

J. KIEHLE.

WASHING-MACHINE.

No. 188,470.

Patented March 20, 1877.

Fig. 1.

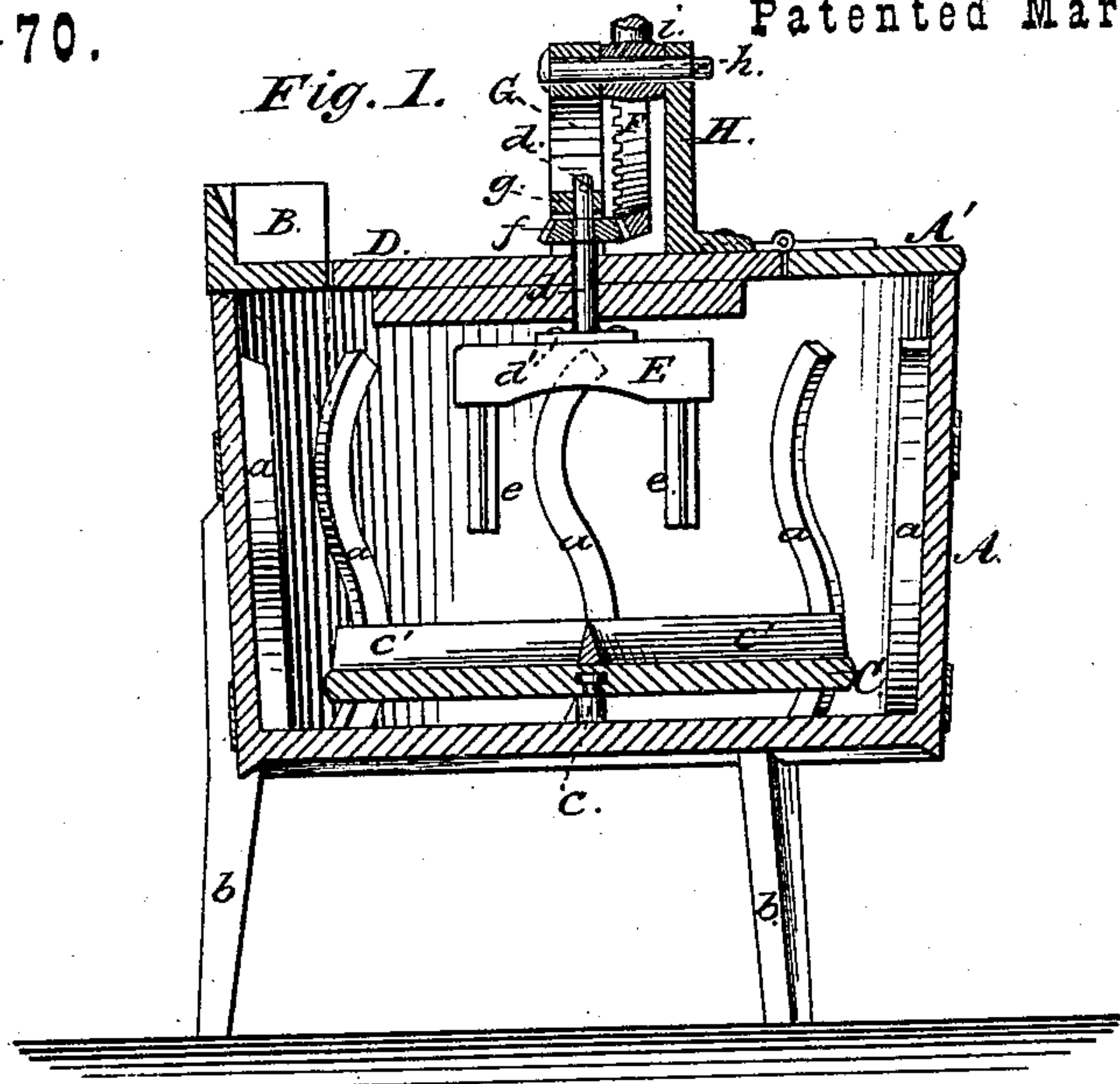


Fig. 4.



Fig. 2.

