

CORRESPONDENCE.

FAULTS.

SIR,—If Professor Blake will kindly look at the GEOLOGICAL MAGAZINE, Vol. III., p. 148 and Plate IX. Fig. 9 (1866), he will see a notice of some faults in Malta that do not penetrate the limestone lying below the bed in which they occur. These faults are thus accounted for—"I suppose that the rock, being already jointed, was pressed down before it was quite hard by the weight of the superincumbent strata, and the pressure on each fragment being proportional to the area of the upper surface, those fragments which had the largest upper surface in proportion to their bulk were more compressed than the others, thus forming faults. The broken state of many of the fossils, particularly the *Echini*, in this bed is a proof that it has undergone considerable compression. I may, perhaps, here mention that I consider that all cases of 'reversed faults' will be found nearly to have been caused by lateral pressure." As this was written nearly twenty years ago, I hope you will not mind reproducing it.

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CHRISTCHURCH, N.Z.

FULLER'S EARTH.

SIR,—I shall feel obliged if you will give notice to the accompanying facts connected with the detergent properties of the fuller's earth,—I mean with regard to its use as an agent in clarifying water, a reference to which appeared in the GEOL. MAG. for February last. These strike me as being the more curious, because, as far as I can learn, they are but little known.

In the fen districts of Cambridgeshire and Lincoln, where the people are entirely dependent upon the discoloured drainage off the peat for their water supply, *fuller's earth*, brought round by dealers, is used to purify the water, rendering it colourless and pleasant to the taste. The method adopted is somewhat after the old fashion in country districts, of placing perforated trays or *latches*, as they were called, containing wood or other ashes, over vessels put to catch the rain.¹

To test the efficacy of fuller's earth as a filtering medium, I have experimented with it upon the mineral water of Flitwick, which is the colour of dark sherry and so powerfully impregnated with iron² as to act upon the palate as alum, with the result that it was made nearly colourless and its strength reduced by one-half.

Muddy water too, if filtered through it, becomes clear and free of sediment. Springs issuing from beneath the fuller's earth are re-

¹ Dr. Thos. Stevenson, Guy's Hospital, has kindly written to say— "fuller's earth is an agent which I conceive would be very useful for the purpose, it is a substance which would clarify, remove organic matter in solution, and also soften by carrying down chalk.

² Professor W. White's analysis gives 144.00 grains per gallon, oxide and carbonate of iron, "a most extraordinary amount and far exceeding the most noted chalybeate springs in the world." E. W. Lewis, upon "The Geology of Leighton and Neighbourhood."