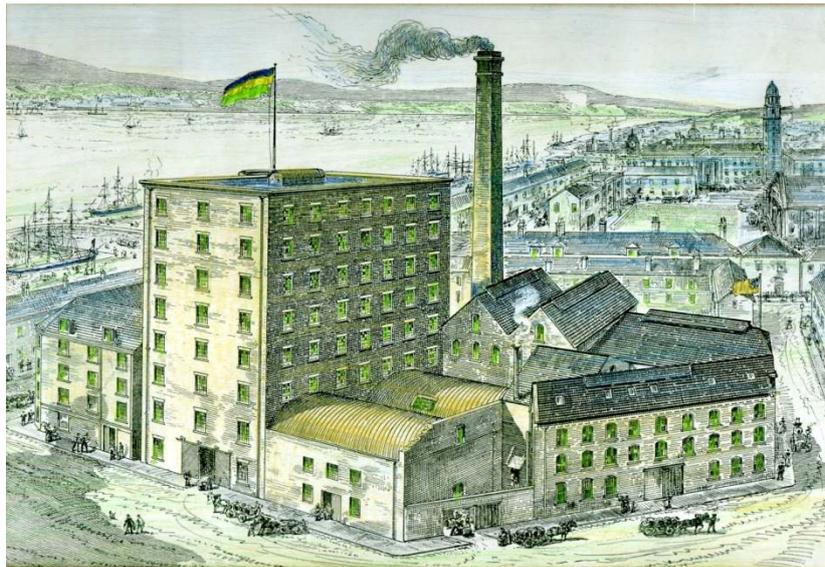


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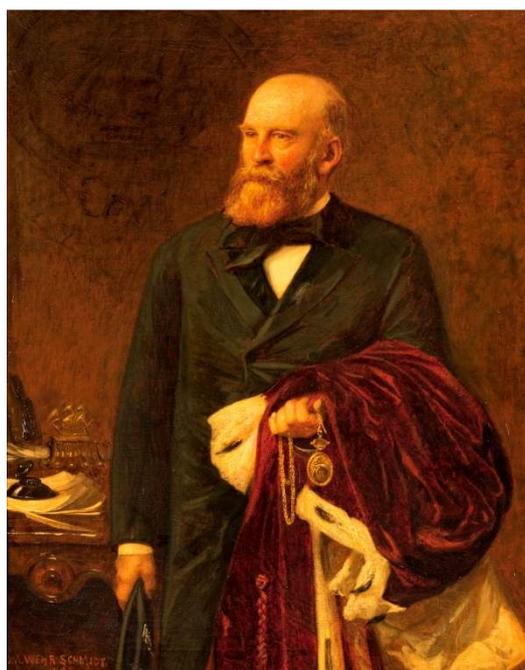
The Sugar Industry



The refining of 1st large refinery built in 1765 by Mark Kuhl at the bottom of Sugarhouse Lane sugar came to be associated with Greenock for over two hundred years. Colonial connections, initially with the slave colonies in the West Indies, ensured a supply of the raw material for processing and later imperial expansion led to the Greenock sugar trade pursuing business in almost all parts of the world. The refining trade made several dynastic business fortunes and these families came to have an important role in the business and politics of nineteenth century Greenock.

Greenock's first refinery was erected about 1765 by Mark Kuhl at the bottom of Sugarhouse Lane. Thereafter the trade expanded rapidly and by 1881 eleven refineries were in operation including John Walker & Co. and Neill, Dempster & Neill, Westburn Refineries Ltd.

With economic power came political influence and Abraham Lyle, whose firm later amalgamated with that of Joseph Tate, became a Provost of Greenock. In the 19th century Greenock was second only to London as producer of sugar. There were still three refineries present in the 1950s. Now, however, there are none; the Westburn Refinery, owned by Tate & Lyle Ltd., being the last refinery to close on 29th August 1997.



Portrait of Abram Lyle (1820-1891) as Provost of Greenock.

