

the dexterous management of the blowing-pipe, requires a great deal of experience and skill, and will certainly be prejudicial to the breasts of such gentlemen as have any complaints relative to their lungs. Beside these objections, the habit of properly managing this instrument cannot be easily acquired in a certain age; and, if great precautions are not taken, an operator is apt to swallow the fumes which arise from the operation, and which are often arsenical, or otherwise noxious. We have therefore taken all possible care to avoid any such operations as would require a great deal of trouble, or a larger apparatus than may be taken on a journey or voyage without too much incumbrance. Upon the whole, it would not be amiss to take Mr. Engstroem's apparatus, as it contains a great variety of instruments we must likewise recommend; viz. a hammer, a steel to strike fire with, a loadstone, a file, a steel plate to hammer and pound substances on, a magnifying-glass, a small mattrafs, a trough for washing the ores, &c. The only additions we should chuse to make, would be a small box containing some phials with the following liquids; viz. Three phials with the concentrated acids of vitriol, marine salt, and salt-petre, together with one phial full of aqua regis, which is a compound of two-thirds of acid of nitre and one-third of muriatic acid, or in some cases of equal parts of each of the above acids; 2. A solution of salt of tartar; 3. Spirit of hartshorn, or a volatile alkali; 4. A phial with *liquor vini probatorius**; 5. Some oil of olives, or lin-

* Take one ounce of orpiment, two ounces quick-lime, twelve ounces distilled water, infuse the above substances with the water, digest the infusion in a close glass, in a moderately warm place, shake it often during twenty-four hours, let it cool, decant it, keep it in a well stopped glass; this is *liquor vini probatorius*.

seed,