

United States Patent Office.

JUAN POEY, OF HAVANA, CUBA.

Letters Patent No. 108,514, dated October 18, 1870.

IMPROVEMENT IN THE MANUFACTURE OF SUGAR.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern :

Be it known that I, JUAN POEY, of the city of Havana, Island of Cuba, have invented a new and useful Process for the Manufacture of Sugar from Cane-juice; and I do hereby declare that the following is a full and exact description thereof.

My invention relates particularly to that method or process of manufacture of sugar from the juice of the cane in which carbonic acid is employed, as set forth, for instance, in Letters Patent granted to me on the 10th day of May, 1870, No. 102,969.

My present invention has for its main objects to prevent the formation of lime refuse, and the consequent resistance to the action of the carbonic acid, and to avoid the loss, in the residuum, of the large quantity of sugar heretofore found to have been met with; and to these ends

My invention consists in acidulating the juice of the cane before any alkaline substance is introduced into it, as will be hereinafter more fully described.

And my invention further consists in decanting the material, after carbonization and prior to the final clarification; evaporation, and concentration of the juice, into separate vessels, as hereinafter explained, whereby the operation is facilitated, and the residuum of the decanted body may be treated with the requisite dispatch.

To enable those skilled in the art to understand and use my new process, I will proceed to more minutely explain the same, as I have successfully practiced it.

Having heated the body of juice, in the usual manner, to about the temperature of 75° , I blow in the carbonic acid in sufficient quantity, and so that, when tested with litmus paper, the latter will be turned light red. I then add the proper quantity of slaked lime, (which shall have been previously calculated,) being very careful to watch carefully these things, viz: that the blowing in of the gas be diminished in such manner as to insure the neutrality of the liquid at the conclu-

sion of the operation; that the slaked lime be introduced through a spout of two or three centimeters (about one or one and a half inches,) in diameter; and that a rapid motion be kept up to insure the most speedy and effectual incorporation of the alkali with the juice.

I then raise the temperature of the body until the first indications of boiling appear, when the liquid should be decanted into separate vessels, and therein allowed to rest quietly for twenty-five or thirty minutes, after which the juice may be perfectly clarified, evaporated, and concentrated, by means of troughs, in the open air, or by filters or vacuum apparatus, until sugar of lead is obtained.

It will be seen that, by proceeding in the manner I have described, the formation of any lime refuse, and the consequent resistance to the action of the carbonic acid will be completely avoided; and it will be found, also, that in my improved process there will be no such loss of sugar in the residuum as frequently occurs in other modes of treatment of the juice.

Having explained my invention so that those skilled can comprehend and practice it,

What I claim as new, and desire to secure by Letters Patent, is—

1. The improved process, consisting in the acidulation of the juice of the cane prior to the introduction of the alkaline substance, as and for the purpose set forth.

2. The decantation of the material into separate vessels, after carbonization, and prior to the final clarification, as and for the purposes hereinbefore described.

In testimony whereof I have hereunto set my hand and seal this 1st day of August, 1870.

JUAN POEY. [L. s.]

Witnesses:

MANUEL MOREJON,
FRANZ GRENADOS.