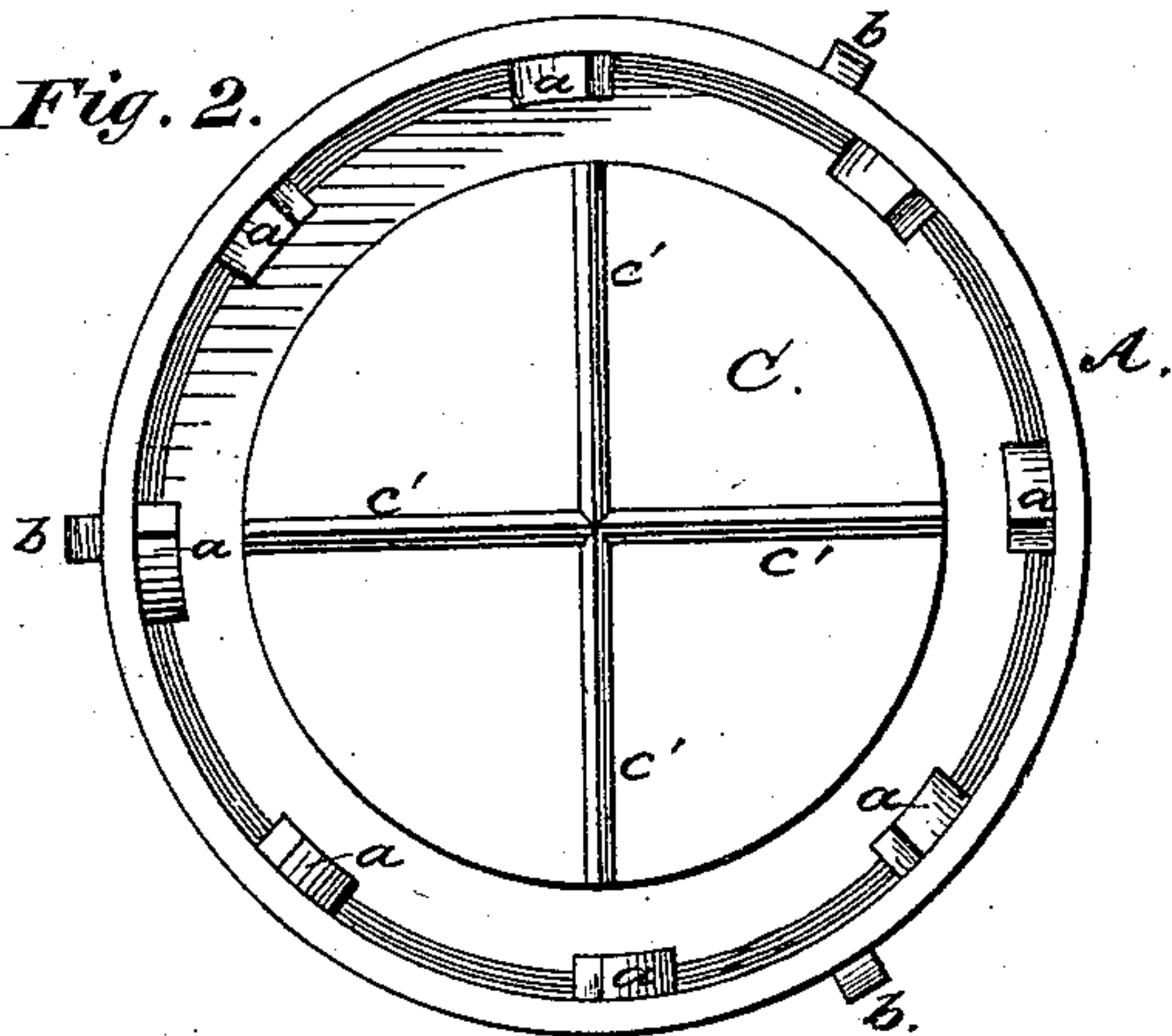
