

JOS. BROWER, JAS. CAMPBELL & HARVEY CAMPBELL.

Improvement in Washing Machines.

No. 120,848.

Patented Nov. 14, 1871.

Fig 1

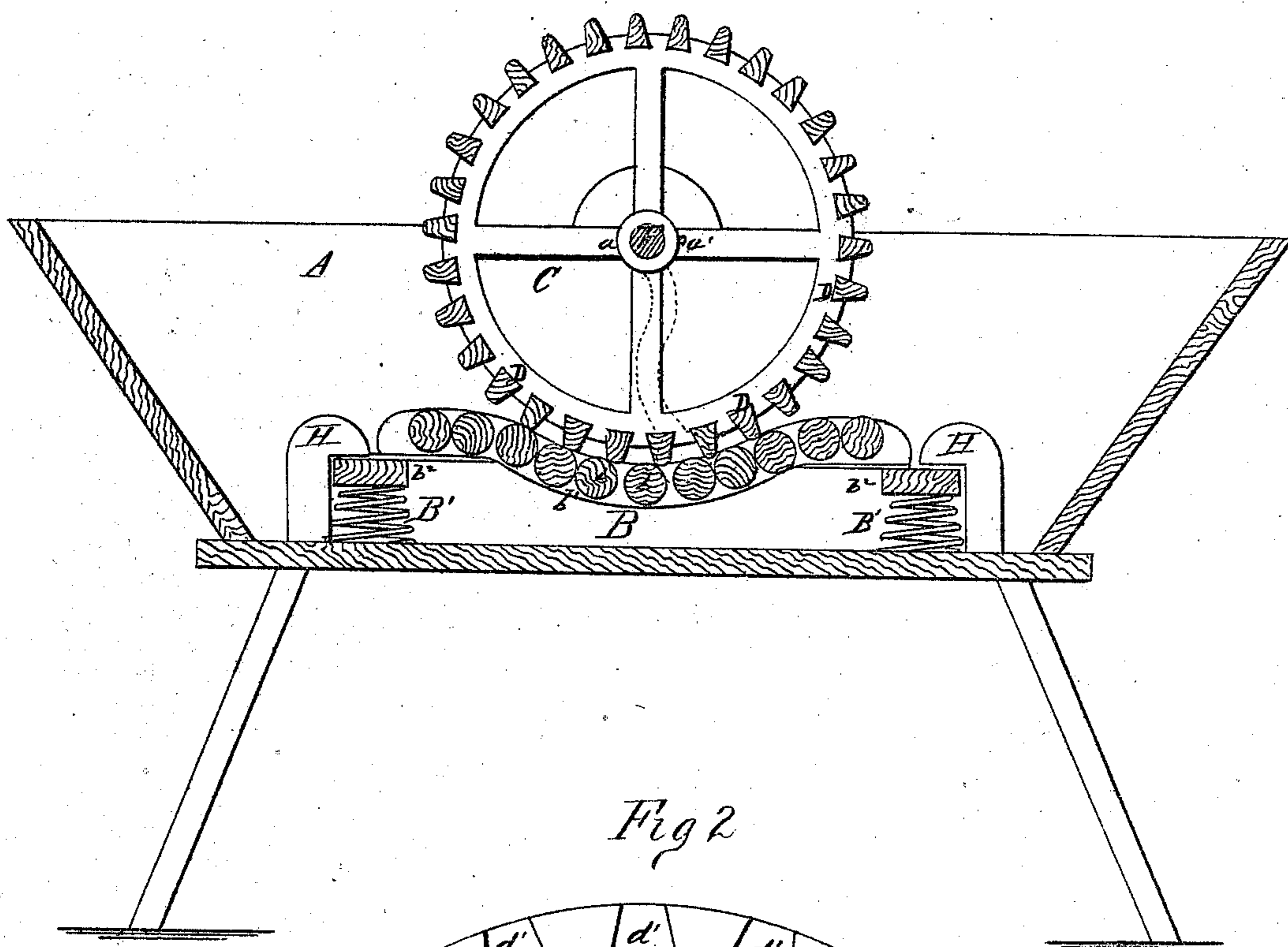


Fig 2

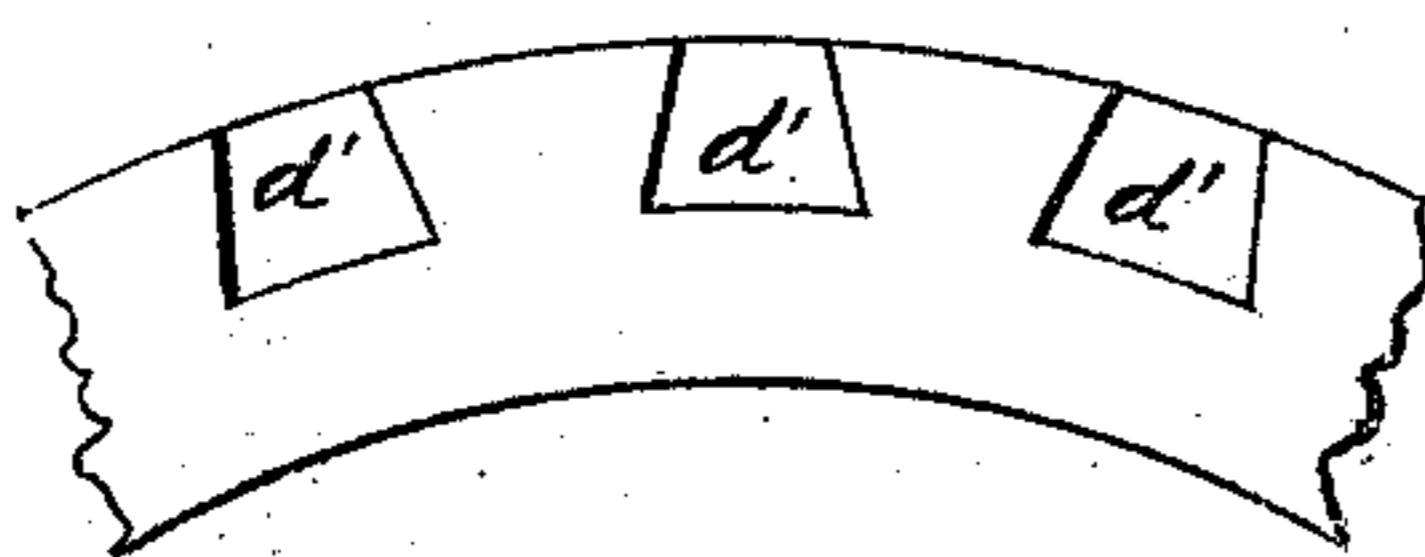


Fig 3



Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH BROWER, JAMES CAMPBELL, AND HARVEY CAMPBELL, OF WEST ALEXANDRIA, OHIO.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 120,848, dated November 14, 1871.

To all whom it may concern:

Be it known that we, JOSEPH BROWER, JAMES CAMPBELL, and HARVEY CAMPBELL, of West Alexandria, in the county of Preble and State of Ohio, have invented a new and valuable Improvement in Washing-Machines; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a vertical longitudinal section of our invention. Fig. 2 is a detail view, showing part of cylinder-head. Fig. 3 is a detail view, showing end of beveled cylinder-rib.

This invention has relation to washing-machines having ribbed cylinders; and the novelty consists in the construction of the cylinder-heads with dovetailed recesses around their peripheries, and in the construction and adaptation to said recesses of the ribs by which the clothes are rubbed and washed, as hereinafter described.

In the drawing, A represents a washing-machine tank; B, a curved wash-board, having rollers *b* journaled to side-bars *b*¹, which rest on cleats *b*². B' represents spiral springs placed under the cleats *b*², and designed as a means of accommodating the wash-board to the bulk of clothes between it and the ribbed cylinder. C designates a cylinder-head, around the rim or periphery of which are cut the dovetailed recesses *d*', opening on the periphery and inner face of the cylinder-heads. The sides of the recesses converge from base to mouth. D represents the ribs, which are attached to the cylinder-heads. They are beveled to correspond to the form of the recesses *d*', into which their ends are placed. The ribs are made somewhat wider than the dove-

tailed recesses and compressed into their places, thus forming slight shoulders at each end. These ribs are so constructed that their outer edges project outward above the head of the cylinder about one inch, more or less, as shown on Fig. 1 of the drawing. After being arranged and put to use the ribs absorb the water and are thereby expanded so as to make them secure and rigid in position. The outer edges of the ribs should be slightly rounded to prevent the tearing of the clothes, and should project beyond the peripheries of the cylinder-heads, so as to be of more service. The advantages of the washing-cylinder constructed as described are so obvious as to require but little explanation. The cylinder is easily constructed, nails and screws are dispensed with, and strength and security obtained. F represents the cylinder-shaft, journaled to the sides of the tank A. The cylinder-heads are secured by means of a pin, *a*', passing through a shoulder, *a*, formed at the center of the head. When a rib breaks it may be taken out and a new one replaced by taking out the pin *a* and separating the cylinder-heads.

We claim as our invention—

The improved cylinder for washing-machines, having the metallic cylinder-heads *c* constructed with the dovetailed recesses *d*', and provided with the beveled ribs D, arranged substantially as specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

JOSEPH BROWER.
JAMES CAMPBELL.
HARVEY CAMPBELL.

Witnesses:

DAVID YOKE,
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