

(No Model.)

L. DUCHARME & G. ERARD.

WASHING MACHINE.

No. 386,239.

Patented July 17, 1888.

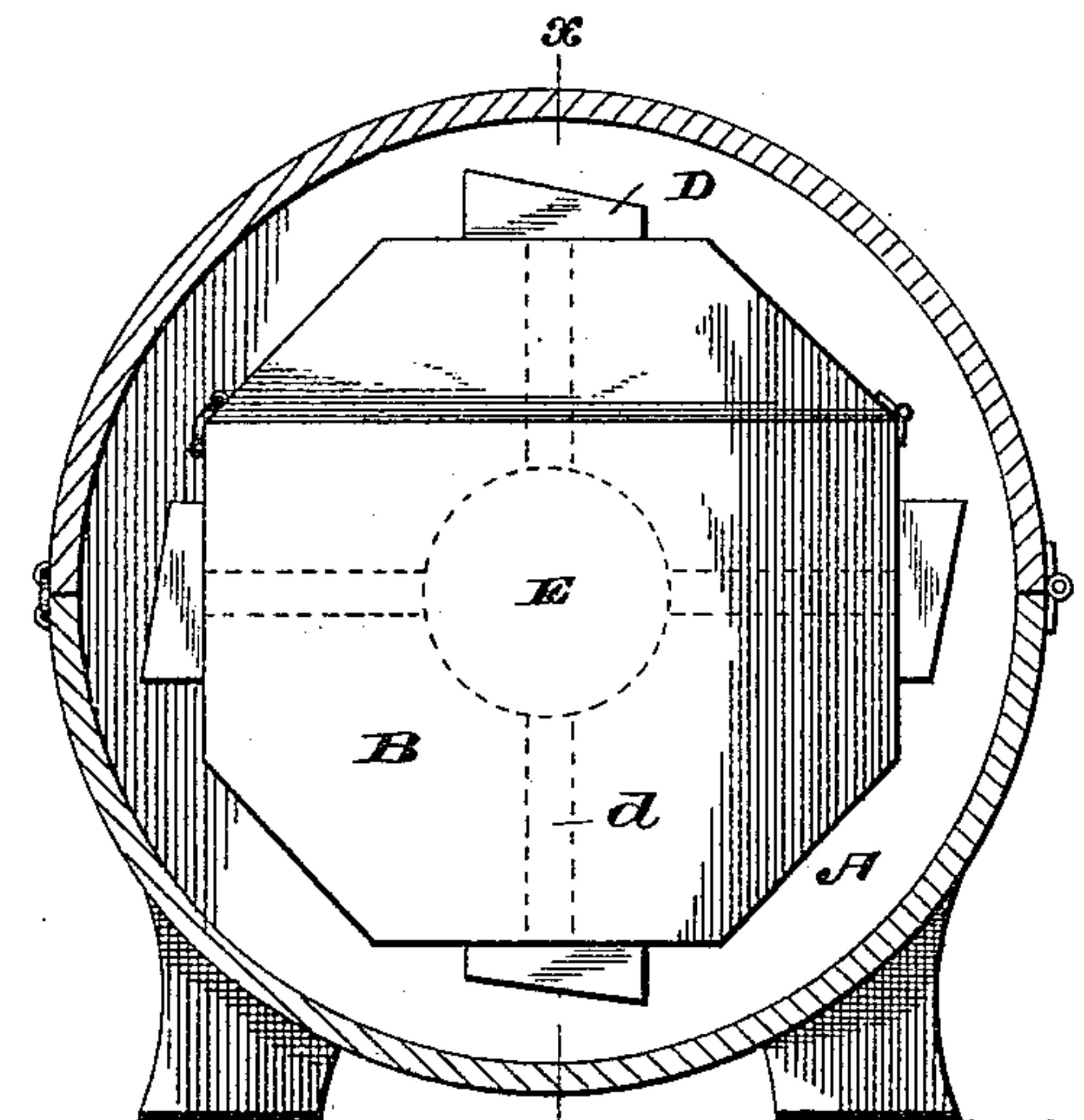


Fig. 1.

