Most of us tend to think of the present as having always been with us, and our social intelligence is apt to be limited if not warped in consequence. Effective demonstration through the medium of motion pictures of the relative recency of most of our customs and beliefs should perforce tend to broaden perspective and tolerance among peoples. Finally, the barrier of language-differences could be surmounted in motion pictures (using sub-titles when necessary), thereby also enhancing social intercourse and understanding. In short, it is my contention that motion-talking pictures, intelligently utilized by the museum, could make the museum a great force for social as well as intellectual enlightenment.

The practical question of financing such an undertaking as proposed is probably the most serious obstacle in its path, whether an insurmountable one or not, I do not know.

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ELECTRODES SEALED IN GLASS TUBING

GARRETT, Hogge and Heiks[1] have noticed erratic potentials in the use of platinum electrodes sealed in glass tubing. The source of trouble was located at the glass-metal-solution interface. They did not mention the type of glass used. Some years ago I noticed that platinum electrodes sealed in Pyrex glass gave very poor results in the titration of ferrous sulfate with dichromate, or the reverse.[2] On finding that electrodes made with soft glass behaved satisfactorily, I abandoned the Pyrex and had no further trouble. While erratic behavior in some cells may be attributable to this cause, there is evidence that junctions of soft glass and platinum can at least sometimes be immersed in solutions without erratic results. For example, some lead-iodine cells in which platinum electrodes were sealed in soft glass by means of lead-glass seals and immersed in a paste of lead iodide, iodine and electrolyte were found unusually reproducible.[3] It seems that the immersion of a platinum-glass interface does not invariably lead to erratic results, and further light on the source of trouble and how to avoid it would be welcome.

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SCIENTIFIC BOOKS

PHYSICS

Classical and Modern Physics, A Descriptive Introduction. By HARVEY E. WHITE. 707 pp. New York: D. Van Nostrand and Company. 1940. $3.75.

IT is doubtless a truism that teaching is yet an art and the art of an individual teacher. Be the educational objective ever so clearly defined the good teacher must and will follow his own procedure, irrespective of whether others agree or can follow in his path or not. To anyone who has had recourse to the admirable pictorialization of the atoms and their spectra presented in White's "Introduction to Atomic Spectra" it will be obvious that in his more elementary presentations this author must employ to an even greater extent his very clear and vivid graphical and visual methods. The perfection of the text-book on review is thus the expression of the art of the author in his attempt to solve a teaching problem. The task set is not an easy one. The problem of presenting a stimulating one-semester survey course in physics of collegiate grade interesting alike to students who have or who have not taken high-school physics is no mean task.

The objectives which the author sets himself to accomplish are as follows: "First to start as nearly as possible at the beginning of each subject, second to develop each new concept or phenomenon so that a student with some knowledge of the simplest principles of algebra and plane geometry should have no difficulty in following; and third to adequately illustrate each subject and chapter with diagrams and photographs."

In each of these the author quite successfully accomplishes his mission. The presentation of the classical physics must in the nature of the objectives be brief, but the essentials are all there. The style is terse and crisp. The physics is excellent and the illustrations are adequate. The few equations presented are not too difficult and the numerical examples of solutions of these equations facilitate the student's understanding. At times one feels that unnecessarily many examples of some less important principles are given, (*e.g.*, optical illusions), but in general no example of an important principle capable of ready pictorialization has been omitted. In reading the book one wishes that there were a bit more discussion of the subjects in some of the earlier chapters and particularly that more attempts were made to correlate and connect the various chapters and sections. For in reality the whole of classical physics is bound together by the Newtonian system. The failure to do this gives the reader the impression that physics consists of a confusingly great number of relatively unrelated facts, which in a survey

[1] A. B. Garrett, E. Hogge and R. Heiks, SCIENCE, 92: 18, 1940.

[2] W. C. Vosburgh, *Jour. Am. Chem. Soc.*, 44: 2155, 1922.

[3] W. C. Vosburgh and V. H. Dibeler, *Jour. Am. Chem. Soc.*, 61: 2522–2523, 1939.