regard the use of the terms "sporangium," "macrospore," "microspore" as unnecessary, seeing that the book deals only with the flowering plant; and why "oosphere" and not "ovum"?

In the second part short chapters explain the Linnæan and natural systems of classification, the distribution of plants, and give general directions for field work.

The physiology is the least satisfactory part of the book. The plan adopted of giving experiment, result and conclusions to be deduced therefrom is eminently good. But many of the experiments are open to serious criticism, as in some cases the apparatus is not practical, in others the deductions are unsatisfactory. For instance, apparatus is figured on p. 126 to show that plants take in oxygen. The apparatus shown would certainly allow leakage of air; the potash would not absorb much carbon dioxide, and in so far as it did, this would partly account for the change in the manometer; further, the seedlings shown in the figure would photosynthesise unless placed in the dark. The three subsequent figures also show apparatus which is not workable. Despite these faults and one or two erroneous statements, the book is so vigorous and well compounded that it may be strongly recommended to school teachers as one which is eminently suitable for beginners in botany.

Intuitive Suggestion. By J. W. Thomas. Pp. x + 160. (London: Longmans, Green and Co., 1901.) Price 3*s.* 6*d.* net.

IT is difficult to know how far Mr. Thomas takes himself seriously. His book is called a "New Theory of the Evolution of Mind," and certainly contains some very novel and curious statements both about the past and about the future of mankind. He has, however, no very clear notion of the difference between saying a thing and proving it, and many of his most remarkable assertions are made without any serious attempt of proof. His main thesis appears to be that the processes of the inorganic and organic worlds alike are the consequences of a series of quasi-hypnotic "suggestions" on the part of a "great first cause." He takes, that is, a few unfamiliar and very imperfectly understood facts of experience and makes them the basis of a theory of experience as a whole. Apparently he has never even asked himself whether there is any evidence to show that a creature without a nervous system would be amenable to "suggestion" at all. The argument from the miraculous narratives of the Bible, on which he lays great stress, is deplorable alike from the standpoint of logic and of piety. From the logician's point of view, the alleged facts are insufficient as a basis for a theory of nature, and from that of the believer they lose all their moral significance by being degraded to the level of mediumistic or hypnotic "phenomena." A. E. T

Jahrbuch der Chemie. Herausgegeben von Richard Meyer. Jahrgang, 1900. Pp. xii + 565. (Brunswick: F. Vieweg und Sohn.) Price 15 mk.

THOUGH somewhat later in the time of its appearance, this valuable publication is happily not much thicker than its precursors, and the volume before us gives in reasonable space an excellent summary of the chief advances in chemistry and applied chemistry recorded in the year 1900. The labour of writing is distributed among authorities of the highest competence, and the result is correspondingly satisfactory. It is true that the information is in a highly condensed form, but the present writer is able to say of the subjects on which he is at all qualified to speak that they are dealt with in summaries which bear the impress of informed writers rather than hack abstractors, and that they will continue to serve well the useful purpose of assisting all those who are engaged in the difficult task of keeping themselves moderately well informed of chemical progress. A. S.

LETTERS TO THE EDITOR.

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Earthquake Observations in Strassburg.

DURING the last twelve months, on more than one occasion I have been asked why it is that at the Kaiserlichen Hauptstation für Erdbebenforschung in Strassburg one type of instrument records earthquakes so very much more frequently than other types of instruments give records, although they are all installed in the same building. An answer to this is apparently to be found in an analysis of the Strassburg registers.

For example, in January 1901, a von Rebeur-Ehlert apparatus, which consists of three horizontal pendulums oriented at 120° to each other, which reflect beams of light on to a photographic recording surface at a distance of about three metres, yielded twelve records, only five of which were noted by a single component horizontal pendulum of the type adopted by the British Association and now in use at very many stations round the world. This latter apparatus was therefore quiescent on seven occasions when we should have expected it to have been in action. On looking at the registers, we first observe that these seven disturbances were all exceedingly small, and two of them were only noted in Strassburg. Considering this latter fact, in conjunction with the facts that they are found in the traces from an instrument with a very high multiplication, subject to so-called "Mikroseismische Unruhe" (air tremors?), and that a blur may be formed in the photographic record by a slight flare in the illuminating apparatus, it seems a bold proceeding to enter such records (January 17 and 26) as being earthquakes. I doubt their seismic character and consider that their entry ought to have been accompanied by some qualification. So much for two out of the missing seven. Two others (January 8 and 30), although not recorded by the British Association type of instrument in Strassburg, were recorded by similar instruments in Britain and at stations in other parts of the world. That they were not recorded in Strassburg, but were recorded all round Strassburg, suggests the idea that the instrument as installed at the Hauptstation has not the desired amount of sensibility, and if this is the case it is not remarkable that this form of instrument as used in Strassburg should fail to record very small earthquakes.

As another illustration let us take the month of August, when the Rebeur-Ehlert pendulums gave twenty-four records, out of which the British Association seismograph is advertised as only having responded to four. A glance at the registers for stations in Britain and other countries shows that this number should be increased to seventeen, leaving a balance of seven, which, if they all are earthquakes, are for the most part peculiar to Strassburg, and as such have in my own mind a doubtful character.

Another point connected with the Strassburg registers relates to the determination of origins. To identify a seismogram obtained at Strassburg on September 17 at 4.30 a.m. as connected with an earthquake which shook a small portion of the north of Scotland at about 1.25 a.m. on that morning is asking us to believe more than our reason can accept. Even had the Hauptstation been situated in the south of Scotland itself, it is very doubtful whether its horizontal pendulums would have responded to a local shock originated in the northern part of the same country. JOHN MILNE.

March 3.

Proofs of Euclid I. 5.

SEVERAL writers have lately expressed their opinions in favour of replacing the present proof of this proposition by an alternative proof based on the supposition that the bisector of the vertical angle of the isosceles triangle is drawn, irrespective of the fact that no construction has been given for drawing this bisector. Now there may be some advantage in using a "hypothetical construction" to prove a proposition, where its avoidance necessitates a long and tedious alternative proof. In the present instance the artifice is absolutely unnecessary, as the proof can be simplified in any of the following ways, A being the vertical angle of the isosceles triangle ABC:—