H. W. Johnson,

Washing Machine,

No. 33,888. Patented Dec. 10, 1861.

Fig. 1.

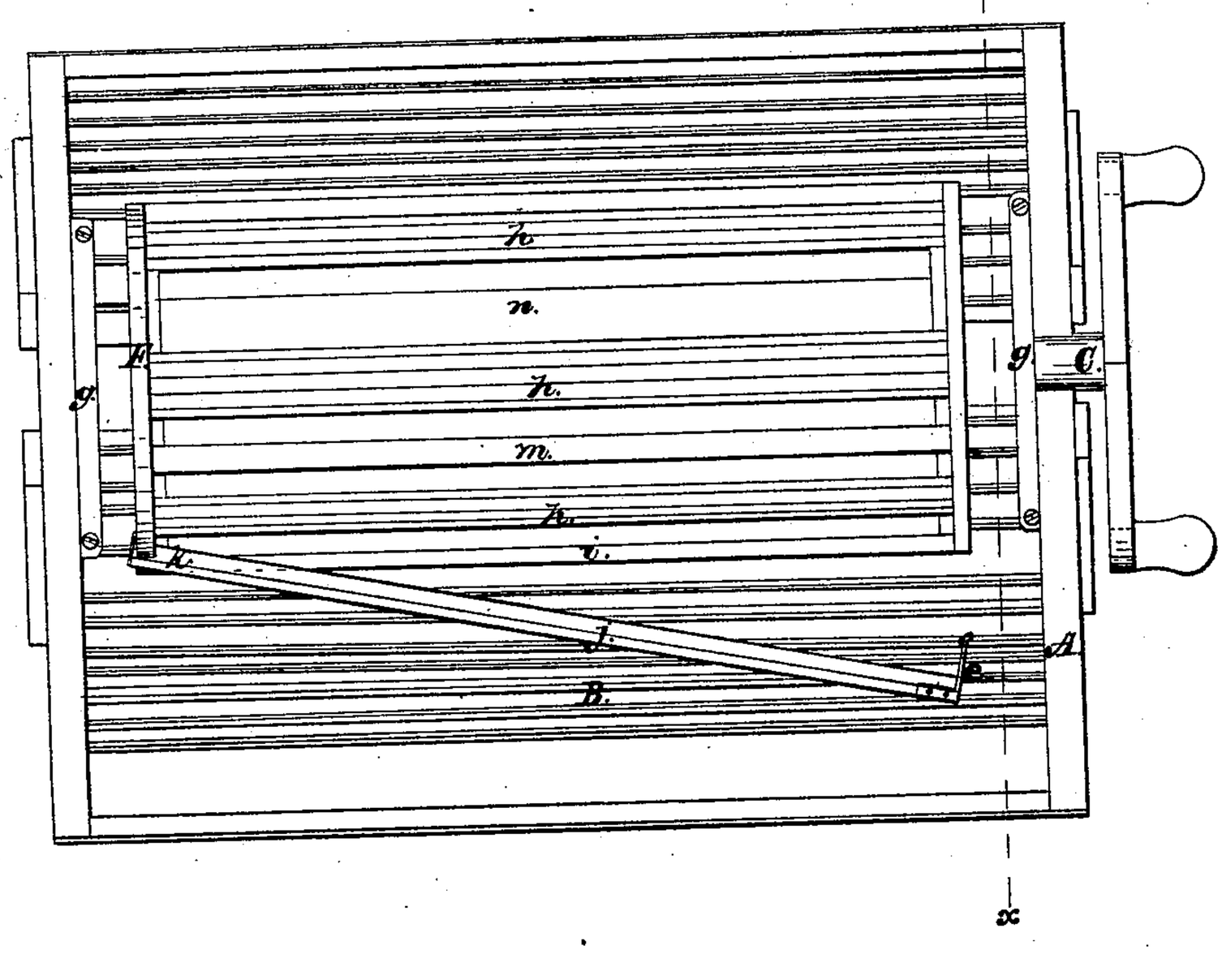
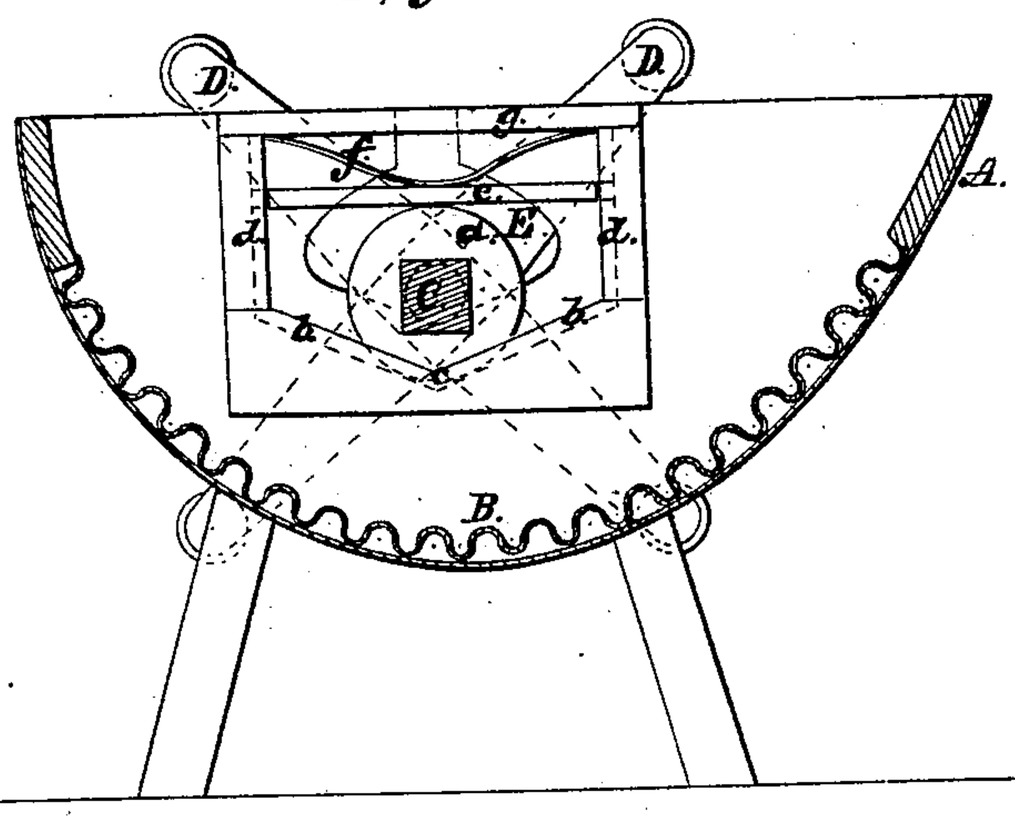