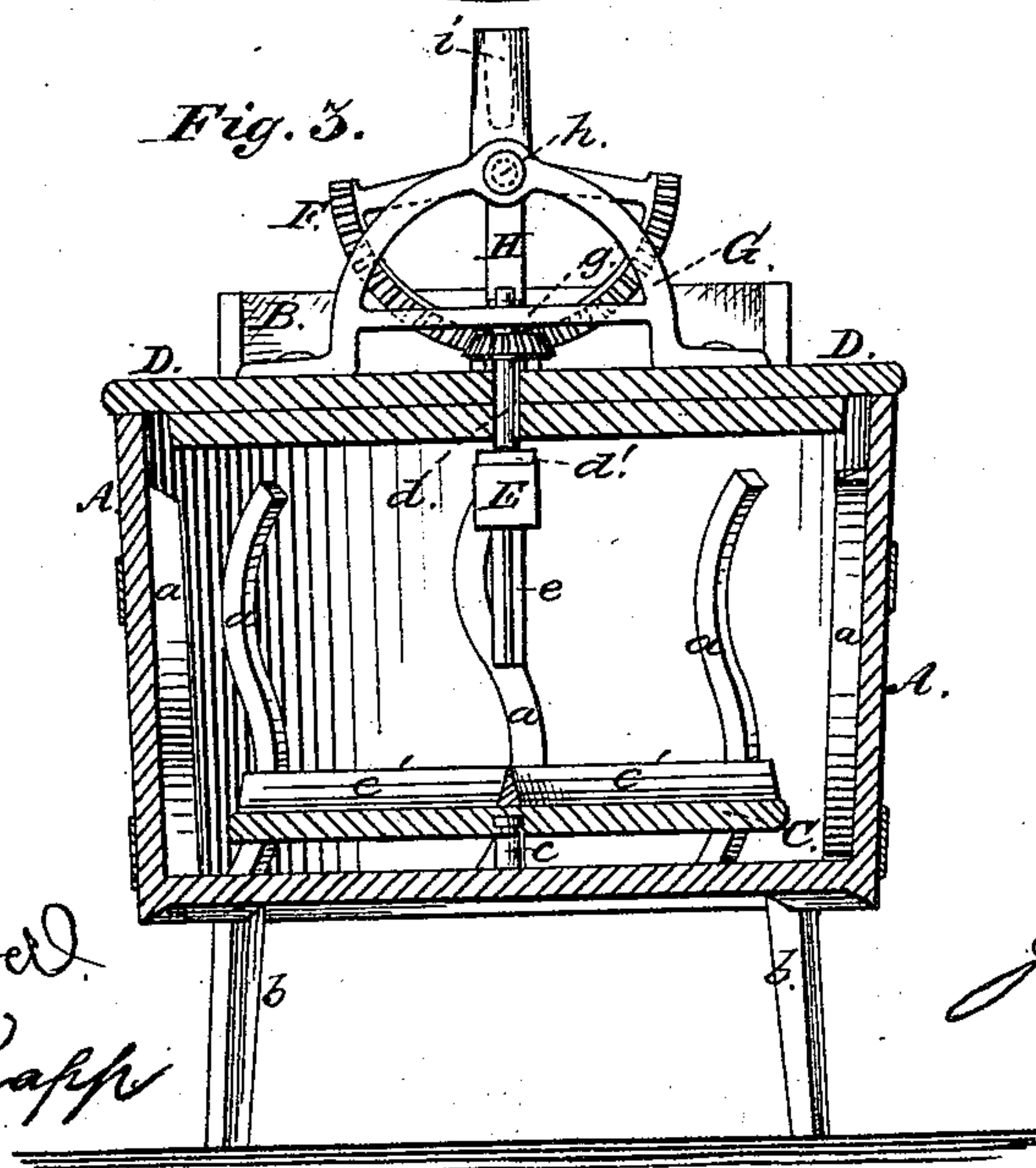


