corated and dried; it weighed $8\frac{1}{4}$, which was mixed with 40 of the nitrate, with the same phenomena, and the same separation of a blue coloured powder by the effusion of muriatic acid; the residue now weighed only $2\frac{1}{2}$ grains; this underwent a similar treatment, and after this, as not one grain remained undecomposed, it ceased to be an object of experiment. A strong smell of prussic acid accompanied the detonations.

I can find no farther account of this curious discovery; indeed increasing ill health put an end to all the chemical enquiries of Mr. Gregor. Imperfect as this notice is, I thought it proper to present it to the Society, as it might induce some of our members to undertake a farther examination, and perhaps to discover an œconomical application of the substance to the formation of *Prussian blue*; at all events, I feel confident that any extract, however crude, from the manuscripts of Mr. Gregor, will be respectfully received by every mineralogist in Europe.

JOHN AYRTON PARIS.

VII.—On Stones and Clays annually Exported from Cornwall, for the purposes of Architecture, Manufactures, and the Arts.

It may be interesting and useful to place upon record the nature and quantity of the

different mineral substances, not metallic, which are annually exported from this county. I have learnt the following particulars upon this subject, and scanty as they may appear, I am willing to present them to the Society, as an example to stimulate others to exertion, who have better opportunities for enquiry, and more numerous sources of information. The total quantity of granite shipped at Falmouth during the last seven years, amounts to FORTY THOUSAND Tons; it has been employed for building the docks at Chatham, and the Waterloo Bridge in London. The lands in the vicinity of Penrhyn have furnished it; indeed the quantity actually quarried has been considerably greater, for many of the blocks, in consequence of being damaged, have been condemned, and sold at a low price to the inhabitants for building and other purposes. The number of men generally employed in quarrying it, is about four hundred: their wages from twelve to eighteen shillings per week, varying with the quantity raised.— The lord of the soil receives one halfpenny a foot for all that is quarried; the freight during war was as high as 25s. per ton, at present it is only 16s. Fourteen cubic feet weigh one ton. The weight of the blocks generally varies from five cwt. to seven tons. With respect to the quantity of granite quarried in every part of the county for the purposes of building houses, constructing bridges, columns, gate

posts, and a variety of domestic purposes, it is impossible to form any estimate.

The amount of decomposing granite (*petunze*) shipped at Charles Town to Worcestershire for the China manufactories, from the 25th of March, 1816, to the same day in the following year, was 2135 tons. That of clay derived from its felspar (*kaolin*) 1775 tons. It is not the least curious circumstance in the history of these clay works, that whilst Lord Grenville is receiving, as proprietor of the land, £700 per annum, Lord Falmouth, for an equal portion of land, does not receive more than £20. This is to be explained by the value of the clay being very different at the periods when the leases were granted. The works contribute more than £150 per annum to the poor. The sum is of course variable.

The *steatite*, or soap rock, near Cape Lizard, is worked by Mr. Dillwyn of Swansea, for which he pays Lord Falmouth, the proprietor, the sum of £75 per annum; about twelve tons are annually quarried and exported. There are also many other valuable clays derived from the decomposition of rocks; and as one of the principal labours of this Society is to form a statistical analysis of the mineral resources of the county, it is to be hoped that some farther account of them will be received.

Near Lelant, 330 tons of clay, derived from decomposed *schistus*, are annually exported to Swansea, for the smelting furnaces.

For the purposes of architecture, there are likewise many rocks which might be profitably and advantageously employed. I shall beg to offer a few remarks upon the durable and ornamental properties of our porphyry: it would furnish a suitable material for the construction of a national column. The patriotic county of Cornwall has furnished granite for the proud memorial of our glory at Waterloo; let her present her *adamantine* porphyry for a triumphal pillar to immortalize our naval superiority.

Sir Christopher Hawkins has furnished me with different specimens of porphyry; that from a quarry at Pentuan, near St. Austle, is fine grained and durable. Norden mentions this quarry of "*fair stone*" which was worked in his time; about three hundred years since. Many of the ancient buildings and churches in Cornwall are built of this or a similar stone. As a testimony of the durable nature of this rock, it may be stated, that the arches and cornices in Restormel Castle, which are composed of it, although built in an early period of the British history, are in a high state of preservation; as are the cornices and mouldings at Place House, in Fowey, built in the reign of Henry VI. which are of the same material.

JOHN AYRTON PARIS.