

If attention be given to the parts printed above in italics, I think it will be admitted that the writer did not consider the yellowness of the reflecting particles as the exclusive cause of the greenness in sea water, and in the last sentence quoted it is stated that the water on the west coast of Scotland, when examined in a long tube, transmitted a blue-green light, therefore greener than the water of the Mediterranean.

The paper concludes with some tests made in Loch Lomond and with pure water, and a number of well waters; these were found to vary from blue to yellowish brown. As the waters of most of our rivers and lakes are yellowish brown, it is probable that it is the addition of this yellowish water to sea water that makes the seas surrounding our islands of a greenish colour.

JOHN AITKEN.

Ardenlea, Falkirk, March 20.

### The Wehnelt Current Interrupter.

THE form of contact breaker recently introduced by Wehnelt is attracting so much notice, that it may be worth while to draw attention to an essentially identical arrangement described by Spottiswoode for use with an induction coil, more than twenty years ago (*Proc. Roy. Soc.*, vol. xxv. p. 549). He says: "Another form of contact breaker was also occasionally used. The principle upon which it was based was the sudden disruption of a thin film of conducting liquid by a discharge between the electrodes of a circuit. The mode of effecting this was to make one electrode terminate in a platinum plate fixed in a horizontal position, and supplied with a uniform film of dilute sulphuric acid; the other in a platinum point, the distance of which from the plate is capable of delicate adjustment by means of a screw. Electro-motive force required for this break is not less than that of five cells of Grove. As soon as the current passes, the fluid between the plate and point will be decomposed, and electrical continuity broken. This done, the fluid flows back again, and continuity is restored. By a proper adjustment of the supply of fluid and of the distance between the electrodes (the latter varying from '05 to '001 of an inch), the number of disruptions may be made to attain 1000 per second. The currents delivered by this form of break are exceedingly uniform, and the effects produced are quite equal in delicacy to those produced by the electro-magnetic or by the wheel break."

R. J. STRUTT.

IN reference to the Wehnelt current interrupter—in 1874 I used a similar interrupter on a coil with fifty Groves' cells. The idea was not even then new, for although my experiment was due to accidental short-circuiting of electrodes during electrolytic experiments, which led to my final application of the so-called interrupter as a resistance to current, and then as a rapid make-and-break, I found that some of the old masters of electrics had evidently used it before. Since November 1896, I have always endeavoured in using a Jackson tube to condition the tube by heating, when connected with coil, so that the make-and-break of coil shows infinitesimal sparking and works with such rapid vibrations that a musical note is produced, the pitch varying as the position of the flame heating the tube is altered. Shadow-graphs can then be obtained of the human trunk from thirty-five seconds upwards, and the results on English fluorescent screens are almost perfect. This has all been mentioned in my lectures at the Royal Artillery Institute, &c., the first being at the end of October 1896.

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### Palæolithic Implements from the Valley of the Ver.

THE river Ver rises at Markyate Street, near Dunstable, at the junction of Hertfordshire with Bedfordshire, and runs to St. Albans, whose ancient name Verulamium is derived from the river. Leaving St. Albans, the river becomes the Colne and joins the Thames at Staines. Many Palæolithic implements have been found by myself and others in the valley of the Colne, but up to now none have been recorded from the valley of the Ver.

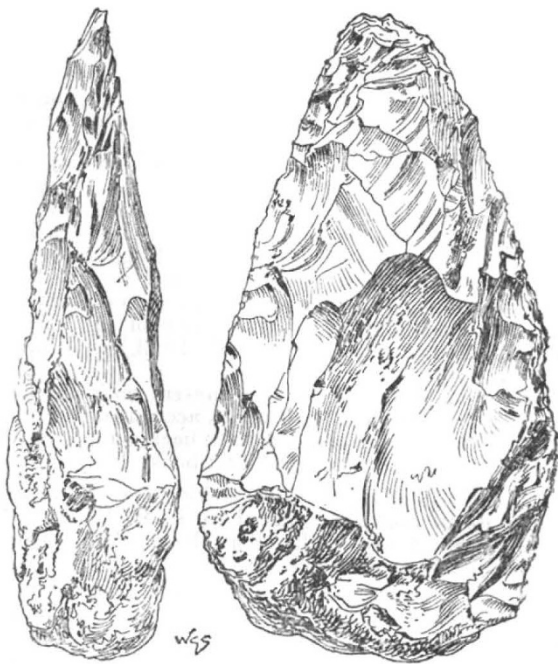
It is true that for many years I have found Palæolithic implements in contorted drift (or where contorted drift has been) on

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the highest hill-tops north of the source of the Ver, but none of these positions have been in the river's valley. They have belonged to large ponds and swamps of Palæolithic age on the hill-tops.

For the last three or four years small excavations for clay have been made in a brick-yard east of Markyate Cell, but until this last winter I have never seen any human work amongst the excavated material. The implements occur in relaid contorted drift, which has been washed in patches from higher ground. The implementiferous material only occurs here and there in the brick-field; it is a brown clay full of large stones, and rests upon a brick-earth of much greater age, probably glacial, which in turn rests on Lower Chalk. The implementiferous clay is on the surface, and is never more than two feet deep. The pit is 108 feet above the Ver, and 547 feet above the Ordnance datum. On the hills to the north, and removed from the water-shed of the Ver, implements occur at 595 feet.

I have lately found six Palæolithic implements in the valley of the Ver at Markyate Street, all above the average in size and weight; they are faintly ochreous and slightly abraded. The example illustrated to one-half the actual size—1673 in my



Palæolithic implement from the valley of the Ver. One-half actual size

collection—weighs 1 lb. 6½ ozs., two others weigh 1 lb. 1 oz. each, others 1 lb. 4 ozs. and 1 lb. 4¼ ozs. With these implements were numerous large cores and large blocks of flint, from which a flake or two had been struck. These were abandoned by me as too heavy for convenient carriage. Only one flake has come to hand; in fact, no stones as small as ordinary flakes are in the material. I have found a few Palæolithic flakes one and a half miles nearer St. Albans, in the same river valley, north of Friar's Wash.

Twenty-one years have now passed since I first directed attention to the Palæolithic implements found on the hill-tops of North Herts (*Jour. Anth. Institute*, vol. viii., 1878). Since that time I have greatly extended my observations on these hills, but no evidence whatever has been seen by me indicative of a greater antiquity than post-glacial. The high-level implements at North Herts and South Beds are never in glacial material. The implementiferous brick-earth is always on the top of the glacial clay, where the latter is present, and to this rule I have seen no exception. The glacial gravels and clays and the boulder clay are here positively barren of human work.

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