

A chapter on the motion of two spheres indicates the attention given to this problem of late years, and may also serve as a warning of its hopelessness. The anticipations of its yielding an explanation of magnetic phenomena, to which the first experiments by Bjerknes gave rise, have been dissipated by the exhaustive mathematical treatment it has received.

The excellence of this work leads us to look forward with great interest to the publication of the second volume, which will deal with fresher and more suggestive portions of the subject; and the two volumes together will prove of very great use to every student. The words on the title-page, "with numerous examples," strike us as below the dignity of a subject like hydrodynamics. The book will certainly be appreciated for its own merits even more than for its examination usefulness, to which aim too many books conform.

OUR BOOK SHELF.

Sierra Leone; or, the White Man's Grave. By G. A. Lethbridge Banbury. (London: Swan Sonnenschein, Lowrey, and Co., 1888.)

THE author of this book explains that he does not offer it as "one of travel over unknown ground" or "as one of dangerous adventures and hardships." His aim simply is to bring before his readers a description of an Englishman's life in "the most interesting but deadly colony of Sierra Leone." He has done his work well, and the book will be cordially welcomed by all who have any special reason for wishing to obtain clear and accurate information about this part of the West African coast. The volume consists chiefly of letters written while Mr. Banbury was at Sierra Leone, and has therefore a freshness and vividness which it would have been hard for him to match in a more elaborate and formal work. The most valuable chapters are those in which he sets forth the impressions produced upon him by the natives, in whose ideas and customs, as here depicted, there is an odd mixture of Christianity and the lowest forms of paganism. Mr. Banbury has a strong belief in the power of education to improve the character of the native population, and he urges that more strenuous efforts should be made for the establishment of proper schools. It is tolerably certain that if permanent good cannot be done to the colony by this means there is no other way in which real progress can be secured, for, as Mr. Banbury points out, the unhealthiness of the climate prevents any large increase of the number of European settlers.

Nature's Fairy-Land: Rambles by Woodland, Meadow, Stream, and Shore. By H. W. S. Worsley-Benison. (London: Elliot Stock, 1888.)

THIS book consists of a series of papers selected from a considerable number which have appeared in various periodicals. The author has a clear, pleasant style, and his vivid descriptions and explanations are well adapted to awaken in the minds of young readers a genuine interest in various aspects of scientific truth. The volume opens with an attractive paper on "The Journeyings of the Rain Drops," and this is followed by papers entitled "From Root to Flower," "Out Among the Gorse," and "Companions of the Corn." These three papers serve as an introduction to other chapters on plant-life. There are also interesting essays on such subjects as shells and shell-builders, spiders, and the nests of fishes.

Lessons in Elementary Mechanics. By W. H. Grieve, P.S.A. (London: Longmans, Green and Co., 1888.)

THE second stage of mechanics is alone dealt with here, and throughout, the author has rendered the various forces

which produce motion, together with the laws which regulate those forces, in a clear and simple style; the illustrations are numerous, and are specially adapted to an elementary course. The work is suited to the requirements of the second stage of the revised code, and the arrangement of the chapters is the same as that in the Syllabus of Instruction adopted by the London School Board. The examples at the end of each chapter are instructive and well chosen, and the book concludes with a series of examination papers and results to the numerical questions.

LETTERS TO THE EDITOR.

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Photography of Lightning.

So much interest is being taken at the present time in obtaining photographs of lightning flashes, that perhaps some one would be willing to take the necessary trouble, and use a moving camera. A camera revolving or vibrating at any ordinary pace would probably give each single flash unaltered, but it might analyse multiple and complex flashes into their constituents.

The eye is so easily deceived as to what is really happening in these sudden effects that very erroneous views may easily be formed, and indeed are in some quarters now prevalent.

Whether it is better to make the camera revolve as a whole, or only the sensitive plate, or whether a revolving mirror should be used with a stationary camera, are questions for experience to decide.

One good method, if not too troublesome in practice, would be to arrange a double camera, with component axes parallel, so as to photograph the same flash in both halves, but with the sensitive plate of one fixed, of the other rapidly revolving. Appearances really due to succession in time could be then easily distinguished, and might be capable of interpretation.

July 10.

OLIVER J. LODGE.

Micromillimetre.

I AM glad that the Council and Fellows of the Royal Microscopical Society have seen their way to the adoption of the word *micron*, but the letter in which Mr. Crisp announces this decision to you is not, I think, calculated to give a correct impression of the circumstances under which it was taken.

Firstly, I need hardly say that I did not take exception to the word *micromillimetre*, but to its use as equivalent to the thousandth of a millimetre.

In the next place, I wrote to the Secretaries of the Royal Microscopical Society on behalf of the Council of the Physical Society, of which no mention is made by Mr. Crisp.

Thirdly, the proposal of the Council of the Physical Society was that the word *micron* should be adopted.

Lastly, I am myself quite in favour of this course, and in fact moved its adoption by the Physical Society.

The word *micromètre* must in accordance with the rules of the B.A. Committee be a possible alternative just as a *cubic decimetre* is alternative to a *litre*, and I think the disadvantage of the multiplication of special names not based on a uniform system is nearly as great as that of the possible occasional comparison between *micromètre* and *micromètre*. This is however a little matter as compared with the use of *micromillimetre* in two different senses, and the official sanction of *micron* by the French authorities (of which I was not aware when I originally wrote to you) is quite sufficient to turn the scale in its favour.

As some of your readers may not have seen the previous correspondence, will you allow me in conclusion to state that it is now generally agreed,

(1) That the thousandth of a millimetre shall be called a *micron* and denoted by μ .

(2) That the millionth of a millimetre shall be called the *micromillimetre* and denoted by $\mu\mu$.

ARTHUR W. RÜCKER.