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 in height, 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 part of the salt-pan. In some places, besides the common salt­pans 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 from the preparing pan into the salt-pans. Various other contrivances have been invented to lessen the expense of fuel, and several patents have been obtained for that pur­pose ; but the salt-boilers have found the old methods the most convenient.

Between the sides of the pan and walls of the boiling- house there runs a walk five or six feet broad, where the workmen stand when they draw the salt, or have any other business in the boiling-house. The same walk is continued at the end of the pan, next to the chimney ; but the pan is

placed close to the wall at the end adjoining to the forehouse.

The roof of the boiling-house is covered with boards fastened with nails of wood, iron nails quickly mouldering into rust. In the roofs are several openings, to convey off the watery vapours ; and on each side of it a window or two, which the workmen open when they look into the pan whilst it is boiling.

Not far distant from the saltern, on the sea-shore, be­tween full sea and low-water marks, they also make a little pond in the rocks, or with stones on the sand, which they call their *sump.* From this pond they lay a pipe, through which, when the tide is in, the sea-water runs into a well adjoining to the saltern ; and from this well it is pumped into troughs, by which it is conveyed into the ship or cis­tern, where it is stored up until they have occasion to use it.

The cistern is built close to the saltern, and may be pla­ced most conveniently between the two boiling-houses, on the back of the fore-house ; it is made either of wood or of brick and clay. It sometimes wants a cover, but ought to be covered with a shed, that the salt water contained there­in may not be weakened by rains, nor mixed with soot and other impurities. It should be placed so high that the water may conveniently run out of it, through a trough, in­to the salt-pans.

Besides the buildings already mentioned, several others are required ; as storehouses for the salt, cisterns for the bittern, an office for his majesty’s salt-officers, and a dwell­ing-house for the salt-boilers.

All things being thus prepared, and the sea-water hav­ing stood in the cistern till the mud and the sand are settled to the bottom, it is drawn off into the salt-pan. And at the four corners of the salt-pan, where the flame does not touch its bottom, are placed four small lead pans, called scratch-pans, which, for a salt-pan of the size above men­tioned, are usually about a foot and a half long, a foot broad, and three inches deep, and have a bow or circular handle of iron, by which they may be drawn out with a hook when the liquor in the pan is boiling.

The salt-pan being filled with sea-water, a strong fire of pit-coal is lighted in the furnace; and then, for a pan which contains about four hundred gallons, the salt-boiler takes

the whites of three eggs, and incorporates them well with two or three gallons of sea-water, which he pours into the salt-pan whilst the water contained therein is only luke­warm, and immediately stirs it about with a rake, that the whites of the eggs may everywhere be equally mixed with the salt water.

Instead of whites of eggs, at many salterns, as at most of those near Newcastle, they use blood from the butchers, either of sheep or black cattle, to clarify the sea-water; and at many of the Scotch salterns they do not give themselves the trouble of clarifying it. As the water grows hot, the whites of eggs separate from it a black frothy scum, which rises to the surface of the water, and covers it all over. As soon as the pan begins to boil, this scum is all risen, anil it is then time to skim it off.

The most convenient instruments for this purpose are skimmers of thin ash boards, six or eight inches broad, and so long that they may reach above half way over the salt­pan. These skimmers have handles fitted to them ; and the salt-boiler and his assistant, each holding one of them on the opposite sides of the pan, apply them so to each other that they overlap in the middle, and beginning at one end of the pan, carry them gently forward together, along the surface of the boiling liquor, to the other end ; and thus, without breaking the scum, they collect it all to one end of the pan, whence they easily take it out.

After the water is skimmed, it appears perfectly clear and transparent ; and they continue boiling it briskly till so much of the fresh or aqueous part is evaporated, that what remains in the pan is a strong brine almost fully sa­turated with salt, so that small saline crystals begin to form on its surface ; and this operation, in a pan filled fifteen inches deep with water, is usually performed in five hours.

The pan is then filled up a second time with clear sea­water drawn from the cistern ; and about the time when it is half filled, the scratch-pans are taken out, and being emptied of the scratch found in them, are again placed in the corners of the salt-pan. The scratch taken out of these pans is a fine white calcareous earth found in the form of powder, which separates from the sea-water during its coc- tion, before the salt begins to form into grains. This sub­tile powder is violently agitated by the boiling liquor, until it is driven to the corners of the pan, where the motion of the liquor being more gentle, it subsides into the scratch- pans placed there to receive it ; in them it remains undis­turbed, and thus the greatest part of it is separated from the brine.

After the pan has again been filled up with sea-water, three w hites of eggs are mixed with the liquor, by which it is clarified a second time, in the manner before described ; and it is afterwards boiled down to a strong brine as at first, which second boiling may take up about four hours. The pan is then filled up a third time with clear sea-water; and after that a fourth time, the liquor being each time cla­rified and boiled down to a strong brine, as before related, and the scratch-pans being taken out and emptied every time that the pan is filled up. Then, at the fourth boil­ing, as soon as the crystals begin to form on the surface of the brine, they slacken the fire, and only suffer the brine to simmer, or boil very gently. In this heat they constant­ly endeavour to keep it all the time that the salt corns or granulates, which may be nine or ten hours. The salt is said to granulate when its minute crystals cohere together into little masses or gains, which sink down in the brine, and lie at the bottom of the salt-pan.

When most of the liquor is evaporated, and the salt thus lies in the pan almost dry on its surface, it is then time to draw it out. This part of the process is performed by rak­ing the salt to one side of the pan into a long heap, where it drains a while from the brine, and is then filled out into barrows or other proper vessels, and carried into the store­