

having examined the specimens, reported that "it seems difficult to think that these rods are the result of natural processes of growth." Mr. Ferrier said he thought the siliceous matter had not been present in the original charcoal, but that it was slag that the coal had absorbed in the furnace. Then, next, word came from the furnace at Radnor that similar fibrous charcoal had again been expelled from the slag notch, and this whilst charcoal from a totally different locality was being used in the furnace. The evidence was thus strongly against the view that the siliceous matter was part of the original coal, and in favour of Mr. Ferrier's suggestion. The question was thus again, as it were, thrown back into the sphere of chemistry, and it appeared probable that an analysis of the fibrous matter would settle it. After much care and labour, a quantity of fibre sufficient for analysis—and free from the ash naturally present in the charcoal—was obtained. The difficulty of securing a satisfactory sample lay in the fact that the alkali of the true ash caused the fibres to fuse, forming little glassy globules. It was desirable to avoid these, in order that the analysis might show the composition of the fibre itself. The analysis of the fibre is stated in column 2; column 1 is the partial analysis of a sample of Radnor slag made by myself in January, 1891:—

	(1) p.c.	(2) p.c.
Alumina	13.52	18.15
Ferrous oxide	1.44	.51
Manganous oxide	3.48	Traces
Lime	23.89	25.44
Magnesia74	1.47
Sulphuric anhydride	1.52	Traces
Silica	54.00	42.18
Alkalies — Phosphoric anhydride, etc., by diff.	2.41	2.25