'The produce of the Clyde refineries, and of Greenock in particular, equals, if it does not excel that of any sugar refining port in Europe, as the prizes awarded at the Great Exhibitions of 1851 and 1862 doubtless testify. In consequence of recent improvements in the various branches of the refiners art, the quality of the product on the Clyde can rival that of any port in Britain, even London, that great metropolis of the world, which boasts so much of her skill and genius. The Thames may boast, and perhaps justly, of the superior qualities of her 'London Porter' but compared with the product of the Clyde refineries, she possesses no ground for boasting of her refined sugars. The Thames may in some respects possess advantages over the Clyde for prosecuting sugar refining: but, strange to say, with these advantages if they really exist, the London refiners are unable to rival, or even to cope with those of the Clyde in the quality of the refined article. To use a familiar expression, the London refiners "cannot hold the candle to those of the Clyde".'

from 'Essay on sugar: and a general treatise on sugar refining as practised in the Clyde refineries embracing the latest improvements' by Robert Niccol, 1864



Medal awarded to Anderson Orr of Greenock for the 'highest condition of refined sugar' at the General Exhibition, London in 1862.

The Sugar Refining Process

Sugar can be extracted commercially from sugar cane or sugar beet. The sugar refining industry in Greenock used sugar cane as the raw material from which the sugar was processed though beet sugar was also refined in Greenock in the past. Sugar cane grows in semi-tropical parts of the world in countries such as the West Indies, Fiji, Cuba and Australia.

The first part of the refining process took place on the plantations where the canes were crushed in factories (this also brought industry to Greenock, since several local firms made cane crushing equipment). The juice was boiled and then formed raw sugar crystals. The raw sugar was then transported to the refinery for purification to remove colour, dirt and living organisms. During this process the sugar was washed and filtered. Until around the 1840s in Greenock bullock's blood was used as the filtering agent, which was then superseded by animal charcoal made from camel bones was substituted. The well-known local firm of John Poynter was established in 1833 for the production of the filtering agent used to render the sugar white.

The filtering process produced a clear, pure sugar liquor and the water in this solution was then removed by evaporation in vacuum pans. Finally, the remaining moisture in the sugar was removed by centrifugal action, with golden syrup being produced from the liquor after centrifuging.

The stages of the sugar refining process were as follows. A series of boilings and extractions is followed by a filtration then a crystallisation. Different stages are repeated (1st. boiling, 2nd. boiling etc.) and the product, residue and liquor has its own name. A simple description of the process has the following steps:

The Stages of Sugar manufacturing

- Cane growing
- Field cutting
- Milling
- Raw sugar factory
- Transport

- Refining - which divides into:-
- Washing
- Centrifuging
- Filtration
- Charcoal filtration
- Crystallisation
- Separation
- Drying
- Packaging



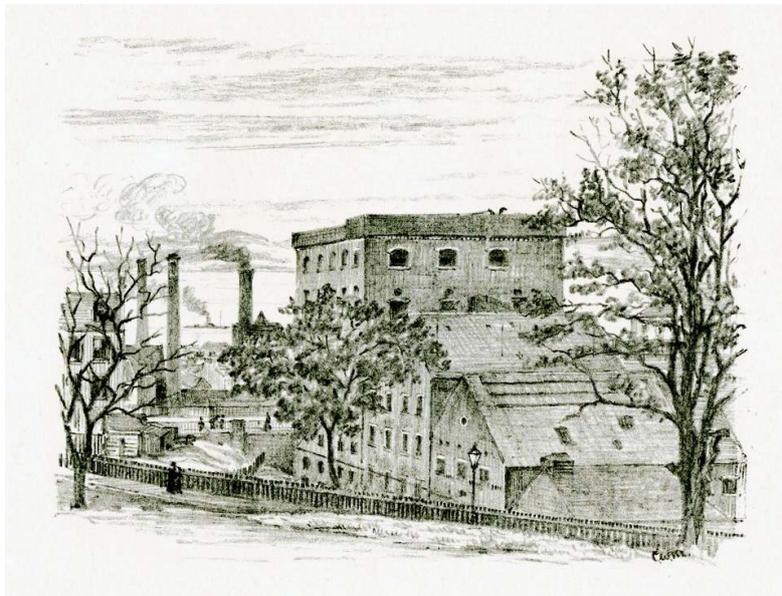
Model of a 19th century sugar crystallising pan.



