

Fifty Years Ago.

From the "Sugar Cane," April, 1871.

EUGENE FELTZ was one of the earliest investigators taking up the question of the cause of the formation of molasses; and in this issue of the *Sugar Cane* he exposed some of his views. He held that the effect of the inorganic and organic salts present was physical rather than chemical, in that they increased the viscosity of the liquor to such an extent as gradually to inhibit the movement of the sugar molecule in the operation of crystal formation. In his own words, "the substances mineral or organic, crystallizable or uncrystallizable, which are generally met with in our molasses, do not possess any special power of dissolving sugar, as for a long time has been believed. They act in a purely physical, we might almost say mechanical, manner. Thus they may appear completely inoffensive in a solution rich in sugar, but their pernicious effect becomes more and more apparent in proportion as the solutions are poorer in sugar and fuller of impurities." He cited experiments in this paper showing that both calcium chloride and sodium carbonate, though classed by MARSCHALL as negative molasses formers, "possess no power of dissolving sugar," but exhibit a marked effect in increasing the viscosity of concentrated solutions.

PATRICK NEILSON, of Trelawney, Jamaica, contributed a paper on the manufacture of rum, this being intended to be complementary to the article that had appeared in the previous issue by "J. S."¹ He pointed out that the best results were obtained by slow fermentation conducted at a low temperature, and he remarks that "what in fact first drew my attention to seeking out a flavour in rum was the running I first got from what is known here as the 'dirty cistern,' a receptacle for all the refuse, bottoms, etc., of the other vats; I was astonished to find at the can pit mouth as the rum came over, an exquisite flavour . . ." He endeavoured to apply the conditions obtaining in the "dirty cistern" to distillery practice; and stated that he succeeded in getting such successful results that a rich fruity odour pervaded the house, which effect he thought was produced "not only by a slow decay or putrefaction going on, but also by an acid generated thereby." Other factors likely to contribute to flavour were considered to be the use of the skimmings having a very acid reaction; a moderate temperature; and the quality of the water used. He also believed that the use of "rum cane" constituted one of the details requisite for producing good flavour, that is rotten or half eaten cane, which had been allowed to undergo a slow fermentation while lying in the field and yard.

It was announced in this issue that at a sitting of the Chamber of Agriculture, Mauritius, a letter was read by M. LEMERLE, of Réunion, stating that he had been so fortunate on his estate at Rivière-des-Creoles as to establish the possibility of the reproduction of sugar cane from seed. The President closed the long discussion which followed the reading of this letter by saying that the future would show the extent of the importance of the discovery.

A patent taken out by J. F. CAIL² was abstracted in this issue. Cane was supplied by a travelling table to three 2-roller mills, and macerated with water while passing from the first to the second, and from the second to the third.

¹ *I.S.J.*, 1921, 127.

² English Patent, 2212 of 1870.