

## Errata.

In these days of co-operative enterprises there is a chance of success for many a useful scheme that in other times would be utopian; and so the writer would like to suggest the usefulness of a separate systematic publication devoted to errata, to appear at intervals as materials accumulated for it. In it any student of an important book might hope to find collected all the important errors that critics and other readers had discovered. These errors might be disturbing misprints, slips in dates or the spelling of a name, mistakes in formulae or mathematical tables, etc., or possibly might extend to very brief criticisms on a book for the omission of very important facts bearing on the argument, or the use of unreliable authorities. Just how far it would be safe or desirable to go into such criticism, must, of course, be left to the judgment of the editor.

If such a plan commends itself to those who use books, and therefore want them to be correct, it ought not to be difficult to put it into operation through the co-operative work of public-spirited publishers, and of the librarians, who have already done so much for book-users, that in our gratitude to them we have the proverbial 'lively sense of favors to come.'

If the publication of such a list as this were started, either as an independent venture or as a supplement to the *Publishers' weekly* or the *Library journal*, we cannot doubt that many readers all over the country would gladly furnish contributions to it; and such scattered corrections as one finds in newspaper reviews of a book would be collected in a way to be useful to all who use the book in question.

C. K. WEAD.

## Popular astronomy.

Permit me to make a few remarks on the review of my 'Story of the heavens,' which appeared in your issue of April 23.

You first charge me with appropriating a figure on p. 78 of Professor Newcomb's 'Popular astronomy,' and you assert that the text relating thereto has been borrowed from him. I refer to my 'London science class-book of astronomy,' articles 60 to 63, where essentially the same figures and reasoning are used. This was published in 1877; Newcomb's, in 1878. No doubt I had read Newcomb afterwards, and possibly improved on the original illustration by so doing. Probably the same idea has occurred to many others besides Newcomb and myself.

You also charge me with taking illustrations without acknowledgment, yet out of one hundred and six figures you only cite one (p. 228) to support the charge. The extent of my offence is just this: in the original manuscript of my book I had referred to Newcomb, but I struck out the reference from the proof in the belief that he would not care to be cited for so trivial a matter.

The two passages from Professor Young's 'Sun' have been unconsciously adopted by me by a carelessness which I sincerely regret. They were copied some years ago for use in my lectures; they passed into my manuscripts, and I lost sight of their origin, and treated them as my own language, which, until my attention was called to the matter by your review, I believed them to be.

While I am glad to have my errors pointed out, and to make what reparation may be possible, I must indignantly protest against the tone of your com-

ments. You have fastened the worst construction on these blots, and accuse me of pillage. The simplest principles of justice should have required you to hear my explanation before you make so serious an allegation. You have even spoken of it as wholesale pillage, with what justice I leave your readers to decide. I have added the lines in the passages impugned in your review, as well as in the kindred review in the *Nation*; I have also added the equivalent of the illustration on p. 228; and I find the whole amounts to two pages and a half, while the entire volume contains five hundred and fifty-one. ROBERT S. BALL.

Dublin, May 12.

[We are glad to publish Professor Ball's reply to the critics of his book, and hope that he will feel fully vindicated by the letters from Professors Newcomb and Young in *Science* of April 30. — ED.]

## Barometer exposure.

You gave a place to my letter showing how thermometers were affected by the place of exposure: will you now allow me to point out how the barometer also seems to be thus affected?

At the Blue Hill observatory, during high winds, the barograph shows sudden small oscillations, which, on watching, have been found to be coincident with changes in the wind's velocity. When the wind rushes by with increased velocity, the barograph sinks; and when the wind subsides somewhat, the barograph rises again slightly. About noon on March 16 the wind's velocity rapidly rose from five to thirty-five miles, and the barometer suddenly fell five-hundredths of an inch. During a sudden gust attending a shower last summer, the barometer fell a tenth of an inch, and immediately rose again as the gust ended. These facts all suggest that the wind, in blowing by at right angles to the cracks and crevices in the building, produces a mechanical effect, which tends to draw the air out of the building, and decrease the pressure inside. In confirmation of this conclusion, whenever, during high winds, the hatchway in the top of the tower is opened, it gives a larger aperture for the wind to act on, and the pressure on the inside immediately falls. It fell as much as a tenth of an inch during a seventy-mile wind in February. This seems to point to the conclusion that during high winds the barometer reads too low.

In Loomis's fifteenth paper in the *American journal of arts and sciences*, he discusses the reduction to sea-level of the barometer-readings on Mount Washington, and finds a number of cases in which the barometer-readings, when reduced to sea-level by the formulas usually in use, are three-tenths of an inch or more lower than would seem to be the true readings as determined from the neighboring stations of Burlington and Portland. These cases all occurred when the wind was very high on Mount Washington, the average being sixty-six miles per hour, and some cases showing as much as a hundred miles. In his remarks, Loomis says that these "great anomalies are confined to the colder months of the year, and seldom occur except during the progress of violent storms."

This suggests that at Mount Washington, as at Blue Hill, and probably elsewhere, the wind, in blowing by the building with great velocities, produces a partial vacuum inside.

H. HELM CLAYTON.

Blue Hill observatory, May 18.