Fig. 3.



Witnesses:

S. H. Packard

Sanford Knapp

Inventor:

Jonas Kiehle

UNITED STATES PATENT OFFICE.

JONAS KIEHLE, OF CEDAR FALLS, IOWA, ASSIGNOR OF ONE-HALF HIS
RIGHT TO L. N. BRONSON, OF SAME PLACE.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **188,470**, dated March 20, 1877; application filed
February 6, 1877.

To all whom it may concern:

Be it known that I, J. KIEHLE, of Cedar Falls, in the county of Black Hawk and State of Iowa, 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, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of my invention is to furnish a washing-machine that is easily manipulated, and will wash the clothes thoroughly without the danger of tearing them.

The invention consists of a tub or receptacle having on its inner side **S** or serpentine shaped projections or ribs, a revolving bottom on a pivot that is provided with ribs or projections on its upper face, and a revolving stirrer or beater, provided with downward-projecting or pendent grooved or cross-shaped stirrers attached to a cross-piece, to which an upright shaft or stud is attached, having a pinion on the upper end, and said pinion is operated by a segmental gear journaled on a horizontal shaft arranged in suitable bearings, and said segment has a socket secured thereto for the reception of a handle by which to operate the stirrers, all of which will be more fully described hereinafter, reference being had to the accompanying drawing, in which—

Figure 1 is a vertical cross-section of my machine. Fig. 2 is a top or plan view, with the top removed. Figure 3 is a vertical transverse section of Fig. 1. Fig. 4 is an enlarged cross-section of one of the pendent stirrers.

In the drawing, **A** represents a tub or suitable receptacle of any desired size and shape. On the inside of this tub are secured a number of **S** or serpentine shaped ribs or projections, *a a*, and at one side is arranged a shelf, **B**, for the soap, &c. This tub is preferably provided with legs *b b*, to suit the ordinary height for washing. To the bottom of the tub is secured a pivot, *c*, upon which the plate **C** freely revolves, and it is provided with ribs

or projections *c'* on its upper side, arranged in cross shape or at right angles to each other, and of triangular cross-section. To the top **A'** of the tub is hinged a cover, **D**, in the center of which is arranged a vertical shaft or stud, *d*, with a foot, *d'*, to which a cross-piece or stirrer, **E**, is secured. This cross-piece **E** has two or more pendants, or downward-projecting stirrers, *e*, grooved as shown in Fig. 4, secured to it. The shaft *d* has a bevel-pinion, *f*, secured to its upper end, and is journaled in a cross-bar, *g*, of the bracket **G**, that is fastened to the hinged cover **D**. Into the pinion *f* meshes a segmental bevel-wheel, **F**, that is secured to a short horizontal shaft, *h*, which is journaled at one end in the bracket **G**, while its other end revolves in another bracket, **H**. The segmental wheel **F** is provided with a socket, *i*, into which a suitable handle may be inserted, and by which motion is imparted to the segment-wheel **F**, pinion *f*, and stirrer **E**.

The operation is as follows: The clothes, with water and soap, are placed into the tub on the plate **C**, the hinged cover closed down, and motion imparted to the stirrer **E** by the pinions *f* and segmental wheel **F**, with a suitable handle. The stirrer **E** thus receives a semi-rotary motion, and, by moving the clothes backward and forward in the tub and against the ribs *a* thereof, and ribs *c* of the bottom **C**, they are thoroughly washed and cleaned. The revolving bottom prevents the clothes from catching against any part of the machine, and at the same time gives enough resistance to the stirrer and the clothes to thoroughly cleanse them.

The object in making the ribs on the inside of the tub of **S** or serpentine shape instead of straight or corrugated is, that the clothes to be washed will not catch on them and become torn as easily, and will yet be retarded and rubbed enough to cleanse them.

The advantages of my invention are, that it is very simple in its construction; it is not liable to get out of order; it is very effective and thorough in its operation; it will not tear the clothes; it can be furnished at a very small cost; it can be very easily repaired, and no water is splashed over the tub.

I am aware that washing-machines embrac-

ing similar elements to mine are not new, and therefore do not broadly claim them; but

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

In a washing-machine, the combination of the tub A, having serpentine or S shaped ribs *aa* with the revolving ribbed bottom C, hinged cover D, fluted stirrer E *e e*, operated by pinion *f* and segment F, and supported on brack-

ets G H, all constructed and arranged for operation as shown and described.

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

JONAS KIEHLE.

Witnesses:

S. H. PACKARD,
LANFEER KNAPP.