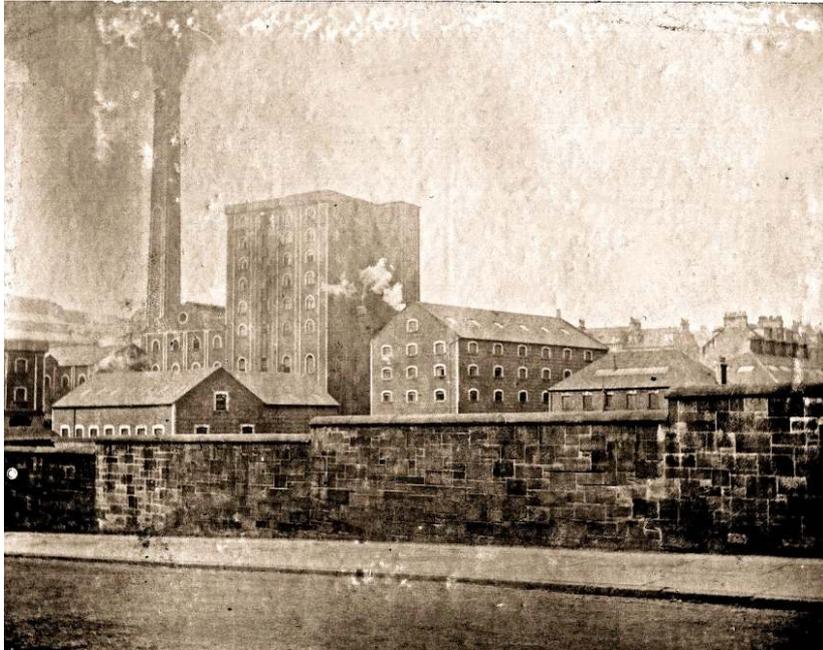
Presentation clock to Mr. Rorison on leaving the sugar refinery.
For a contemporary account see the Greenock Telegraph of 1877 below.

PRESENTATION TO MR RORISON.

On Saturday afternoon the employes of Messrs Crawhall, Allison & Co., sugar refiners, met in one of the flats of the crushed stores of the works to do honour to Mr Thomas D. Rorison, one of their number, on the occasion of changing his situation. Mr Twaddle was called to the chair on the motion of Mr Getty. The Chairman then made a few opening remarks, and afterwards called upon Mr D. Bryce. That gentleman thanked the company for the honour they had done him in selecting him for the pleasant duty of making a presentation to a worthy friend. Mr Rorison (he said) was leaving them to better his position, and while they would realise his absence, yet they would congratulate him on attaining a higher position. He was sure Mr Rorison would fill that position with credit to himself and to the entire satisfaction of his employers. He then, in name of the subscribers, presented Mr Rorison with a very elegant timepiece and with a gold ring for Mrs Rorison. Mr Bryce added that he had known Mr Rorison for 20 years, having been working with him in various positions during that period; and concluded by expressing the hope that Mr Rorison and his good wife might be long spared to each other. Mr Rorison returned thanks for the gifts, remarking amongst other things that he had been in Messrs Crawhall, Allison & Co.'s service for seven years. The timepiece was inscribed as follows:—"Presented to Mr Thomas D. Rorison, along with a gem ring to Mrs Rorison, by the employes of Messrs Crawhall, Allison & Co., sugar refiners, as a token of esteem, on the occasion of his leaving the works in order to better his position. Greenock, July 14th, 1877." The articles were supplied by Messrs Ward & Co., Hamilton Street.



The Orchard Street refinery in 1886.



The sugarhouse of Neill, Dempster & Neill at Greenock, April 1893.



Men wheeling sugar bags at the Neill, Dempster & Neill sugar refinery, Greenock in 1894.

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