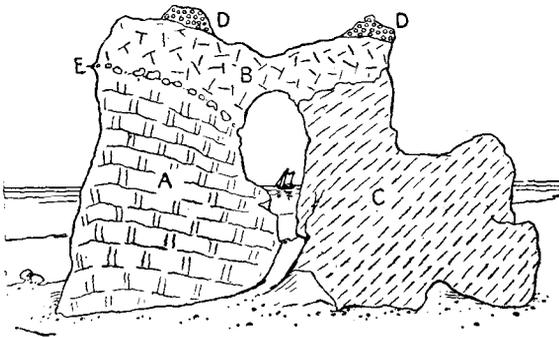


CORRESPONDENCE.

TRIMMINGHAM CHALK BLUFFS.

(PLATE XXVII.)

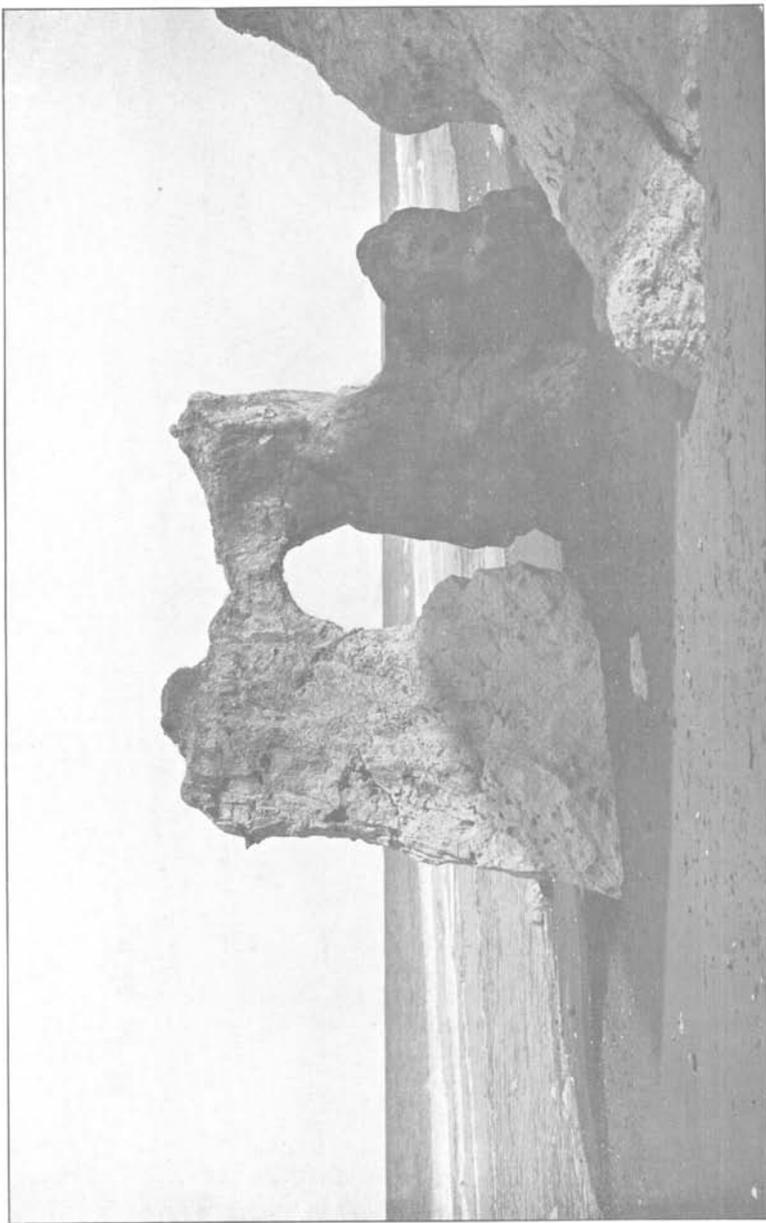
SIR,—You may be interested to know that I spent a short fortnight in East Anglia. *Apropos* of Trimmingham I endeavoured to identify Mr. Brydone's photographs. He appears to have taken no notice of the extraordinary natural arch situated a few yards from the base of the cliff, a miniature 'Old Harry.' Enclosed is a rough sketch of this peculiar specimen of the Contorted Drift, which owes its preservation, in a great measure, to an intensely hard bed of flint pebbles (D). There are two fragments of this remaining, and during my visit two young Philistines were doing their best to destroy the one on the left hand. I preached them an appropriate sermon on the folly of destroying interesting natural objects, and they had the good sense to desist. I also send you photograph taken by Messrs. Tucker showing the natural arch as seen by me in July last (see Plate XXVII).



