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FINANCE AND INSURANCE REVIEW.

MONTREAL, DECEMBER 6, 1878.

SUGAR REFINING.

So much has been heard lately about frauds, adulteration, &c., in connection with the importation and refining of sugar in the United States, that it becomes necessary to inquire into these allegations, especially at a time when a reconstruction of our tariff in regard to sugar is contemplated. Instead of being any longer the consumer of sugar refined abroad, Canada intends to become again her own refiner; consequently, what has taken place in a refining country which has been our purveyor for some years, cannot fail to be of interest in the new position we purpose to assume. If frauds have been committed, if adulterations have existed, the country should know how to prevent them in the future.

The conflict of opinions in regard to the allegations of fraud has been very great, and, amidst fierce assertions and no less angry denegations, we must try to find out whether the abuses complained of can be substantiated. The consumption of sugar in the United States amounts to 750,000 tons annually, and the duty collected on

the portion of this large consumption that is not a domestic production, is over \$34,000,000. Such large figures give ample scope to the exaggerations of the contending parties, and it is with a great deal of caution that any of their statements should be accepted. According to the records in the Bureau of Statistics at Washington, the importation of sugar entered into consumption in the fiscal year ending June 30th, 1877, was, 1877—1,455,387,854 lbs.; duties received, \$34,337,350; rate per lb., .0236c. It is stated in relation to grades of sugar D S that the proportion of imported sugars entered into consumption are as follows:—

Of No. 7 Dutch standard, 20 per cent.	
Of No. 10 do do	65 do
Above No. 10 do do	15 do

The duties levied on the three preceding classifications are:—

On No. 7 Dutch standard, 2 3-16c. per lb.	
On No. 10 do do	2½ do
Above No. 10 average	3 2-16c. do
Average duty as above	would be .0253c. do

1877—consumption, 1,455,387,854 lbs.
Average duty, .0253c.....\$36,821,302
Duty collected..... 34,337,350

Revenue discrepancy.....\$ 2,483,952

While on the part of refiners it is denied that any undervaluation took place, their adversaries raise the amount of loss of revenue to \$5,367,449 for the year 1877 alone. Our estimate of the loss of revenue is nearer the truth, as the proportion of low grade sugars in a refining country must be quite as large as that we based our calculation upon. The other fraud, consisting of coloring sugars of high grade to enter them at a lower rate, has been proved in one instance only, and the Secretary of the Treasury is represented as having said that this case settled the fact that Demarara sugars were artificially colored to defraud the revenue, but that the defendants in the case were not proven to have knowledge of the fraud, and, therefore, were not technically guilty. It will naturally be asked, who was to be benefited by the fraud?

As to the so-called "monstrous adulterations, which have rioted unchecked, and placed poisonous compounds, called refined sugars and pure syrups, upon the tables of the people whose treasury these sugar ring manipulators have previously robbed, to increase their gains from such nefarious practices," they have never been made specific and substantiated. The presence of Glucose in the refined sugar, and the use of Muriate of Tin are the charges brought against the refiners.

The first count has never been set forth by people having the slightest knowledge of the process of refining, and the second one has not been established. Glucose has the same chemical composition as crystallized sugar. If the chemical formula of sugar is C¹², H¹¹, O¹¹, that of Glucose is C¹², H¹², O¹², having consequently one equivalent more of water. Cane sugar, under the action of the acids that the impurities in the raw sugar may contain, is converted into Glucose, or, in what the refiners and chemists call "inverted sugar." A dissolution of Glucose deviates to the right the polarized light as does a dissolution of sugar. Grape sugar, fruit sugar, syrup of fecula and Glucose are synonymous. Is there anything noxious in these? Imperfectly refined sugars may contain Glucose, which we have proved to be harmless; well-refined, pure white sugar does not contain any.

The use of Muriate of Tin has never been proved, and Professor Chandler, the President of the Board of Health, says: "The adulteration of refined sugar and syrup has often been alleged. There is no foundation whatever for that belief. The writer has examined a great number and variety of sugars, and has never found an adulterated and unwholesome specimen. A similar idea is entertained with regard to syrup. The only foundation for this is the fact that one or two houses prepare a syrup by combining sugar-house molasses with glucose syrup prepared from Indian corn, which is entirely harmless; and some refiners have used minute quantities of a tin salt and free acid to improve the color of the syrup, but the quantities employed were too small to give any cause for harm." Frauds on the revenue may have successfully been attempted, but no adulterations dangerous to health have ever been discovered or substantiated.

The rumors of frauds and adulterations have caused the agitation of a radical change in the mode of levying duty on raw sugar. It is proposed, on the adjustment of a new tariff, to impose a uniform duty on sugar of all grades and cost, the advocates of this measure resting upon the simplicity of such a tariff, and the impossibility of losses to the Government by "fraudulent coloring," arguing also that the producing countries will then expend more labor in the manufacture, and send sugar of higher grades to meet the changes of duty. On the other side, the refining interest, and a portion of the importing interest also, maintain that, with their perfect machinery and appliances, sugar can be clarified or whitened cheaper in