

UNITED STATES PATENT OFFICE.

WALTER R. ELMENHORST, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN THE MANUFACTURE OF SUGAR.

Specification forming part of Letters Patent No. **146,893**, dated January 27, 1874; application filed November 1, 1873.

To all whom it may concern:

Be it known that I, WALTER R. ELMENHORST, of Jersey City, in the county of Hudson and State of New Jersey, have invented an Improvement in the Manufacture of Refined Sugar, of which the following is a specification:

The object of this invention is to convert at once, into a marketable sugar of fine quality, the whole of the saccharine matter contained in the mixture of crystallized sugar and sirup resulting from the process of boiling in a vacuum-pan, and to save the time and expense of treating in centrifugal machines, or otherwise draining, the sugar and reboiling the sirup; and to this end the invention consists in subjecting said mixture to the direct action of a current or currents of heated air, whereby the aqueous matter is removed from said mixture, and a marketable sugar of fine quality left as the residuum.

While hot air has before been applied in various ways, to expedite or facilitate the manufacture of sugar, this invention essentially differs from other processes in which heated air has been employed, by applying the current or currents of heated air to the mixture or mass, as it comes from, or after it has left, the vacuum-pan.

The apparatus for carrying into practice said invention may be variously constructed. Thus, the mass or mixture of crystallized sugar and sirup may be passed through a perforated distributor, and allowed to descend through a trunk, while the heated currents of air flow upward or in an opposite direction to permeate the mass, or the latter may be run through one or more inclined heated cylinders, or from one to another of a series of horizontal cylinders, and be equivalently exposed to a current or currents of heated air, such treatment in either case serving to carry off the aqueous portion of the saccharine product of the vacuum-pan, and at once to convert the same into a marketable sugar of fine quality.

I claim—

The process of converting, into marketable sugar of a fine quality, the whole mass of saccharine mixture resulting from the vacuum-pan, by exposing said mixture during or after its discharge from the pan to a current or currents of heated air, substantially as specified, whereby purging or draining the sugar and reboiling the sirup are dispensed with.

W. R. ELMENHORST.

Witnesses:

A. V. BRIESEN,
MICHAEL RYAN.