syrup, prepared by boiling a little brown ſugar in water, juſt before he went to bed, that he did from a doſe of opium. It has been ſuppoſed by ſome of the early phyſicians of our country, that the ſugar obtained from the maple-tree is more medicinal than that obtained from the West India ſugar- cane ; but this opinion I believe is without foundation. It is preferable in its qualities to the Weſt India ſugar only from its superior cleanliness.

" Cases may occur in which ſugar may be required in me­dicine, or in diet, by perſons who refuse to be benefited, even indirectly by the labour of ſlaves. In such cases the innocent maple ſugar will always be preferred. It has been ſaid, that ſugar injures the teeth ; but this opinion now has ſo few advocates, that it does not deserve a ſerious re­futation.”

In the account which we have given above of the method of cultivating and manufacturing ſugar, we have had in our eye the plantations in the West Indies, where ſlaves alone are employed ; but we feel a peculiar pleaſure in having it in our power to add a ſhort deſcription of the method uſed in the Eaſt Indies, becauſe there ſugar is manufactured by free men, on a plan which is much more economical than what is followed in the West-Indies. The account which we mean to give is an extract from the report of the committee of Privy-council for trade on the ſubject of the African ſlave- trade, drawn up by Mr Botham. We ſhall give it in the author’s own words.

“ Having been for two years in the Engliſh and French Weſt-Indian iſlands, and ſince conducted ſugar eſtates in the East-Ιndies ; before the abolition of the ſlave-trade was agitated in parliament, it may be deſirable to know that ſugar of a superior quality and inferior price to that in our iſlands is produced in the Eaſt-Indies; that the culture of the cane, the manufacture of the ſugar and arrack, is, with theſe material advantages, carried on by free people. China, Bengal, the coaſt of Malabar, all produce quantities of ſugar and ſpirits ; but as the moſt conſiderable growth of the cane is carried on near Batavia, I ſhall explain the improved manner in which ſugar eſtates are there conducted. The proprietor of the eſtate is generally a wealthy Dutchman, who has erected on it ſubſtantial mills, boiling and curing houſes. He rents this eſtate to a Chineſe, who reſides on it as a ſuperintendant ; and this renter (ſuppoſing the eſtate to conſiſt of 3c0 or more acres) relets it to freemen in par­cels of 50 or 60 on theſe conditions : “ That they ſhall plant it in canes, and receive ſo much *per* pecul of 133 1/2 pounds for every pecul of ſugar that the canes ſhall pro­duce.”

When crop time comes on, the ſuperintendant collects a sufficient number of perſons from the adjacent towns or villa­ges, and takes off his crop as follows. To any ſet of tradeſmen who bring their carts and buffaloes he agrees to give ſuch a price *per* pecul to cut all his crop of canes, carry them **to** the mill and grind them. A second to boil them *per* pecul. **A** third to clay them and baſket them for market *per* pecul. So that by this method of conducting a ſugar eſtate the renter knows to a certainty what the produce of it will coſt him *per* pecul. He has not any permanent or unnecessary expence ; for when the crop is taken off, the taſkmen return to their ſeveral purſuits in the towns and villages they came from ; and there only remains the cane planters who are preparing the next year’s crop. This like all other complex arts, by being divided into ſeveral branches, renders the labour cheaper and the work more perfectly done.

Only clayed ſugars are made at Batavia; theſe are in quality equal to the beſt sort from the West Indies, and are sold ſo low from the ſugar eſtates as eighteen ſhillings ſterling *per pe*cul of 133 1/2 lbs. This is not the selling price to the trader at. Batavia, as the government there is arbitrary, and ſugar subject to duties impeded at will. The Shabander ex­acts a dollar *per* pecul on all ſugar exported. The price of common labour is from 9d to 10d *per* day. By the method of carrying on the ſugar eſtates, the taſkmen gain conſiderably more than this not only from working extraordinary hours, but from being conſidered artiſts in their ſeveral branches. They do not make ſpirits on the ſugar eſtates. The melasses is font for ſale to Batavia, where one diſtillery may purchaſe the produce of an hundred eſtates. Here is a vaſt ſaving and reduction of the price of ſpirits ; not as in the West Indies, a diſtillery, for each eſtate ; many cen­tre in one, and arrack is sold at Batavia from 21 to 25 rix- dollars per leaguer of 160 gallons ; say 8d *per* gallon.

*The Sugar Maple,* (the *acer ſaccharinum* of Linnæus), as well as the ſugar-cane, produces a great quantity of ſugar. This tree grows in great numbers in the weſtern counties of all the middle ſtates of the American union. Thoſe which grow in New York and Pennſylvania yield the ſugar in a greater quantity than thoſe which grow on the waters of Ohio—Theſe trees are generally found mixed with the beech, hemlock, white and water aſh, the cucumber-tree, linden, aſpen, butter nut, and wild cherry trees. They ſometimes appear in groves covering live or six acres in a body, but they are more commonly interſperſed with ſome or all of the foreſt trees which have been mentioned.@@ From 30 to 50 trees are generally found upon an acre of ground. They grow only in the richeſt ſoils, and frequently in ſtony ground. Springs of the purest water abound in their neigh­bourhood. They are, when fully grown, as tall as the white and black oaks, and from two to three feet in diameter. They put forth a beautiful white bloſſom in the ſpring be­fore they ſhow a ſingle leaf. The colour of the blossom diſtinguiſhes them from the acer rubrum, or the common maple, which affords a blossom of a red colour. The wood of the ſugar maple-tree is extremely inflammable, and is pre­ferred upon that account by hunters and ſurveyors for fire­wood. Its ſmall branches are ſo much impregnated with ſugar as to afford ſupport to the cattle, horſes, and ſheep of the firſt ſettlers, during the winter, before they are able to cultivate forage for that purpoſe. Its aſhes afford **a** great quantity of potaſh, exceeded by few, or perhaps by none, of the trees that grow in the woods of the United States. The tree is ſuppoſed to arrive at its full growth in the woods in twenty years.

It is not injured by tapping ; on the contrary, the oftener it is tapped, the more syrup is obtained from it. In this respect it follows a law of animal ſecretion. A ſingle tree had not only ſurvived, but flouriſhed after forty-two tappings in the same number of years. The effects of a yearly discharge of lap from the tree, in improving and increaſing the ſap, are demonſtrated from the ſuperior excellence of thoſe trees which have been perforated in an hundred places, by a ſmall wood-pecker which feeds upon the ſap. The trees, after having been wounded in this way, diſtil the re­mains of their juice on the ground, and afterwards acquire a black colour. The ſap of theſe trees is much ſweeter to the taſte than that which is obtained from trees which have not been previouſly wounded, and it affords more ſugar.

From twenty-three gallons and one quart of ſap, procured in twenty-four hours from only two of theſe dark coloured trees, Arthur Noble, Eſq; of the ſtate of New York, ob­tained four pounds and thirteen ounces of good grained ſugar.

A tree of an ordinary ſize yields in a good ſeaſon from twenty to thirty gallons of ſap, from which are made from five to six pounds of sugar. To this there are ſometimes remarkable exceptions. Samuel Lowe, Eſq; a juſtice of

@@@[mu] Transactions of the American Philosophical Society, vol iii.