

J. Johnson,
Washing Machine.

No. 93,308.

Patented Aug. 3, 1869.

Fig 1.

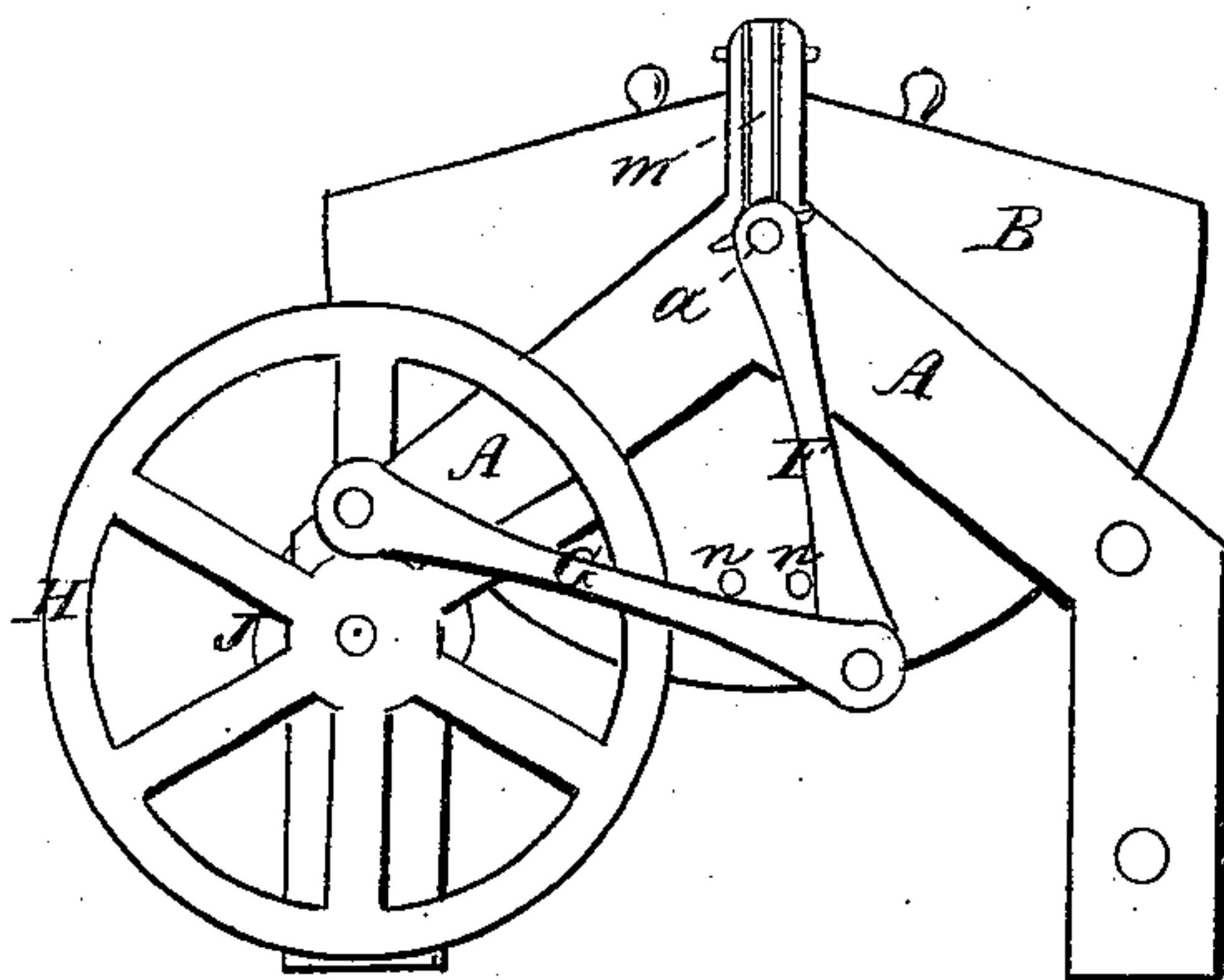
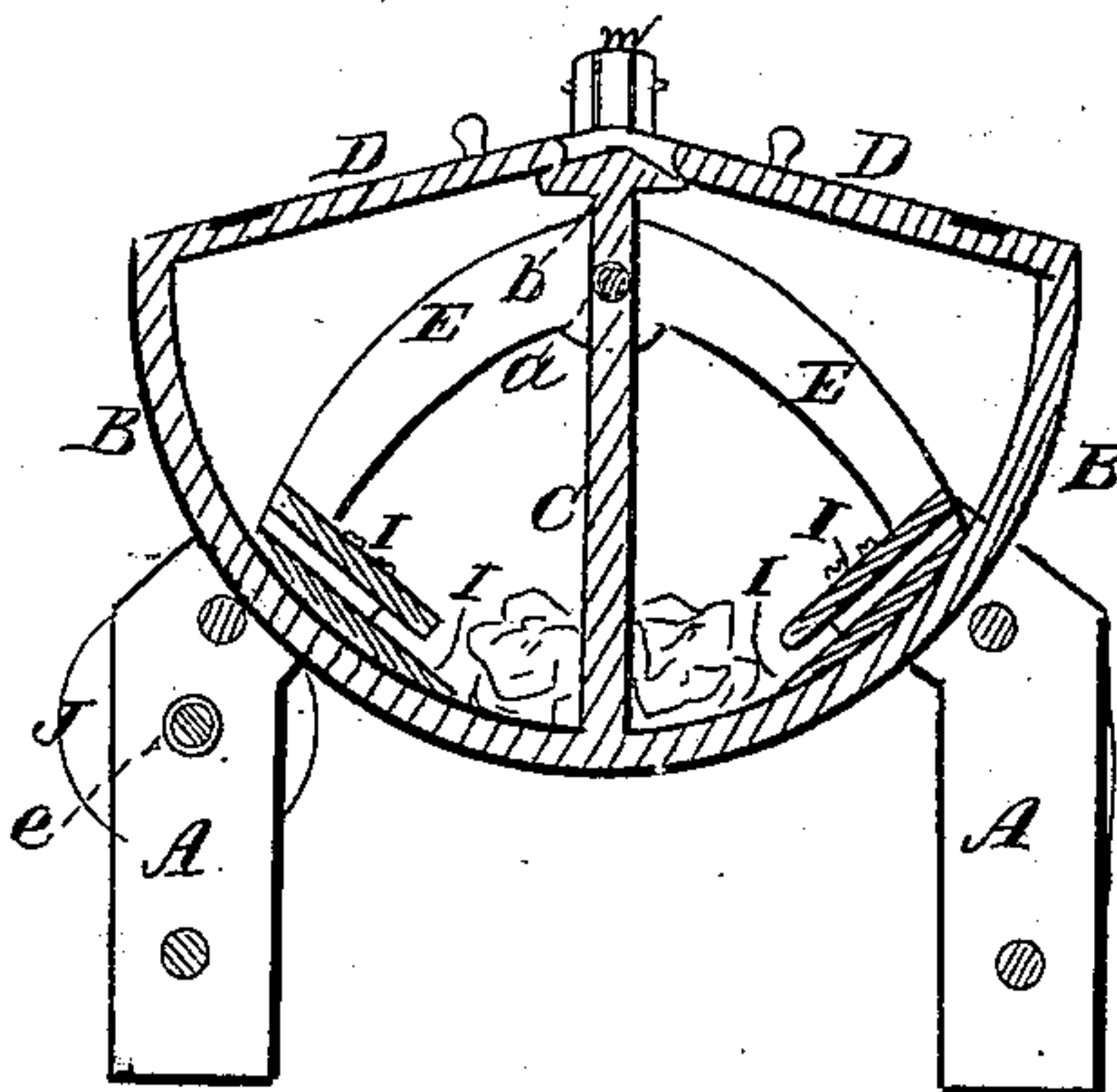