Natural arch on the sea-shore at Trimmingham.

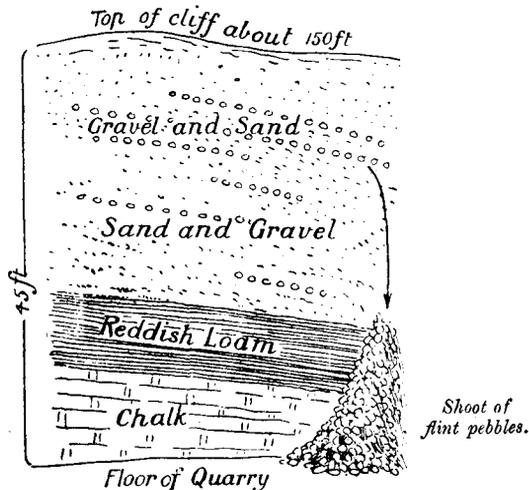
- A. Chalk *in situ* unaltered and full of flints.
- B. Modified Chalk with much impurity.
- C. Pugged grey clay with some stones.
- D. Conglomerate of flint pebbles.
- E. The principal flint band.

This mass of marly Chalk in the Trimmingham cliff is situated just below the Crown and Anchor Hotel, the 'marl' being burnt for lime (July 31st, 1906). It is evidently a mass of squeezed and softened Chalk, but I did not notice flints in it. A quantity of flint pebbles, some very large, are obtained from the overlying gravels for road-mending, etc. There are several smaller lumps of softened



The Chalk Arch at Trimmingham, Norfolk, as seen in July, 1906.

Chalk in the cliff hereabouts, and the cliff itself is much fissured and crevassed. The beds dip towards the north-east (approximately).



The elevation of the church at Trimmingham is marked in the old map as 195 feet, and the top of the cliff here is from 40 to 50 feet lower.

W. H. HUDLESTON.

NOTE.—The mass of Chalk forming the arch (see Pl. XXVII) was only entirely isolated and detached from the adjoining cliff early in this year. (See Mr. Brydone's Plates, *GEOL. MAG.*, 1906, Pl. II, Figs. 2, 3; Pl. IV, Fig. 7; Pl. V, Fig. 12; Pl. VIII, Fig. 13. See also description by Prof. Bonney in *Sept. No.*, pp. 400-403, Fig. 1, A, and Fig. 2.)—*EDIT. GEOL. MAG.*

THE THICKNESS OF THE CIRCUM-POLAR ICE.

SIR,—Your reviewer of the first volume of Professors Chamberlin and Salisbury's *Geology* has the following sentence on p. 376: "We note that the thickness of the Greenland ice-dome at its centre is estimated at 5,000 feet or more, and we recommend the statement to the attention of the writer in this Magazine (March, 1906, p. 120) who has recently, on hypothetical grounds, revived the idea that ice cannot attain a greater thickness than 1,600 feet." May I again point out that the 5,000 feet ice-sheet is a pure assumption, whereas the 1,600 feet limit rests on physical experiment and direct field observation? Professors Chamberlin and Salisbury's statement, which your reviewer refers to with such satisfaction, is as follows: "The height of the land surface beneath [the ice-cap] is unknown, but it is unlikely that it averages half this amount [9,000 feet], and hence the ice is probably 5,000 feet or more thick in the centre. There is reason to think it is much thicker in Antarctica." This is simply an appeal to ignorance; and as regards the Antarctic, Captain Scott's observation