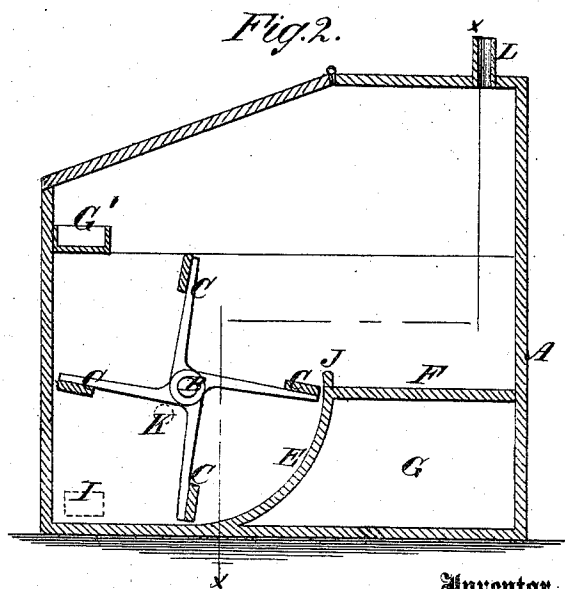
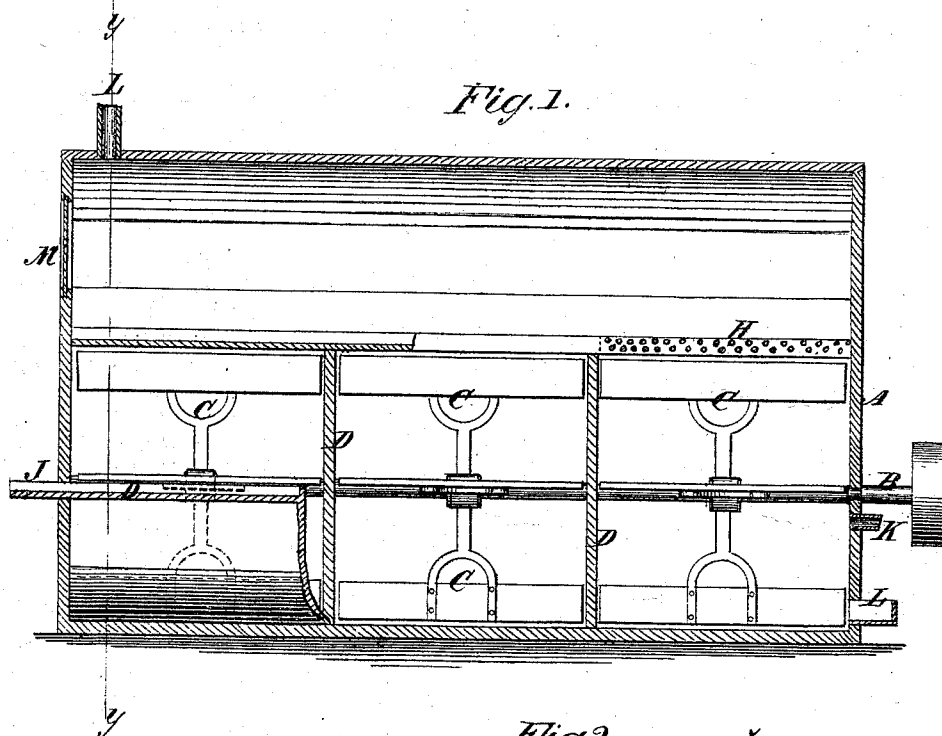


W. G. BILLIU.

Apparatus for Treating Cane-Juice with Sulphur Fumes.

No. 141,914.

Patented August 19, 1873.



Witnesses.

John Becker
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Inventor.

W. G. Billiu

PER

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UNITED STATES PATENT OFFICE.

WILLIAM G. BILLIU, OF THIBODEAUX, LOUISIANA.

IMPROVEMENT IN APPARATUS FOR TREATING CANE-JUICE WITH SULPHUR FUMES.

Specification forming part of Letters Patent No. **141,914**, dated August 19, 1873; application filed January 11, 1873.

To all whom it may concern:

Be it known that I, WILLIAM G. BILLIU, of Thibodeaux, in the parish of Lafourche and State of Louisiana, have invented a new and Improved Machine for Bleaching Cane-Juice, of which the following is a specification:

My invention consists of an arrangement of a series of wheels and conducting-pipes in a case for agitating the juice and causing it to shower through sulphur vapor, with which the case is charged to bleach the juice, the latter being repeatedly converted into spray and subjected to the fumes by means of the numerous wheels and return-passages, so that it becomes thoroughly treated, as hereinafter described.

Figure 1 is a longitudinal sectional elevation of my improved cane-juice bleaching-machine taken on the line *x x* of Fig. 2, and Fig. 2 is a transverse section taken on the line *y y*.

Similar letters of reference indicate corresponding parts.

A represents a long rectangular or approximately-rectangular case of wood or other substance, made sufficiently tight to hold the cane-juice and sulphur fumes. B is a long shaft extending through the case from end to end, considerably below and in front of the center of the case, on which shaft are three more or less beating-wheels, C, separated from each other by partitions D. E is a curved plate or section of a curb in front of the wheels on the side where the beaters rise in agitating the juice, extending from the bottom of the wheel about as high as the shaft. F is a table over the waste-space G for receiving the falling spray from the space above and conducting it back to the wheels, or to some of them, to be repeatedly forced up into the space containing the fumes, and finally to conduct

the bleached juice out of the case at D, where a rib, J, is fixed on the front of the table to prevent the juice from flowing back to the wheel. G' is another trough in the upper front corner of the case, to receive any portion of the juice thrown so directly through the fumes as not to be thoroughly acted upon, and conduct it back to the right (see Fig. 1) over the space containing the first wheel, to which the juice is subjected after entering the case, when it falls down to said wheel through the perforated piston H, to be treated again. I represents the entrance for the juice; K, the one for the fumes; L, the escape-passage for the fumes, and M is a glass window in one end to allow of inspecting the operation while in progress.

The wheels will be revolved by any competent power applied to the shaft, which projects at one end for the purpose, and has a pulley for the application of a belt.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A series of beating-wheels, C, arranged on the same shaft and separated by partitions D, in case A, in combination with the spray-receiving table F, which passes the juice successively to each wheel, from one end of the case to the other, and finally out at D, as set forth.

2. The combination of the return-spout G', having a perforated bottom at one end only, with the first beater-wheel C, and the compartment in which it revolves, as and for the purpose specified.

WILLIAM G. BILLIU.

Witnesses:

E. W. BLANC,
L. F. SUTHON.