Fig 2.



Witnesses.

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JOSEE JOHNSON, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND
WILLIAM H. JOHNSON, OF SAME PLACE.

Letters Patent No. 93,308, dated August 3, 1869.

IMPROVEMENT IN WASHING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOSEE JOHNSON, of New York, in the county of New York, and in the State of New York, have invented certain new and useful Improvements in Washing-Machines; and 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, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a "power washing-machine," as will be hereinafter 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 drawings, in which—

Figure 1 is an end elevation, and

Figure 2 is a vertical cross-section.

A represents a frame, of suitable dimensions, the upper central portion of which is, on both sides, provided with a vertical slot, of suitable depth.

The lower ends of these slots form the lower halves of two journal-boxes, in which a shaft, *a*, has its bearings.

The upper halves of these journal-boxes are formed of vertical bars or blocks, *m*, inserted in the slots above the shaft, and connected by a cross-bar.

As I prefer having the frame made of cast-iron, this cross-bar may be formed with its ends turned or bent downward, to be inserted above the shaft *a*, thus having one piece answer the purpose of both the cross-bar and vertical bars or blocks *m*.

On the shaft *a*, within the frame A, is loosely hung the semicircular tub B, the shaft passing through the same at the centre of its radii, leaving sufficient room between the upper edges of the box and the cross-bar *m*, to allow the rocking or vibrating motion of the box.

A water-tight partition, C, extends from the shaft *a* downward, through the centre of the tub B, dividing the same into two chambers, as seen in fig. 2.

Above the shaft *a* is a bar or small partition, *b*, which completes the division of the tub into two chambers, each of said chambers being provided with a lid, D.

On the shaft *a*, within the tub B, are two curved arms, E, placed, one near each side of the tub, and one end of each arm extending into each chamber.

The ends of the arms E are bent inward, forming a foot, to the upper and lower sides of which the beaters I I are secured, said beaters extending across the tub, and connecting the two arms with each other.

The lower beater extends a suitable distance beyond the upper, and both project beyond the foot of the arm E, so that if said arms should be made of galvanized iron, the iron would not come in contact with the clothes.

To one end of the shaft *a*, outside of the frame A,

is attached a crank, F, which, by a pitman, G, is connected with a fly-wheel, H, mounted on a shaft, *e*, which has its bearings, at suitable points, in the frame A.

On this shaft is a pulley, J, which, by a belt, or other suitable means, is connected with the power designed to operate the machine.

When the clothes and water have been placed in the chambers of the tub B, and the machine put in operation, it will be seen that the beaters I I at once commence operations, and, by their action, cause the rocking motion of the tub B, which increases the agitation of the water, and, consequently, cleanses the clothes better and more rapidly than would otherwise be the case.

The main object, however, of my invention is, that I obtain a flexible or yielding beater, so that any quantity of clothes placed in the tub will receive the same pounding or blow from the beaters. Supposing that the tub B was fixed rigidly, like it is in a great many machines, then the beaters would, at all times, come at a certain distance from the centre partition, so that if a certain amount of clothes is placed in the tub, they will be thoroughly washed, without injury; but if a smaller number or amount of clothes were put in, then, of course, the beaters would not hit the clothes, and consequently not cleanse them; and if too many clothes are put in, then they would be very liable to be torn and injured, or some part of the machine would break. This is all obviated by having a swinging tub, as the beaters and the centre partition meet each other, and the same blow, exactly, is produced, whether there are few or many clothes between them. This is evident from the fact that the beaters must each time overcome the momentum the box has obtained in the opposite direction; and if the machine is run at a uniform speed, this momentum will, at all times, be the same.

The blow or pounding of the beaters can, however, be increased or lessened, at pleasure, by increasing or lessening the speed of the machine, for it will be seen, that when the machine runs slow, the momentum of the box is very small, and consequently the blow very light; but if the speed of the machine is increased, the momentum of the box increases in the same proportion, and hence the blow is greater.

The shaft *a*, on which the box B, as well as the beaters, is hung, passes through the centre of the radii of the box, and hence the beaters do not take up so much room during their work as they would if hung away from the true centre. I am also enabled, by this arrangement, to close the box up perfectly steam-tight, which is of great value in washing-machines.

The object of having the box B divided in two separate chambers is, that the clothes can be divided into two parts. In all large washings, some clothes are

more soiled than others, and require more cleansing. If the clothes, then, are put in, those more dirty in one chamber, and those less dirty in the other, then, when the latter are clean, they can be taken out, and the others changed into this chamber, where the water is comparatively clean yet.

The cross-bar *m*, across the centre of the tub, is used to place the clothes-wringer upon, so that the clothes can be easily wrung out, when taken out of the box, whether to change them from one chamber to the other, or not.

By separating the clothes, and changing the more soiled ones from one chamber to the other, I economize water, and save time.

The dirty water is drawn off through the openings *n n*, one of which leads to each chamber.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. Hanging the tub of a washing-machine loosely on the same shaft with which the beaters are connected, and from which they receive their motion, substantially as and for the purposes herein set forth.

2. The combination of the tub *B*, shaft *a*, curved arms *E E*, and beaters *I I*, all constructed as described, and arranged to operate substantially in the manner and for the purposes set forth.

In testimony that I claim the foregoing, I have hereunto set my hand, this 26th day of June, 1869.

JOSEF JOHNSON.

Witnesses:

C. L. EVERT,
A. N. MARR.