

is positively appalling. The difficulty encountered by a student seeking information in any important library to-day lies more in differentiating what he wants from the mass of material at hand than in integrating the results of his search. As a consequence, the sciences of classification and indexing are becoming daily more important, and have already reached a high pitch of development. But existing card catalogues (and none but *card* catalogues deserve to be considered in this connection), even when including a well-arranged subject-index, still leave an immense amount of labor which might be saved to the student if he could but get a bird's-eye view of the contents of the books whose titles he finds so admirably arranged in the index of the well-equipped modern library.

In making use of the magnificent Public Library of Boston I have often felt keenly the discouragement that comes from trying to find certain definite information—in my case usually relating to electrical matters—almost hopelessly concealed by the very wealth of the literature upon the general subject.

I wish, therefore, to lift up my voice—or typewriter—in the warmest support of the plan which was well and clearly set forth by Professor William Townsend Porter, of the Harvard Medical School, in the issue of *SCIENCE* for September 15, 1899. It contemplates a series of abstracts of books and periodicals devoted to physiology. These abstracts are to be printed upon standard cards, and will therefore take on all the well proved advantages of the card-index system—indeed, the abstracts themselves will constitute a complete card-index, as well as a most valuable bibliography, for the subject in hand. In many cases, moreover, the card abstracts will supply directly the information sought, and so will save much time by forestalling the need of going to the books themselves.

But it would be supererogatory for me to here go into a detailed explanation regarding the system itself. What I do wish to emphasize is the fact that the plan proposed is co-extensive in scope with science itself; and that it is proposed to make a beginning with the science of physiology because the generous interest taken

by Professor Porter renders available to the plan a wider view of that subject than of any other, and gives assurance that the abstracts shall be so intelligently edited that the usefulness of the scheme shall have a fair trial.

The plan is laid down in such wise that it can be extended to deal with any other department of scientific knowledge without any change in its general features; and, in my earnest desire to see such a system applied to the literature of electrical science, I am most anxious to see the Physiological Index established. For I am convinced that as soon as a beginning is made which shall familiarize students with the idea, there will be so general an appreciation of the usefulness of the system that its rapid extension to other departments of knowledge will follow as a matter of course.

Science is classified knowledge, and the proposed scheme, as an advance in classification, is a service to science so important that I hope all who are loyal to *SCIENCE* will manifest such an interest in the proposition that the trustees of the Boston Public Library will have no hesitation in undertaking the publication of the Physiological Index.

PHILIP HENRY WYNNE.

SCIENCE AND SCHOLASTICISM.

PROFESSOR BROOKS' comment, in the current number of *SCIENCE*, on the remarks made by me concerning his review of Ward's *Naturalism and Agnosticism*, is most suggestive and stimulating. It amounts to a very positive declaration that 'naturalists' (and by this I understand him to imply scientific men in general) must expel all 'abstractions' from their methods and results. No one who has made an impartial effort to appreciate the course of scientific thought—'so-called,' as Brooks would probably say—can fail to assent heartily to this proposition; for, it signifies that the mechanical theory cannot be regarded as a legitimate inference from the evidence assembled by the sciences. So far as I am able to discover, Ward means no more than this. His objections are taken against theories which, though masquerading in the name of science, cannot be ranked as of its household. To be brief, my own complete accord with everything

that Brooks holds has startled me, even although I cannot altogether appreciate his appeal to writers whose thought is still so comparatively medieval as Sir Thomas Browne and Berkeley. The remarks on determinism, for instance, are particularly apposite. If, in my turn, I might dare to speak for contemporary philosophers, I should say, there is no material for controversy, save under that misconception of the situation which Brooks so well lays bare. The crux of our discussion, it may be noted, seems to center in an equivocal as between the precise meaning attached to the term 'naturalism' by Brooks and Ward respectively.

R. M. WENLEY.

UNIVERSITY OF MICHIGAN.

NOTES ON INORGANIC CHEMISTRY.

At the sixth annual meeting of the German Electro-chemical Society, held at Göttingen in June, a strong address was delivered by Professor Hittorf on the necessity for the erection of special laboratories and creation of new chairs for inorganic chemistry in the German universities. After alluding to the address before the last meeting of the Society by Van t'Hoff on the increasing significance of inorganic chemistry, he showed the overwhelming predominance given to organic chemistry in the universities. There are but three German universities where there is any adequate teaching of inorganic chemistry. At all the rest the full professors of chemistry are almost exclusively devoted to the organic field. If Germany is to keep pace in the practical world with England, America and France, a revival of inorganic chemistry is necessary, and for this men and laboratories are needed.

At the same meeting a new electrical resistance material for high temperature was described by W. C. Heräus. The platinum alloys are not satisfactory owing to their actual low resistance, although their relative resistance is high. The poorest conductor is the 30% iridium platinum alloy, and here the resistance for a meter of wire 0.3 mm. diameter is only 5 ohms. The new resistance material is formed by mixing clay with 10% to 15% of platinum, molding into pencils and heating to about 1250° in a reducing atmosphere. There appears to be

formed a platinum silicon alloy which serves as the conductor. The resistance increases with the temperature up to a certain point, and then at higher temperature decreases, perhaps owing to the formation of more platinum-silicon alloy. The pencils can be used up to a red heat and promise to have a very considerable practical application.

SOME time since a specimen of malachite was described by W. Autenrieth which contained an appreciable quantity of iodine. Exhaustive search, however, failed to find any further similar malachites until recently, when a series of malachites and cuprites from New South Wales proved almost without exception to contain iodine. These are described in the *Chemiker-Zeitung*. The amount of iodine in the malachite is 0.15%, and the iodine is given off merely on heating the mineral to low redness. The amount of iodine in the cuprite is less than one-tenth that in the malachite. These minerals were wholly free from silver and bromine, and chlorine was only occasionally present and then in mere traces.

J. L. H.

CURRENT NOTES ON METEOROLOGY.

WEATHER PERIODICITIES.

THE question of periodicities in the weather has received the attention of many meteorologists and physicists; publications on this subject have been numerous and varied; but as yet no sort of general agreement as to, or acceptance of, results has been reached. In this country Clayton has been studying weather periodicities for some years, and his conclusions, although they have not attracted the notice that they deserve, have been noteworthy. In a recent paper entitled *Investigations on Periodicity in the Weather* (Proc. Amer. Acad. Arts and Sciences, XXXIV., No. 22), Clayton carries his investigations a good step farther in advance. Among his results it is shown that there is a small range in the frequency of thunderstorms in the United States, the plotted curves indicating a maximum a few days preceding the greatest northern declination of the moon. A similar result was obtained by Ekholm and Arrhenius for the thunderstorms of Sweden. Further, when the mean daily departures from