

H. C. GROVER.
Washing-Machines.

No. 141,136.

Patented July 22, 1873.

Fig. 1.

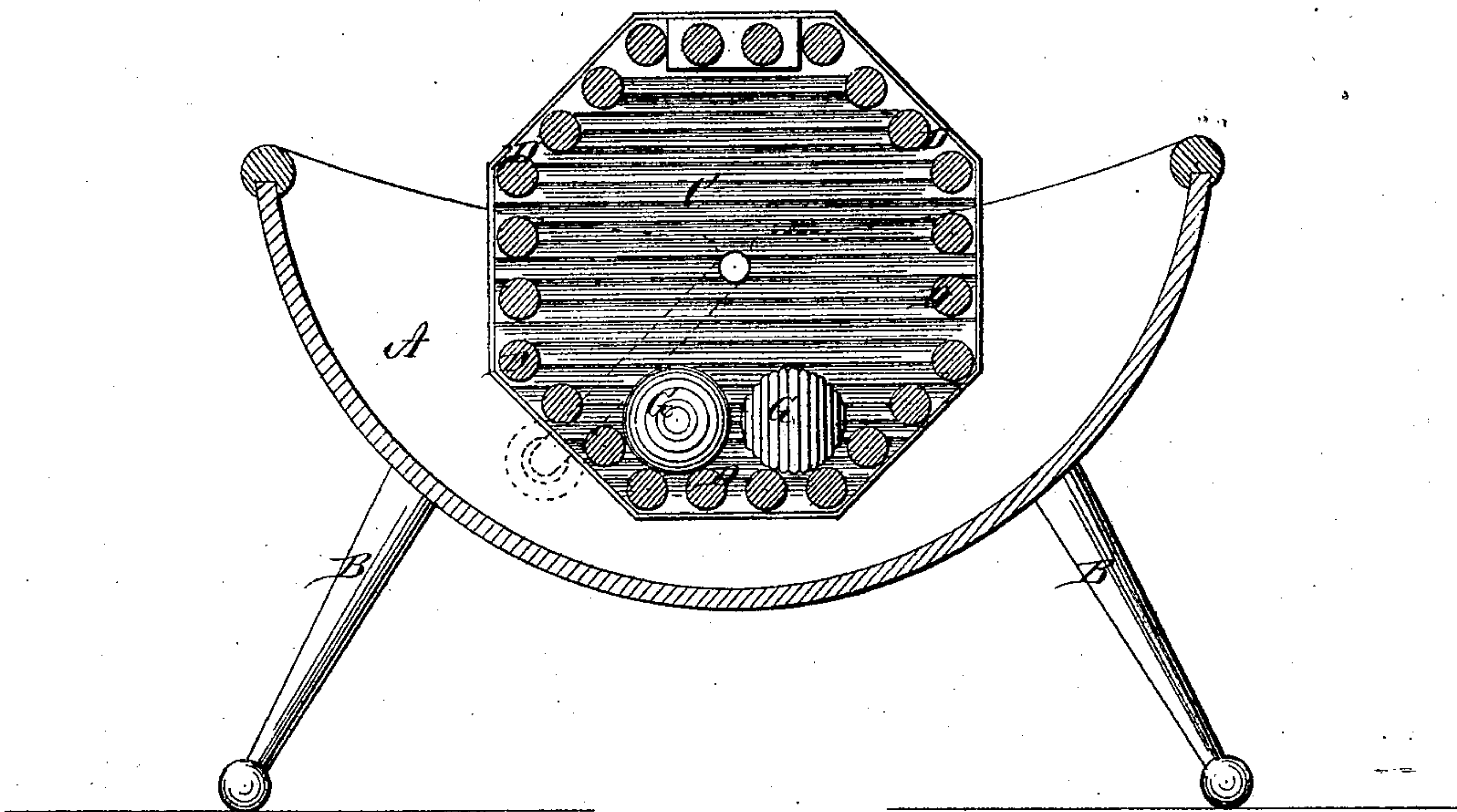
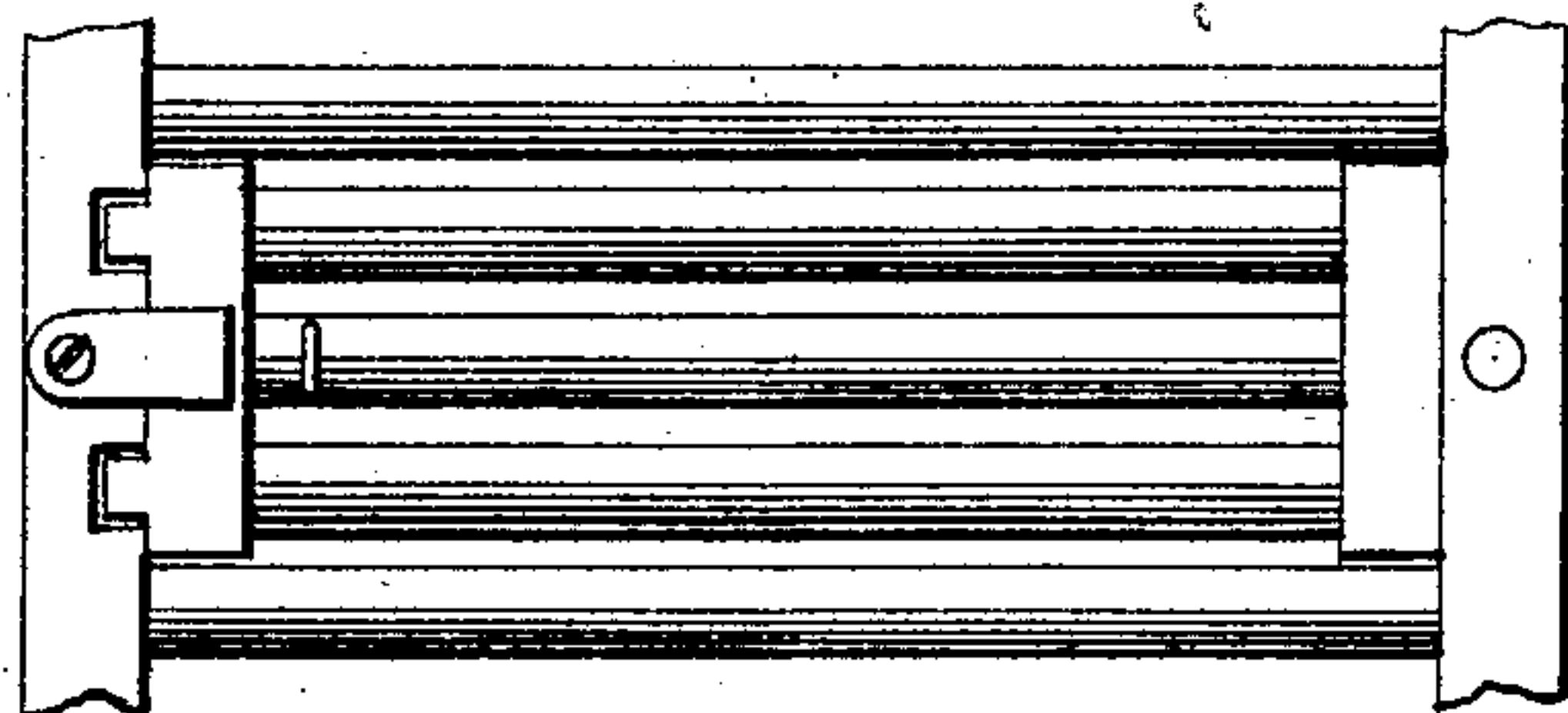


