rood suggested that I should try columbite, and gave me some specimens. The electrometer immediately shows that the air in the neighborhood of the mineral is ionized, and later photographic tests confirm the radio-activity of columbite. A chemical analysis of the specimens has not yet been made, but according to Dana, columbite does not contain uranium or thorium.

Specimens of erbium oxide and niobium oxide, from the museum of the chemical department, also show with the electrometer a slight ionizing effect. Further investigations are being made.

GEO. B. PEGRAM.

PHYSICAL LABORATORY OF COLUMBIA UNIVERSITY, January 26, 1901.

THE MUSICAL BOW IN CALIFORNIA.

IN view of the present discussion in regard to the existence of the musical bow in America, and of its independent development on this continent, the occurrence (quite rare at present, however,) of a form of this instrument among the Maidu Indians of Northern California appears worthy of a brief note.

The bow as used by the Maidu is a simple bow of cedar, some 2½ feet in length, at present strung with wire, but formerly with a fine sinew cord. In playing the instrument it is held in the left hand (the hand grasping the center of the bow, thumb inside and palm facing forward), the bow extending horizontally to the left. The right-hand end of the bow is placed in the open mouth, and the bow string tapped rapidly with a small flexible twig held in the right hand. By varying the size of the resonance chamber (the mouth) with the aid of the tongue, and by opening or closing the mouth to a greater or