Fig. 2.



Attest:
G. A. Lee Smith
John Mathys

Inventor:
H. W. Johnson

UNITED STATES PATENT OFFICE.

H. W. JOHNSON, OF ATHENS, PENNSYLVANIA.

IMPROVED WASHING-MACHINE.

Specification forming part of Letters Patent No. **33,888**, dated December 10, 1861.

To all whom it may concern:

Be it known that I, H. W. JOHNSON, of Athens, in the county of Bradford and State of Pennsylvania, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare that the following is a description thereof in such terms as I now conceive to be sufficiently full, clear, and exact, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a top view, and Fig. 2 a vertical section through the line *x x* of Fig. 1.

The nature of my invention consists, first, in providing the box with inclined changeable bearings for the cylinder-shaft, so that when the clothes go in in a heap or form into wads or knots the cylinder may recede, and thus provide room for their passage without danger of breaking the cylinder or incurring extraordinary friction; second, in forming the cylinder with a series of swinging and stationary holding-bars, by means of which the clothes may be attached at their ends to its circumference and carried around with it; third, in combining a series of swinging and stationary holding-bars used for attaching the clothes at their ends to the circumference of the cylinder, with an opening in the said cylinder for the admission of clothes to be washed within, and, fourth, in constructing the cylinder with an opening to admit a portion of the clothes within to be washed there and combining such cylinder, when corrugated or fluted on its circumference, with a box with a corrugated or fluted bottom, whereby clothes may be washed at the same time both within and without the cylinder.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The box A is made with a concave corrugated or fluted bottom B, which may be of any suitable material, as zinc or wood, or both combined. Each end of the cylinder-shaft C is provided with a friction-roller *a*, which has its bearing on ways *b b*, attached to the inside of each end of the box, inclined toward each other and joining at *c*, so as to form an obtuse angle, and at that end of the box through which the shaft projects to receive the four-hand crank or hand-wheel D the end piece is cut away in a manner corresponding with the shape of the inclined ways, as seen at E. At the outer ends of these inclined ways are arranged vertical guide-pieces *d d*, in which slide the horizontal strips *e*, resting upon the tops of the friction-rollers *a* and provided with springs *f*, which bear against the horizontal fixed piece *g*. From this construction it will be seen that when the clothes accumulate or form into wads or knots at either side of the machine the cylinder will yield or give upwardly and toward the opposite side of the box, the friction-rollers *a* rolling up one set of the inclined ways *b b*, and that when the obstructions are removed or overcome the cylinder will roll back to its normal position by means of the springs *f* pressing upon the bearing-strips *e e*.

The cylinder F is constructed as follows: Its circumference is divided into corrugated or fluted sections *h*, and between two of these sections are arranged the clamping-bars *i j*, the lower one *i* of which is fixed to the cylinder-heads, while the upper one *j* is hinged, as at *k*, and is provided at its other end with a clasp *l*. Between one of these two corrugated or fluted sections and the next succeeding one is interposed the stationary holding-bar *m*, but sufficiently distant from each to admit of a ready insertion of the fingers to carry one end of the clothes in and out under the said bar. The cylinder is completed by a duplication or multiplication of these three parts—viz., the corrugated or fluted section *h*, the clamping-bars *i* and *j*, and the stationary holding-bar *m*, arranged relatively with each other, as described, except that at one point *n* the clamping-bars are omitted and an opening is left therein of sufficient width to admit of the insertion of a part of the clothes—such as sheets, blankets, and quilts—but not wide enough to permit them to fall out in the revolution or reciprocation of the cylinder.

In the process of washing the larger articles that do not need scrubbing are inserted within the cylinder, and the smaller articles—such as shirts, collars, &c.—are fastened at one end to the cylinder by means of the clamping-bars *i* and *j*, while the other end is carried in and out of the cylinder under the sta-

tionary holding-bar *m*, thereby securing between each clamping-bar and stationary holding-bar a separate corrugated or fluted scrubbing-surface. Each article is thus attached until the entire cylinder is covered, when a reciprocating motion is communicated to the four-hand crank or hand-wheel D and the articles without successively scrubbed, while those within are continually rising and falling against the inside of the cylinder's bars. A whole family washing may thus be washed by my machine at the same time and very expeditiously.

Having thus described my invention and the manner in which it operates, what I claim therein, and desire to secure by Letters Patent of the United States, is—

1. The inclined ways *b b* and friction-rollers *a*, in combination with the bearing-strips *e* and springs *f*, as and for the purpose specified.

2. The clamping and stationary holding-bars *i*, *j*, and *m*, in combination with the intervening corrugated or fluted sections *h*, as and for the purpose set forth.

3. The clamping and stationary holding-bars *i*, *j*, and *m*, in combination with the opening *n* in the cylinder, as described.

4. The hollow cylinder with its opening *n*, in combination with the external corrugations *h* and the concave corrugated or fluted bottom B of box A, as and for the purpose described.

H. W. JOHNSON.

Witnesses:
G. A. C. SMITH,
JOHN MATHYS.