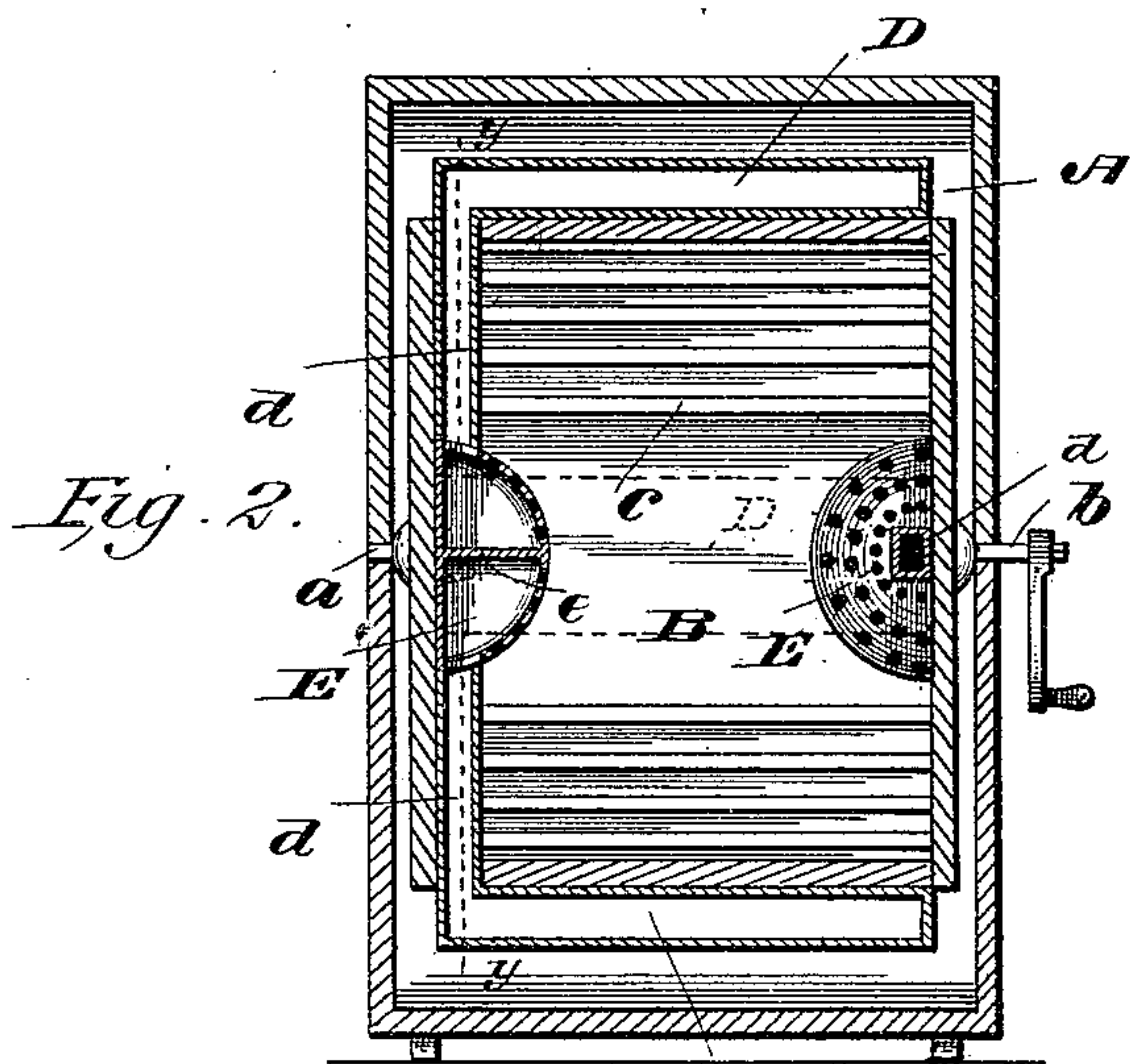


Fig. 2.

