

The diminution of the island has taken place almost entirely from one direction, the sea having encroached 30 miles on the N.E. side, and 1 mile only on the S.W.; this is probably owing to the south-westerly set of the current, and to the harder (? *volcanic*) rocks forming that portion which now remains as an island.

A series of soundings over the N.E. area would be valuable, as showing the form of surface presented by this modern "plain of marine denudation."

W. H. PENNING.

APPARENT AND TRUE DIP.¹

SIR,—The wording of Mr. Penning's ingenious paper involves one or two unfortunate slips of the pen.

In the first rule, instead of "the number of degrees of dip," write "the tangent of the angle of apparent dip."

In the second rule, proceed as before; but measure the length along one of the lines produced backwards.

The truth of the principle so modified is obvious from the following considerations.

If, along the line *b*, the rise is 1 in 20; and, along the line *a*, 1 in 10; then, taking 20 units along one line, and 10 along the other, we arrive at the horizontal line in the plane, *i.e.* at the line of strike.

ST. LEONARD'S HOUSE, LUDLOW.

HENRY GEORGE DAY.

PHYSICAL GEOLOGY OF EAST ANGLIA IN THE GLACIAL EPOCH.

SIR,—When the abstract of Mr. Penning's paper, "*On the Physical Geology of East Anglia during the Glacial Period*," read before the Geological Society in December last, with the report of the discussion thereon, appeared, I addressed the following letter to the author, in the hope that so much of it as consisted of an explanation of the views I held upon the subject of the East Anglian valley system might be allowed to be printed at the end of his paper. This, I believe, Mr. Penning was willing should be done, but the Council of the Society refused to allow it. I therefore, in order to prevent further misapprehension of my views, ask of you the favour of giving the letter a place in your columns.

SEABLES V. WOOD, jun.

[Copy letter.]

"Dear Sir,—So far as the abstract of it affords information, the principal fact brought to notice in your paper, 'On the Physical Geology of East Anglia during the Glacial Period,' is that the Middle Glacial gravels do not generally range in East Anglia above an altitude of 300 feet, that they are at about this height overlapped on the south side of the Cambridgeshire Chalk escarpment by the Boulder-clay, which ranges to the top of that escarpment, resting on the older formations; and that this Boulder-clay recurs on the opposite side of the escarpment, similarly resting on the older rocks, without any Middle Glacial beneath it.

"You will find that this limit of the elevation of the Middle Glacial in East Anglia is expressly pointed out by me in a paper in the

¹ See *GEOL. MAG.* for May last, p. 236.