have therefore avoided to mention the obſervations and ρropoſed amendments of thoſe who have written on this ſubject. Had we done ſo, we ſhould have ſwelled the preſent article to too great a ſize, without accompliſhing the purpoſe which we have in view ; for our intention is not to inſtruct the planters, but to give a diſtinct account of the moſt approved methods which the planters have generally adopted. But though we judge it uſeless to trouble our readers with all the little varieties in the proceſs which different persons employ, we flatter ourſelves it will not be diſagreeable to learn by what methods the French make their ſugar purer and whiter than ours. A quantity of ſugar from the cooler is put into conical pans or earthen pots, called by the French *formes,* having a ſmall perforation at the apex, which is kept cloſed. Each cone, reverſed on its apex, is ſupported in another earthen veſſel. The syrup is ſtirred together, and then left to cryſtallize. At the end of 15 or 16 hours, the hole in the point of each cone is opened, that the impure ſyrup may run out.@@ The baſe of theſe ſugar loaves is then taken out, and white pulverized ſugar ſubſtituted in its ſtead ; which being well pressed down, the whole is covered with clay moiſtened with water. This water filters through the maſs, carrying the ſyrup with it which was mixed with the ſugar, but which by this management flows into a pot ſubſtituted in the place of the firſt. This ſecond fluid is called *fine ſyrup.* Care is taken to moiſten and keep the clay to a proper de­gree of ſoftneſs as it becomes dry. The ſugar loaves are af­terwards taken out, and dried in a ſtove for eight or ten days ; after which they are pulverized, packed, and ex­ported to Europe, where they are still farther purified. The reaſon assigned why this proceſs is not univerſally adopted in the Britiſh ſugar iſlands is this, that the water which di­lutes and carries away the molaſſes diſſolves and carries with it ſo much of the ſugar, that the difference in quality does not pay for the difference in quantity. The French plan­ters probably think otherwiſe, upwards of 400 of the plan­tations of St Domingo having the neceſſary apparatus for claying and actually carrying on the ſyſtem.

The art of refining ſugar was firſt made known to the Europeans by a Venetian, who is ſaid to have received 100,000 crowns for the invention. This diſcovery was made before the new world was explored ; but whether it was an invention of the perſon who firſt communicated it, or whether it was conveyed from China, where it had been known for a conſiderable time before, cannot now perhaps be accurately aſcertained. @@We find no mention made of the refining of ſugar in Britain till the year 1659, though it probably was practiſed ſeveral years before. For in the Portugueſe iſland of St Thomas in 1624 there were 74 ſugar ingenios, each having upwards of 200 ſlaves. The quantity of raw ſugar imported into England in 1778 amounted to 1,403,995 cwts. ; the quantity imported into Scotland in the ſame year was 117,285 cwts. ; the whole quantity im­ported into Great Britain in 1787 was 1,026,741 cwts.

The ſugar which undergoes the operation of refining in Europe is either raw ſugar, ſometimes called *muscovado* or saf*fonado,* which is raw ſugar in a purer ſtate. The raw ſu­gar generally contains a certain quantity of melasses as well as earthy and seculent ſubſtances. The cassonado, by the operation of earthing, is freed from its melasses. As the intention of refining theſe ſugars is to give them a higher degree of whiteneſs and ſolidity, it is neceſſary for them to undergo other processes The firſt of theſe is called *clarifi­cation.* It consiſts in diſſolving the ſugar in a certain proportion of lime-water, adding a proper quantity of bul­lock’s blood, and expoſing it to heat in order to re­move the impurities which ſtill remain. The heat is increaſed very gradually till it approach that of boiling water.By the aſſiſtance of the heat, the animal matter which was thrown in coagulates, at the ſame time that it attracts all the ſolid feculent and earthy matter, and raiſes it to the ſurface in the appearance of a thick foam of a browniſh co­lour. As the seculencies are never entirely removed by a firſt proceſs, a ſecond is neceſſary. The ſolution is there­fore cooled to a certain degree by adding ſome water ; then a freſh quantity of blood, but leſs conſiderable than at firſt, is poured in. The fire is renewed, and care is taken to in- creaſe the heat gently as before. The animal ſubſtance ſeizes on the impurities which remain, collects them on the ſurface, and they are then skimmed off The ſame operation is re­peated a third and even a fourth time, but no addition is made to the liquor except water. If the different proceſſes have been properly conducted, the ſolution will be freed from every impurity, and appear tranſparent. It is then conveyed by a gutter into an oblong baſket about 16 inches deep, lined with a woollen cloth ; and after filtering through this cloth, it is received in a ciſtern or copper which is pla­ced below.

The ſolution being thus clarified, it undergoes a ſecond general operation called *evaporation.* Fire is applied to the copper into which the ſolution was received, and the liquid is boiled till it has acquired the proper degree of conſiſtency. A judgment is formed of this by taking up a ſmall portion of the liquid and drawing it into a thread. When, after this trial, it is found ſufficiently viſcous, the fire is extinguiſhed, and the liquid is poured into coolers. It is then ſtirred violently by an inſtrument called an *oar,*  from the reſem­blance it bears to the oar of a boat. This is done in order to diminiſh the viſcoſity, and promote what is called the *granulation,* that is, the forming of it into grains or imper­fect cryſtals. When the liquid is properly mixed and cool­ed, it is then poured into moulds of the form of a ſugar loaf. Theſe moulds are ranged in rows. The ſmall ends, which are loweſt, are placed in pots ; and they have each of them apertures flopped up with linen for filtering the ſyrup, which runs from the moulds into the pots. The liquor is then taken out ſlowly in ladlefuls from the coolers, and pou­red into the moulds. When the moulds are filled, and the contents ſtill in a fluid ſtate, it is neceſſary to ſtir them; that no part may adhere to the moulds, and that the ſmall cryſtals which are juſt formed may be equally diffuſed thro’ the whole maſs. When the ſugar is completely cryſtallized; the linen is taken away from the apertures in the moulds’ and the ſyrup, or that part which did not cryſtallize, deſcends into the pots in which the moulds are placed. After this purgation the moulds are removed and fixed in other pots, and a ſtratum of fine white clay diluted with water is laid on the upper part of the loaf. The water deſcending thro’ the ſugar by its own weight, mixes with the ſyrup which ſtill remains in the body of the loaf, and waſhes it away. When the clay dries, it is taken off, and another covering cf moist clay put in its place ; and it it be not then sufficiently waſhed, a third covering of clay is applied. After the loaves have stood ſome days in the moulds, and have acquired a conſiderable degree of firmneſs and ſolidity, they are taken out, and carried to a ſtove, where they are gradually heated to the 50⁰ of Reaumur (64⁰ of Fahrenheit),1 in order to diſſipate any moisture which may be ſtill con­fined in them. After remaining in the ſtove eight days, they are taken out ; and after cutting off all diſcolouring ſpecks, and the head it ſtill wet, they are wrapped in blue paper, and are ready for ſale. The several ſyrups collected’ during the different parts of the proceſs, treated in the same manner which we have juft deſcribed, afford ſugars of infe­rior quality ; and the laſt portion, which no longer affords, any ſugar, is sold by the name of melasse*s.*

@@@[mu] Chaptal's Chemistry, vol. iii.

@@@[mu] Anderson's Origin of Commerce.