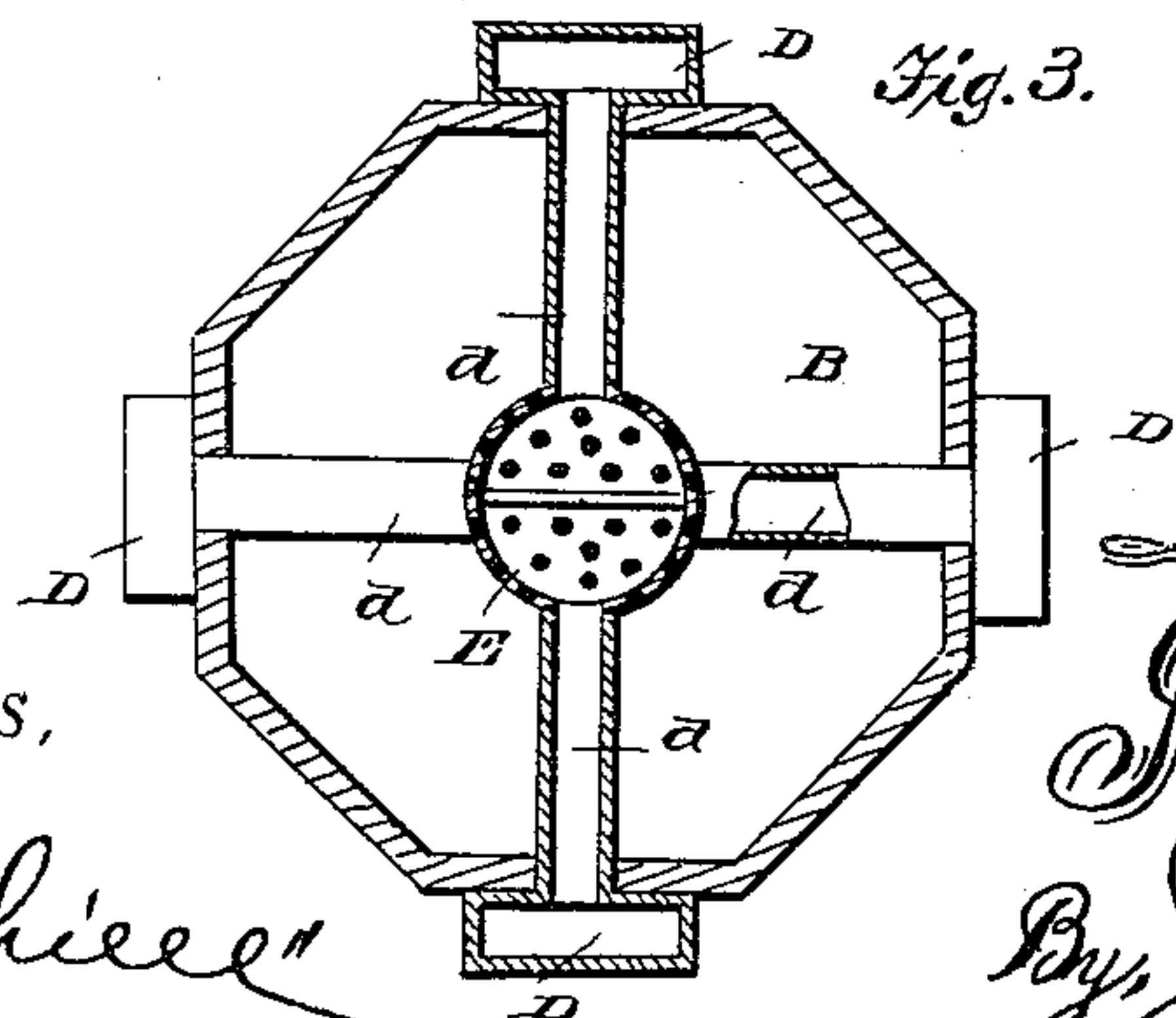


Fig. 3.

WITNESSES,

W. H. Shieff
H. Turpin

Louis Ducharme.
Gilbert Erard.
INVENTORS.

By, James J. Sheehy
Attorney.

UNITED STATES PATENT OFFICE.

LOUIS DUCHARME AND GILBERT ERARD, OF WOONSOCKET, RHODE ISLAND.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 386,239, dated July 17, 1888.

Application filed February 14, 1888. Serial No. 264,003. (No model.)

