

with its oxygen, flies off in the form of carbonic acid gas, while the lead is reduced to the metallic state, and sinks to the bottom of the furnace. Almost all the varieties of galena or lead-glance contain a greater or less portion of silver. The silver, after the reduction of the lead, may be separated by the process of cupellation; but in the greater number of instances, the quantity of silver is so inconsiderable, as not to repay the expence of labour; and hence the lead of commerce almost always contains a minute portion of silver. Galena is also used for glazing pottery.

*Observations.*

1. Some dark-coloured varieties of galena might, with a superficial observer, be confounded with *blende*, or sulphuret of zinc; but the lustre of the zinc-ore is destroyed by scratching the surface with a knife, which is not the case with the galena or lead-glance. If both are breathed upon, the galena recovers its lustre in a moment; the *blende* very slowly. Galena is distinguished from *graphite* by its colour, greater specific gravity, and by the comparatively faint trace it leaves on paper. The same marks will serve to distinguish it from *molybdena*, which possesses, besides a foliated fracture, a considerable degree of flexibility.

2. Galena, which occurs in beds, is said to contain less silver than that found in veins.

*Second*