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

HIRAM C. GROVER, OF NUNDA, NEW YORK.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **141,136**, dated July 22, 1873; application filed April 23, 1873.

To all whom it may concern:

Be it known that I, HIRAM C. GROVER, of Nunda, in the county of Livingston and State of New York, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a washing-machine, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which represents a longitudinal vertical section of the tub or box, with a cross-section of the interior revolving cylinder.

A represents a tub or box, of any suitable dimensions, made in semicircular form, as shown, and supported upon legs B B. In this tub or box A is revolved a cylinder formed of two heads, C, and a series of rounds, D. The heads C may be round or polygonal shaped, and are fluted on their inner sides. They are connected by means of the rounds D D, which are placed a suitable distance apart to admit of the free flow of suds into and out of the cylinder when in use for washing purposes. The entire inside of the cylinder thus forms, as it were, a fluted or wash-board surface. A part of the cylinder is made so as to be opened to insert and remove the clothes. Inside of the cylinder C D are placed five balls, G G, more or less, which

balls are fluted, as shown, and loaded to give them sufficient weight without being materially increased in size. By having the balls G fluted they act in conjunction with the bars D, so that the balls are always kept in a rotary motion, as both balls and the inside of the cylinder have fluted or uneven surfaces, which would not be the case were the balls or cylinder smooth. The cylinder is supported by journals attached in the center of the heads C, and resting in suitable bearings formed in the sides of the box or tub A; and to one of said journals is attached a crank for revolving the cylinder.

The cylinder being put in motion, the fluted balls G G work against each other, and also against the interior fluted or wash-board surface of the cylinder, giving them a very desirable motion for pounding and rubbing, as they, together with the clothes, are revolved and carried up by the cylinder for a short distance, and then fall down, which operation very quickly renovates the clothes or anything intended to be washed, from the fact that the cylinder and its contents are being revolved in boiling suds, which have previously been poured into the box A.

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

The fluted heads C, rounds D, and fluted balls G, all constructed and arranged for operation as and for the purpose herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

HIRAM C. GROVER.

Witnesses:

J. F. OLNEY,
H. M. DAKE.