earth, as in Hungary, Moſcovy, Siberia, Poland, Calabria, Egypt, Ethiopia, and the Eaſt Indies. “In England (ſays Magellan), the ſalt mines at Northwich are in a high ground, and contain it in layers or ſtrata of various colours, of which the yellow and brown are the moſt plentiful, as I have obſerved on the ſpot, which I viſited in June 1782, in company with my worthy and learned friend Mr Volta, profeſſor of Na­tural Philoſophy in the Univerſity of Pavia, and well known by his great abilities, and many diſcoveries in that branch of knowledge. The mine into which we deſcended was excavated in the form of a vaſt dome or vault under ground, ſupported by various columns of the ſalt, that were purpoſely left to ſupport the incum­bent weight. And the workmen having lighted a num­ber of candles all round its circumference, it furniſhed us with the moſt agreeable and ſurpriſing fight, whilſt we were deſcending in the large tub, which ſerves to bring up the lumps that are broken from the mine, &c. See the deſcription of the famous ſalt-mines of Wilieczka in Poland, by Mr Berniard, in the *Journal de Phyſique,* vol. 16. for 1780, pag. 479, in which the mira­culous tales concerning thoſe ſubterraneous habita­tions, villages, and towns, are reduced to their proper magnitude and eſtimate. ” But the Engliſh foſſil ſalt is unfit for the uſes of the kitchen, until by ſolution and coction it is freed from ſeveral impurities, and re­duced into white ſalt. The Britiſh white ſalt alſo is not ſo proper as ſeveral kinds of bay ſalt for curing fiſh and ſuch fleſh-meats as are intended for ſea proviſions, or for exportation into hot countries. So that for theſe purpoſes we are obliged, either wholly or in part, to uſe bay ſalt, which we purchaſe in France, Spain, and other foreign countries.

However, it does not appear that there is any other thing requiſite in the formation of bay ſalt than to evaporate the ſea-water with an exceedingly gentle heat; and it is even very probable, that our common ſea ſalt by a ſecond ſolution and cryſtallization might attain the requiſite degree of purity. Without entering into any particular detail of the proceſſes uſed for the prepara­tion of bay-ſalt in different parts of the world, we ſhall content ourſelves with giving a brief account of the beſt methods of preparing common ſalt.

At ſome convenient place near the ſea-ſhore is erect­ed the ſaltern. This is a long, low building, conſiſting of two parts; one of which is called the *fore-hοuſe,*and the other the *pan-houſe,* or *boiling-houſe.* @@ The fore- houſe ſerves to receive the fuel, and cover the work­men; and in the boiling-houſe are placed the furnace, and pan in which the ſalt is made. Sometimes they have two pans, one at each end of the ſaltern; and the part appropriated for the fuel and workmen is in the middle.

The furnace opens into the fore-houſe by two mouths, beneath each of which is a mouth to the aſh-pits. To the mouths of the furnace doors are fitted; and over them a wall is carried up to the roof, which divides the fore-houſe from the boiling-houſe, and prevents the duſt of the coal and the allies and ſmoke of the fur­nace from falling into the ſalt pan. The fore-houſe communicates with the boiling-houſe by a door, pla­ced in the wall which divides them.

The body of the furnace conſiſts of two chambers, divided from each other by a brick partition called the *mid-ſeather;* which from a broad baſe terminates in a narrow edge nigh the top of the furnace; and by means of ſhort pillars of caſt iron erected upon it, ſupports the bottom of the ſalt pan; it alſo fills up a conſiderable part of the furnace, which otherwiſe would be too large, and would conſume more coals than, by the help of this contrivance, are required. To each chamber of the furnace is fitted a grate, through which the aſhes fall into the aſh-pits. The grates are made of long bars of iron, ſupported underneath by ſtrong croſs bars of the ſame metal. They are not continued to the fartheſt part of the furnace, it being unneceſſary to throw in the fuel ſo far: for the flame is driven from the fire on the grate to the fartheſt part of the furnace; and from thence paſſes together with the ſmoke, through two flues into the chimney; and thus the bottom of the ſalt pan is everywhere equally heated.

The ſalt pans are made of an oblong form, flat at the bottom, with the ſides erected at right angles; the length of ſome of theſe pans is 15 feet, in breadth 12 feet, and the depth 16 inches; but at different works they are of different dimenſions. They are commonly made of plates of iron, joined together with nails, and the joints are filled with a ſtrong cement. Within the pan five or fix ſtrong beams of iron are fixed to its oppoſite ſides, at equal diſtances, parallel to each other and to the bottom of the pan, from which they are diſtant about eight inches. From theſe beams hang down ſtrong iron hooks, which are linked to other hooks or claſps of iron firmly nailed to the bottom of the pan; and thus the bottom of the pan is ſupported, and pre­vented from bending down or changing its figure. The plates moſt commonly uſed are of malleable iron, about four feet and a half long, a foot broad, and the third of an inch in thickneſs. The Scots prefer ſmaller plates, 14 or 15 inches ſquare. Several make the ſides of the pan, where they are not expoſed to the fire, of lead; thoſe parts, when made of iron, being found to conſume faſt in ruſt from the ſteam of the pan. Some have uſed plates of caſt iron, five or fix feet ſquare, and an inch in thickneſs; but they are very ſubject to break when unequally heated, and ſhaken (as they frequently are) by the violent boiling of the liquor. The cement moſt commonly uſed to fill the joints is plaſter made of lime.

The pan, thus formed, is placed over the furnace, being ſupported at the four corners by brick work; but along the middle, and at the ſides and ends, by round pillars of caſt iron called *taplins,* which are pla­ced at three feet diſtance from each other, being about eight inches high, and at the top, where ſmalleſt, four inches in diameter. By means of theſe pillars the heat of the fire penetrates equally to all parts of the bottom of the pan, its four corners only excepted. Care is alſo taken to prevent the ſmoke of the furnace from paſſing into the boiling-houſe, by bricks and ſtrong cement, which are cloſely applied to every fide of the ſalt pan. In ſome places, as at Blyth in Nothumberland, beſides the common ſalt pans here deſcribed, they have a preparing-pan placed between two ſalt pans, in the middle part of the building, which in other works is the fore-houſe. The ſea-water being received into this preparing-pan, is there heated and in part evaporated by the flame and heat conveyed under it through flues from the two furnaces of the ſalt pans. And the hot water, as occaſion requires, is conveyed through troughs

@@@ [mu] *Browning on the Art of Preparing Salt*