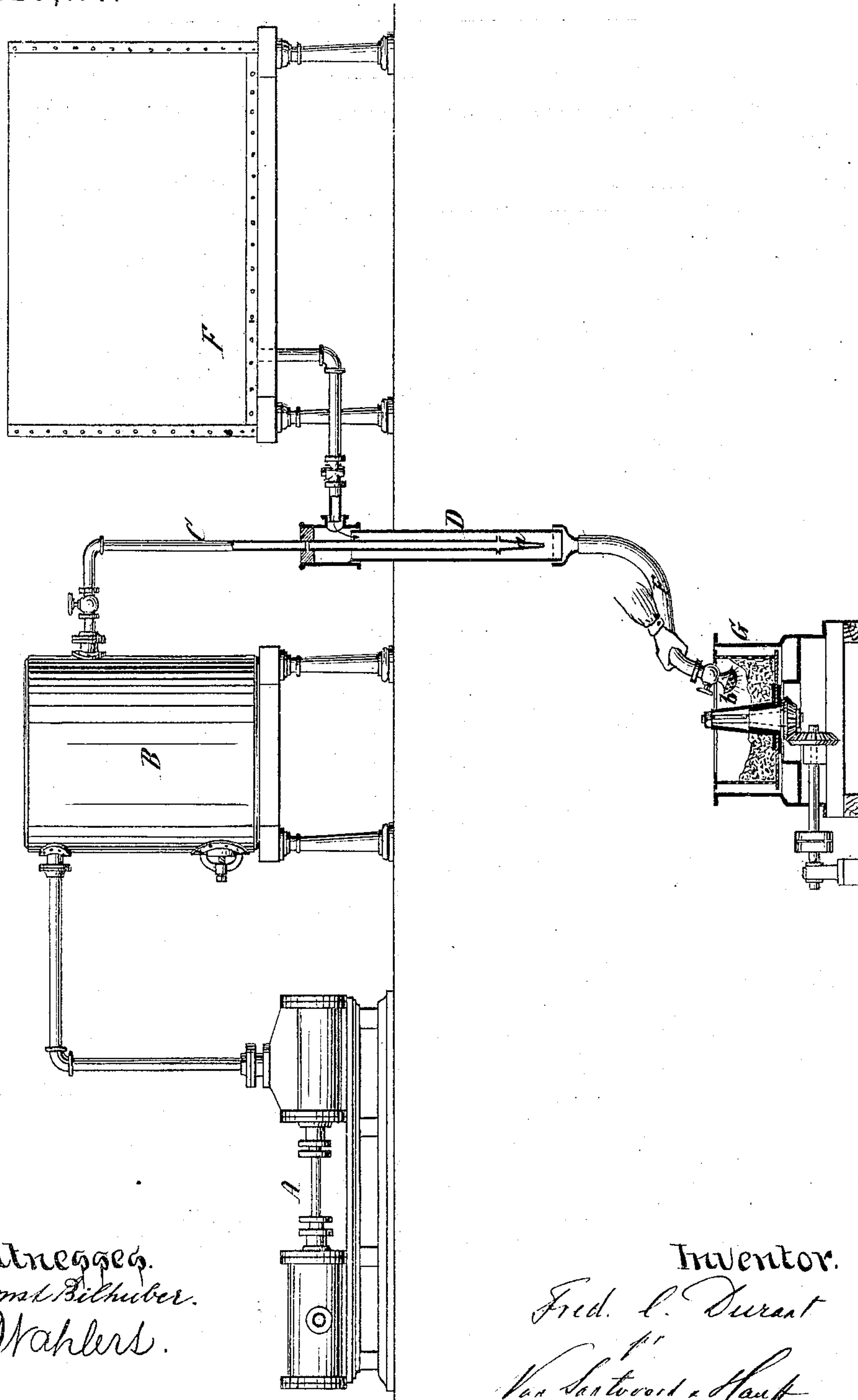


F. C. DURANT.

Improvement in Treating Sugar.

No. 129,114.

Patented July 16, 1872.



Witnesses.
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UNITED STATES PATENT OFFICE.

FREDERICK C. DURANT, OF NEW YORK, N. Y.

IMPROVEMENT IN TREATING SUGARS.

Specification forming part of Letters Patent No. 129,114, dated July 16, 1872.

To all whom it may concern:

Be it known that I, FREDERICK C. DURANT, of the city, county, and State of New York, have invented a new and useful Improvement in Treating Sugar; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, which drawing represents a sectional side view of the apparatus which I use in carrying out my invention.

This invention consists in treating sugar while in the centrifugal machine with an impelled current of air, gas, or other elastic fluid in such a manner that, by the action of the impelled current of air or other fluid, the separation of the sirup from the sugar is materially facilitated; and if such impelled current of air or other elastic fluid be driven with considerable force among the sugar the molasses and other impurities adhering to the sugar are readily separated with a comparatively small quantity of fluid, and the yield of pure white sugar is increased.

In carrying out my invention I use, by preference, an apparatus such as shown in the accompanying drawing, in which the letter A designates an air-pump, which serves to compress atmospheric air in the receiver B. From this receiver extends a pipe, C, which terminates in a nozzle, *a*, and this nozzle extends into a tube, D, to which is connected a hose, E, and which is supplied with water from a tank, F. The hose E terminates in a rose-head or nozzle, *b*, which serves to conduct water admitted to the tube D into the centrifugal machine G.

When the communication between the tank F and the tube D is opened I also open the air or fluid pipe C, and as the compressed fluid

escapes through the nozzle *a* water is caused to discharge with great force from the rose-head or nozzle *b*, and the operation of cleaning and washing the sugar in the centrifugal machine is materially facilitated.

An impelled current of air or other elastic fluid is employed alone without the aid of water or other liquid, and by causing such impelled current of an elastic fluid to act on the sugar in the centrifugal machine the separation of the sirup from the sugar is facilitated and the yield of pure white sugar is increased.

It must be remarked that, instead of using compressed air, other gases, or even steam, may be used, and the air or other elastic fluid, instead of being compressed, may be impelled by a fan-blower or by other means; but in my practice I have found the apparatus which I have shown to work to good advantage, and I usually compress the air in the receiver B to a pressure of from fifteen to twenty pounds to the square inch.

I do not claim, broadly, treating sugar in the centrifugal machine by diffusing the water in a finely-divided state by means of a current of air or other elastic fluid; but

What I claim is—

1. The within-described process for treating or freeing sirup from sugar while in the centrifugal machine, by exposing the same to an impelled current of air or other elastic fluid, substantially as set forth.

2. The combination of a receiver, B, and nozzle *a* with the tube D extending from the tank F, and with the hose or pipe E having a rose-head or nozzle, *b*, arranged for operation in respect to a centrifugal machine, G, substantially as herein shown and set forth.

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Witnesses:

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