

under the weight of apples. One, for instance, which was then one foot in diameter, was grafted with Baldwins, and is now loaded with six barrels at least of nice apples, which, with previous crops, will amount to sixteen barrels, sold at from \$2 to \$3 per barrel. I noticed trees in other orchards, and by the roadside, which were propped up to support the load of apples, while some branches which had been neglected had split down."

Miscellaneous.

THE PROCESS OF SUGAR MAKING.—The cane is cut from the fields by companies of men and women working together, who use an instrument called a machete, which is something between a sword and a cleaver. Two blows with this slash off the long leaves, and a third blow cuts off the stalks near to the ground. At this work the laborers move like reapers, in even lines, at stated distances. Before them is a field of dense, high-waving cane, and behind them strewn wrecks of stalks and leaves. Near, and in charge of the party, stands a driver, or more grandiloquently, a contra-mayoral, with the short, limber plantation whip, the badge of his office, under his arm. Ox carts pass over the field and are loaded with the cane, which they carry to the mill.—The oxen are worked in the Spanish fashion, the yoke being strapped upon the head close to the horns, instead of being hung round the neck, as with us, and are guided by goads and by a rope attached to a ring through the nostrils. At the mill the cane is tipped from the carts into large piles by the side of the platform. From these piles it is placed carefully, by hand, lengthwise, in a long trough. This trough is made of planks, and moved by the power of the endless chain connected with the engine. In this trough it is carried between heavy, horizontal, cylindrical rollers, where it is crushed, the juice falling into receivers below, and the crushed cane passing off and falling into a pile on the other side. This crushed cane (bagazo) falling from between the rollers, is gathered into baskets by men and women, who carry it on their heads into the fields, and spread it for drying. There it is watched and tended as carefully as new-mown grass at haymaking, and raked into cocks and winrows on an alarm of rain. When the cane is placed under sheds for protection against wet. From the sheds and from the fields, it is loaded into carts and drawn to the furnace doors, into which it is thrown by negroes, who crowd it in by the armful,

and rake it about with long poles. Here it feeds the perpetual fires by which the steam is made, the machinery moved, and the cane-juice boiled. The care of the bagazo is an important part of the system; for if that becomes wet, and fails, the fires must stop, or resort be had to wood, which is scarce and expensive. Thus, on one side of the rollers is the ceaseless current of fresh, full, juicy cane stalks, just cut from the open field; and on the other side is the crushed, mangled, juiceless mass, drifting out at the draught, and fit only to be cast into the oven and burned. This is the way of the world as it is the course of art.—The cane is made to destroy itself. The ruined and corrupted furnish the fuel and fan the flame that lures on and draws in and crushes the fresh and wholesome; and the operation seems about as mechanical and unceasing in the one case as in the other. From the rollers, the juice falls below into a large receiver, from which it flows into great open vats, called defecators. These defecators are heated by the exhaust steam of the engine, led through them in pipes. All the steam condensed forms water, which is returned warm into the boiler of the engine. In the defecators, as their name denotes, the scum of the juice is purged off, so far as the heat alone will do it. From the last defecator the juice is passed through a trough into the first caldron. Of the caldrons there is a series, or, as they call it, a train, through which all the juice must go. Each caldron is a large, deep, copper vat, heated very hot, in which the juice seethes and boils. At each stand a strong negro, with long, heavy skimmer in hand, stirring the juice and skimming off the surface.—This scum is collected and given to the hogs, or thrown upon the muck heap, and is said to be very fructifying. The juice is ladled from one caldron to the next, as fast as the office of each is finished. From the last caldron, where its complete crystallization is effected, it is transferred to coolers, which are large shallow pans. When fully cooled, it looks like brown sugar and molasses mixed. It is then shovelled from the coolers into hogsheds. These hogsheds have holes bored in their bottoms, and, to facilitate the drainage, strips of cane are placed in the hogsheds, with their ends in these holes, and the hogshed is filled. The hogsheds are set on open frames, under which are copper receivers, on an inclined plane, to catch and carry off the drippings from the hogsheds. These drippings are the molasses which is collected and put into tight casks. I believe I have given the entire process. When it is remembered