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This material also occurs at several other points further down the river, and is identical with that referred to in the prefatory remarks.

The sample in question had a pitchy-black color, in thin layers and by transmitted light, rich dark reddish-brown. The specific gravity at 60° F. was found to be 1.023; at this temperature it has the consistence of a soft extract, and will barely flow; at 70° F., flows, but sluggishly, whilst at 100° F. it has the consistence of treacle.

As regards the utilization of these substances,—the most appropriate application of the former and that for which it would appear to be admirably adapted, would be for asphaltting purposes. It has one of the most important qualifications of a good bituminous concrete, viz., intimate combination of the mineral and organic constituents, and this in a degree which no artificial preparation of the material could be expected to possess. It will, in all probability be found, that a very slight treatment will render it suitable for employment in the construction of roads, foot-paths, court-yards, *et cetera*; for asphaltting the flooring of granaries, basements of warehouses and the like, and further as a roofing material. Should it be deemed more expedient to separate the bitumen, this may be effected by simply boiling or macerating the material with hot water, when the bituminous matter, entering into fusion, will rise as a scum to the surface and may be removed by skimmers, whilst the sand falls to the bottom of the vessel.

Economic uses
 of the Bituminous
 sand-rock.

Extraction of
 the Bitumen.

An experiment was made in order to ascertain the greatest state of purity to which the bitumen could be brought by this method; it was found, that of the 81.73 per cent. sand, 69.26 per cent. had been removed, the extracted bitumen containing 50.1 per cent. sand, and—owing to the extreme fineness of a portion of this latter, as already mentioned—it may be questioned if the purification, by this method, could be pushed much beyond this.

The sand separated by this process, when carefully conducted, is free or almost free from bitumen, and might, after being heated to redness in a reverberatory furnace—to destroy any little adhering bitumen—be advantageously employed for the manufacture of one of the better qualities of glass.

The above treatment requires but the simplest of appliances and might be readily carried out on the spot.

The amount of maltha at my disposal was far too small to warrant any attempt at its distillation. Should it occur in sufficient quantity, it might possibly, amongst other uses, be advantageously employed as a crude material for the manufacture of illuminating and lubricating oils and paraffin.

Economic uses
 of the Maltha.