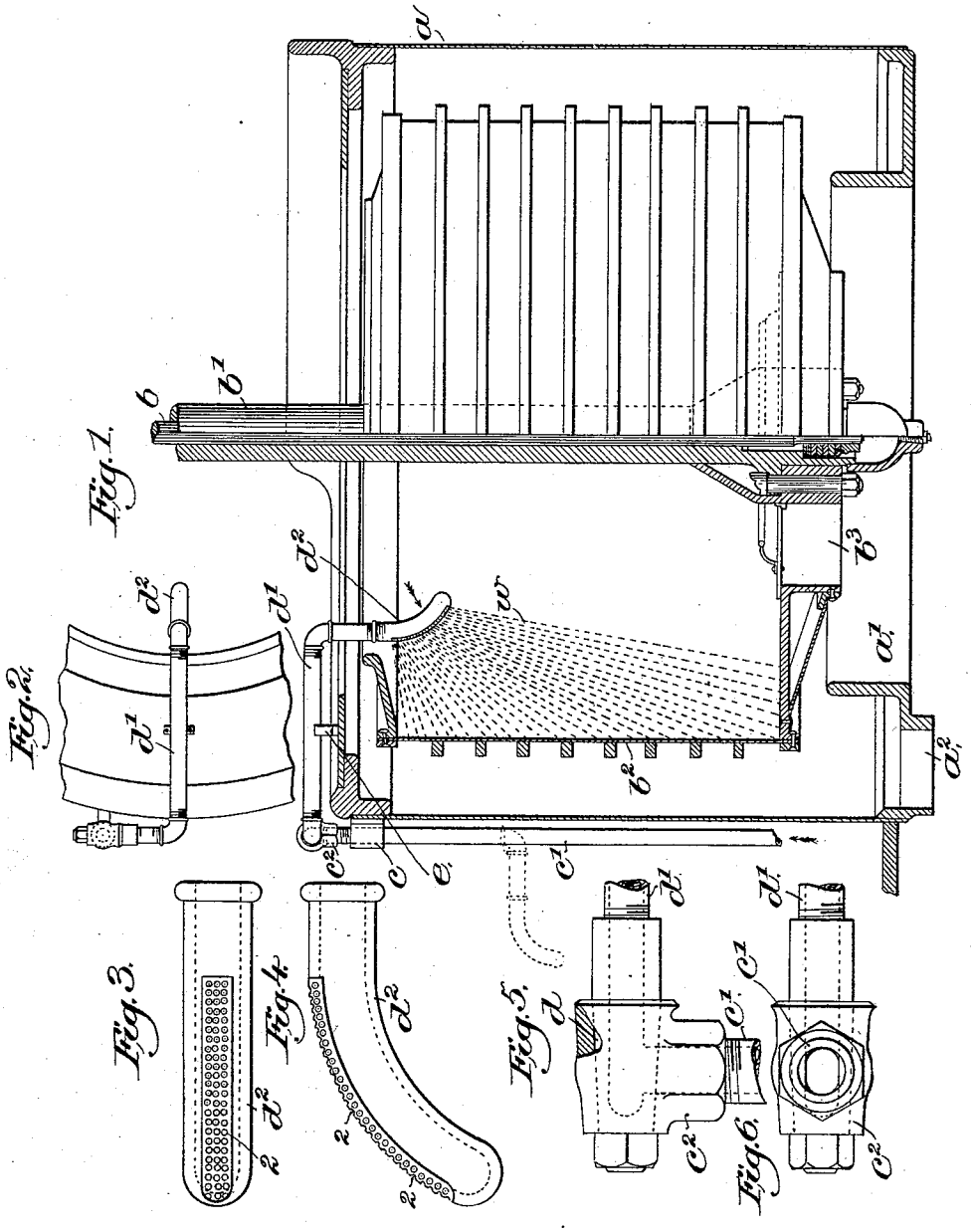
(No Model.)

R. P. JOHNSON.

APPARATUS FOR WASHING SUGAR.

No. 482,179. Patented Sept. 6, 1892.



Witnesses.
Edward F. Allen.
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UNITED STATES PATENT OFFICE.

RICHARD P. JOHNSON, OF BOSTON, MASSACHUSETTS.

APPARATUS FOR WASHING SUGAR.

SPECIFICATION forming part of Letters Patent No. 482,179, dated September 6, 1892.

Application filed May 9, 1892. Serial No. 432,333. (No model.)

