

ther at the Savoy in the strand. These establishments chiefly confined themselves to common window glass or coarse bottles, and the finer articles being still imported from Venice. About a century later the celebrated Duke of Buckingham brought workmen from Italy, and established at Lambeth a manufactory of plate—glass for mirrors and coach-windows in 1673. Since that time the art has made constant progress in England, and has now attained to such a degree of perfection that plates of larger dimensions are made here than in almost any other part of the world. Mirrors are procurable in London exceeding thirteen feet by seven, while the largest size in the Paris list is eleven feet by seven; and in no other place is any approach made to those sizes, except at the Royal manufactory of St. Ildefonso in Spain, where it is stated plates are cast measuring  $13\frac{1}{2}$  feet by  $7\frac{1}{2}$ .

### BITUMEN.

**THIS** is the name of a species in mineralogy, the individuals composing which have acquired several distinct names, from their diversity in appearance. This depends chiefly upon the state of aggregation, which forms an uninterrupted series from the perfectly fluid to the solid condition.—*Naptha*, the most fluid variety, is nearly colorless or of a yellowish tinge, transparent, and emits a peculiar odour. It swims in water, its specific gravity being from 0.71 to 0.84. It burns with a bluish white flame and thick smoke and leaves no residue. It consists of carbon, 82.20, and hydrogen, 14.80; and, being the only fluid destitute of oxygen, it is used to preserve those new metals in, which were discovered by sir H. Davy. It is found in Persia, in the peninsula of Apcheron, upon the eastern shore of the Caspian sea, where it rises in a marly soil in the form of vapour, and, being made to flow through earthen tubes, is inflamed for the purpose of assisting in the preparation of food. It is collected by sinking pits several yards in depth, into which the *naptha* flows. It is burned in lamps, by the Persians, instead of oil. Near the village of Amiano, in the state of Parma, there exists a spring which yields this substance in sufficient quantity to illuminate the city of Genoa, for which purpose it is employed. With certain vegetable oils, *naptha* is said to form a good varnish.—The variety *petroleum* is much thicker than *naptha*, resembling, in consistence, common tar. It has a strong, disagreeable odour, and a blackish or reddish brown colour. During combustion, it emits a thick, black smoke, and leaves a little residue in the form of a coal. It is more abundant than the first mentioned variety, from which it does not appear to differ, except in being more insipid. It occurs oozing out of rocks, in the vicinity of beds of coal, or floating upon the surface of springs. In the Birman empire, near Rainghong, is a hill containing coal, into which 520 pits have been sunk for the collection of petroleum; and the annual product of this mine is 400,000 hogsheads. It is used by the inhabitants of that country, as a lamp-oil, and, when mingled with earth or ashes, as fuel. In the U. States, it is found abundantly in Kentucky, Ohio and New York, where it is known under the name of *Seneca* or *Genesee oil*. It is used as a substitute for tar, and as an external application for the remedy of rheumatism and chilblains.—*Maltha* is a bitumen, still less fluid than *petroleum*, from which it differs in no other respect. Its principal locality is at Puy de la Pege, in France, where it renders the soil so viscous, that it adheres strongly to the foot of the traveller. It is also found in Persia and in the Hartz. It is employed, like tar and pitch.