To all whom it may concern:

Be it known that we, LOUIS DUCHARME and GILBERT ERARD, citizens of the United States, residing at Woonsocket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Washing-Machines; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has relation to improvements in that class of washing-machines in which a rotative cylinder having peripheral buckets is made to serve in conjunction with a boiler or suds-case; and it has for its object to provide a machine which will be durable, cheap in construction, and effective in operation.

The invention will be fully understood from the following description and claims, when taken in connection with the annexed drawings, in which—

Figure 1 is a vertical sectional view of the outer case of a machine embodying our improvements, showing the interior in elevation. Fig. 2 is a vertical sectional view taken in a plane at right angles to Fig. 1 and on the dotted lines *xx* thereof; and Fig. 3 is a sectional view of the cylinder or clothes-receptacle, taken on the dotted lines *yy* of Fig. 2, with parts broken away to show the tubes on the opposite side of the cylinder for connecting the buckets with the spray-chambers.

Referring by letter to the said drawings, A indicates a boiler or suds-case, which we have shown as of a cylindrical form, supported on short legs, although it is obvious that the form of casing may be changed according to the fancy of the mechanic without departing from the spirit of the invention. The form illustrated is, however, the preferred construction, having a hinged cover for the placement of the rotative cylinder as well as the introduction of water.

B indicates the cylinder or clothes-receptacle, which may be of sheet metal or other suitable material, and may have its heads reinforced, as shown, from the center of which extend fixed journals *a b*, the latter of which extends a sufficient distance through one of the side walls of the suds-case, and is adapted to

receive a crank-handle whereby the said cylinder may be rotated. The cylinder is of polygonal form, and the flat sides are respectively provided on their inner sides throughout their length with a suitable number of friction strips or ribs, *c*.

D indicates buckets, which are secured transversely to the periphery of the cylinder. These buckets have one end closed, as more fully shown in Fig. 2 of the drawings, and their opposite ends connect with the interior of the cylinder at a central point, as will be presently explained.

It should be observed that the buckets are connected in pairs, or rather the connecting-tubes are in a right line, being shut off from communication with each other by a transverse wall, whereby a positive discharge from each bucket into the cylinder may be effected. It should also be observed that the tubes *d* communicate with the buckets alternately at opposite ends. It will thus be seen that water is alternately discharged into the cylinder from opposite sides, thereby effecting a more thorough cleansing of the clothes.

E E indicate spray-chambers, which are provided with an inner perforated wall for the discharge of water into the cylinder. These chambers are divided by means of a partition, *e*, and the tubes *d* communicate with the said spray-chambers on opposite sides of the partitions.

The cylinder is provided with a hinged cover and a suitable fastening therefor, so that it may be kept closed during operation, and the buckets may have a flaring mouth, as shown.

From the foregoing description it will be seen that a machine of this character may be manufactured at a comparatively small expense, and in some cases the improvements may be applied to machines at present in use, it only being necessary to provide the cylinder with spray-chambers, as shown, and arrange the buckets on the periphery of the cylinder and connect one end of each bucket with the spray-chamber.

In operation, after a sufficient quantity of water has been placed in the boiler and clothes in the cylinder, the operator grasps the crank-handle and turns the same. The buckets passing through the water in the boiler will fill, and after passing a horizontal point will by

gravity discharge the water through the tubes *d* into the spray-chambers, when it will be thrown upon the clothes therein which are being thrown against the sides of the cylinder and upon the friction-strips therein. By having the mouth of the buckets flaring and in a plane relatively at right angles to the cylinder it will be seen that the water will be received and forcibly discharged upon the clothes, no matter how fast the cylinder may be rotated.

Having described our invention, what we claim is—

1. The combination, with a boiler or suds-case, of a rotative cylinder therein, buckets arranged transversely on the periphery of the cylinder, and tubes connected with the opposite ends of the buckets alternately and lead-

ing to the interior of the cylinder, substantially as specified.

2. A rotative cylinder having spray-chambers in its side walls, divided partitions, and tubes leading from the respective compartments of the said chambers and connected with buckets secured to the periphery of the cylinder, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

LOUIS DUCHARME.

GILBERT ^{his} × ERARD.
mark.

Witnesses:

JEFFERSON ALDRICH,
GEORGE W. SPAULDING.