the miracle of an astonishing progress." In the Fundamental Takimetry (introductory to Takitechny) objects are classified into square, round, pointed, and truncated forms. The three lessons of Takimetry are (1) equivalence; (2) resemblance; (3) the three squares of a right-angled triangle (*i.e.*, "Euc.," i. 47). The subject requires only three lectures, each of an hour's duration. Amongst the subjects for measurement are the accessible, the inaccessible, and the incalculable (*i.e.*, those which depend upon the circle). There is much that is good in this book, though in its present form it is overweighted with a mass of extraneous matter. By aid of the prettily-coloured figures (there are models, also, we are told, to accompany the book) a considerable knowledge of mensuration, we think, might be imparted even to dull boys. We could take exception to the translation in many places.

LETTERS TO THE EDITOR

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts. No notice is taken of anonymous communications.*

The Editor urgently requests correspondents to keep their letters as short as possible. The pressure on his space is so great that it is impossible otherwise to ensure the appearance even of communications containing interesting and novel facts.]

Museum Reform

"J. P." suggests, under the head of "Museum Reform" (vol. xvi. p. 183), the idea of a conference of museum keepers, out of which a permanent union among museum officers might result. I am of opinion that this idea is an excellent one, and that the administration of the museums of all countries would gain a great deal if an opportunity to museum officers were offered to interchange their opinions and to communicate to each other their different practical experiences. Perhaps some arrangements and rules might *generally* be accepted, as, *e.g.*, to labelling specimens, exchanging duplicates, publishing annual reports in a journal *ad hoc*, &c. A. B. MEYER

Dresden, July 9

Koenig's Tuning-Forks

THE letter of Herr Koenig inserted in NATURE (vol. xvi. p. 162) did not come under my notice till July 8. On October 27 last year I counted all the 64 sets of beats in Herr Appunn's tonometer, one through 15, the rest through 20 seconds with a pocket chronometer which was gaining less than 4 seconds a day, and found every set of beats perfectly true. The perfection of the consonances, more than 80 of which I tested mechanically, by observing the beats that arose on flattening one of the two consonant notes, seemed to me to eliminate all possible error of irregular counting. The suggestion now is that the beats were perfectly regular and uniform, and that no exception need be taken to my counting, but that Herr Appunn's pendulum was originally incorrect, to such an extent that what appeared to him 80 beats in 20 seconds, were only 79·27, and that my chronometer was not sufficient to detect the error. If this were the case all the numbers on Herr Appunn's tonometer would have to be reduced by as nearly as possible 9 in 1,000, which would make them agree with Herr Koenig's. I shall therefore have to re-test the tonometer with a larger chronometer and if possible count each set of beats for a longer time. I shall not be able to undertake this examination at present, but I shall not neglect doing so, and will inform you of the result. It is right, however, to say that on July 9 and 10 I received communications from Prof. McLeod showing that his improved instrument for counting vibrations gave results almost exactly agreeing with Herr Koenig's numbers. The marked difference of Herr Appunn's and Herr Koenig's numbers will I hope lead to such an examination of the subject as will result in an accurate determination of pitch that can be generally accepted. ALEXANDER J. ELLIS

Kensington, July 11

P.S.—I have this morning received a letter from Herr Appunn, in which he tells me that the letter of Prof. Helmholtz, quoted by Herr Koenig, was received eleven or twelve years ago, and that the error of Herr Appunn's pendulum there pointed out was corrected more than ten years ago. He also refers me to pp. 46-7 of Prof. W. Preyer's tract "Ueber die Grenzen der Tonwahrnehmung," Jena, 1876, in which, by a calculation there detailed, Prof. Preyer shows that the absolute pitch of two of Herr Koenig's forks, which should have been 128 and 256, were 129·1 and 258·2; and says that "the determination is as exact as possible, so that the first decimal place can be fully trusted." I made another fork to be 258·4, and I know by comparison of several specimens that Koenig's forks do not always agree within more than ·2 vibrations. A. J. E.

July 16

On a Fish-sheltering Medusa

WHILE collecting some three weeks since on the south shore of Killary bay in Connemara, I observed that out of a number of the common *Aurelia aurita* moving about in a rocky inlet below me, one was invariably accompanied by a small fish, of about an inch or an inch and a quarter in length, which had established itself inside of the hemispherical disc.

Occasionally the Medusa turned in its pulsations, so as to bring the umbrella uppermost, when the fish would shoot hastily out, but the Medusa had no sooner righted itself, than the fish returned, and seizing its opportunity, swam in between the marginal tentacles, and close up to the fringes of the actinostome, remaining distinctly visible through the pellucid disc.

I afterwards noticed several other Aurelia similarly attended, but was not able, unfortunately, to identify the fish, which invariably darted off at the most distant approach of a landing-net—it appeared, however, so far as I could judge, to be the young of one of the larger species. Perhaps some of your readers could contribute suggestions on that point.

Associations of a similar character have, I know, been frequently observed in the case of the Physalidæ and other Acalephæ, but not, so far as I am aware, in connection with this species. E. LAWLESS

The Earth and Moon

I HAVE only now (July 12) noticed Prof. Tait's remark respecting a sentence, or rather half a sentence, which he quotes from an article of mine in the *Cornhill Magazine* for June. It runs thus: "What mathematicians call the moving force exerted by the earth on the moon is eighty-one times greater than the corresponding force exerted by the moon on the earth." This admits of an interpretation implying gross ignorance on my part—ignorance, viz., of the fact that the moon pulls the earth just as strongly as the earth pulls the moon. It also admits of an interpretation accordant with fact, for the moving force exerted by the earth on each unit of mass in the moon is eighty-one times greater than the corresponding force exerted by the moon on each unit of mass in the earth. I do not think anyone is likely to believe that I made the mistake imputed to me by Prof. Tait, in this instance, any more than that I made an equally absurd blunder which he attributed to me in your columns several months ago, or that he himself made the ludicrous blunder attributed to him (in jest) by my humorous friend, Prof. Nipher, of St. Louis. But as a mere matter of fact, I may point out that the half-sentence quoted by him is completed by a half sentence leaving no doubt as to my real meaning, and is immediately preceded by the statement that "the moon pulls the earth just as strongly as the earth pulls the moon."

London, July 12 RICHD. A. PROCTOR

Blue and Yellow Crocuses

REFERRING to Mr. W. B. Tegetmeier's letter in NATURE, vol. xvi. p. 163, I can say that I once had a pony born and bred on Dartmoor, which had never seen oats until it came into my father's stable in the fourth year of its age, and it refused them. We induced it to eat oats by mixing them with hay and gradually reducing the quantity of hay until the oats predominated.

Penzance, July 10 THOS. CORNISH

Japanese Mirrors

MORE than eleven years ago, in February, 1866, I published in *The Reader* (since extinct), a letter giving, I venture to think,