To all whom it may concern:

Be it known that I, RICHARD P. JOHNSON, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Apparatus for Washing Sugar, of which the following description, in connection with the accompanying drawings, is a specification, like letters and numerals on the drawings representing like parts.

In the use of centrifugal machines in the production of sugar it is customary to wash the sugar-wall before breaking it down to be removed from the usual basket. This work is now performed by an attendant, who usually carries a sprinkling arrangement in his hand and directs the water on the sugar-wall, the operation being attended with some danger and frequently resulting in injury to the operator.

The object of this invention is to provide mechanism whereby the water needed to wash the sugar-wall may be quickly introduced and discharged upon the sugar-wall from the top to the bottom of the basket and without the presence of the operator at the top of the basket or curb of the machine.

In accordance with my invention I have combined with the curb of the machine a water-pipe having a suitable valve or cock and a perforated shoe, and have so constructed the parts that the shoe may be tipped over the top of the curb and into the basket. Preferably the shoe will have a convexed discharging-face perforated with holes, and the curvature of the shoe will be such as to effect the discharge of the water or liquid used to wash the sugar-wall directly onto the sugar-wall and from its top to its bottom, and preferably a rigid pipe carrying the shoe will have fixed to or forming part of it the plug of the valve or cock, the shell of the valve or cock being attached to another rigid or suitable pipe. In practice this valve or cock may have one water-way, so that the water will be cut off from the shoe, except when the latter is in operative position within the basket, the shoe when not being used hanging down outside the curb.

Figure 1 is a sectional elevation of the curb with a centrifugal basket within it, the basket being broken out to show the sprinkling-shoe. Fig. 2 is a partial plan or top view of part of the curb and basket with the water-pipe and shoe in working position. Fig. 3 is an enlarged view of the face of the shoe. Fig. 4 is a side elevation of the shoe shown in Fig. 3, and Figs. 5 and 6 are details showing the valve or cock enlarged.

Referring to the drawings, the outside curb a, having the bottom a' open at its center and provided with an outlet a^2, the spindle b represented as of the suspended form, the hub b', and the basket b^2, having a discharge-opening b^3 about its center of rotation are and may be all as common to centrifugal machines now in use and of the Weston or other variety.

Herein in suitable bearings, one of which is shown at c, I have mounted a pipe c', at the upper end of which is a casing c^2, ground at its interior and of such shape as to form the shell of a valve or cock. This casing c^2 receives within it a ground tapering plug d, which plug constitutes the other half of the valve or cock, the plug having a one-way opening, so as to permit the discharge of water from the pipe c' into the pipe d' when the latter is turned over the top of the curb, as in Figs. 1 and 2. The pipe d' has in communication with it a shoe d^2, such shoe having a convexed face provided with a series of holes, as 2, the curvature of the shoe being such as to enable the water (represented by the letter w and by dotted lines in Fig. 1) to be discharged against the basket or the sugar-wall therein (not shown) from the top to the bottom of the basket.

Fig. 1 shows the shoe in position and as discharging water into the basket in the proper form to wash the sugar-wall or to cleanse the basket-wall, as may be desired. In said figure the pipe d' is supported upon a rest or foot e, interposed between it and the top of the curb. When it is desired to stop the flow of the water, the operator will turn the pipe d' over to the left, Fig. 1, and down into the dotted-line position shown in said figure, the upward movement of the pipe d' turning the plug d and cutting off the flow of the water.

While I prefer to make the putting of the shoe into position in the interior of the basket effect the letting on of the water, as described, yet it will be obvious that one or the other of the pipes referred to might be provided with a separate or independent valve to be turned

by the operator when the shoe was in working position, (represented in Fig. 1,) the operator shutting off the water when desired by an independent movement.

By the employment of the shoe and its connected pipes, combined with each other, and the curb and basket it is possible to wash a sugar-wall in much less time than in any plan known to me, and consequently at much less expense, and the use of my invention tends to lessen the quantity of "blued water" used to wash the sugar-wall, and it also reduces the liability of accident to the operator.

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

The combination, with the curb and basket of a centrifugal machine, of a water-supply pipe, as c', a branch pipe provided with a perforated shoe, and a valve or cock to automatically effect the discharge of water through the shoe when the latter is placed in position within the basket and to shut off the supply when withdrawn, the shape of the shoe being that of a curved tube perforated on its convex side to enable it to discharge water from the upper to the lower part of the basket, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

RICHARD P. JOHNSON.

Witnesses:
GEO. W. GREGORY,
EMMA J. BENNETT.