

# H. Brown, Washing Machine,

N<sup>o</sup> 47,924,

Patented May 30, 1865.

Fig. 1.

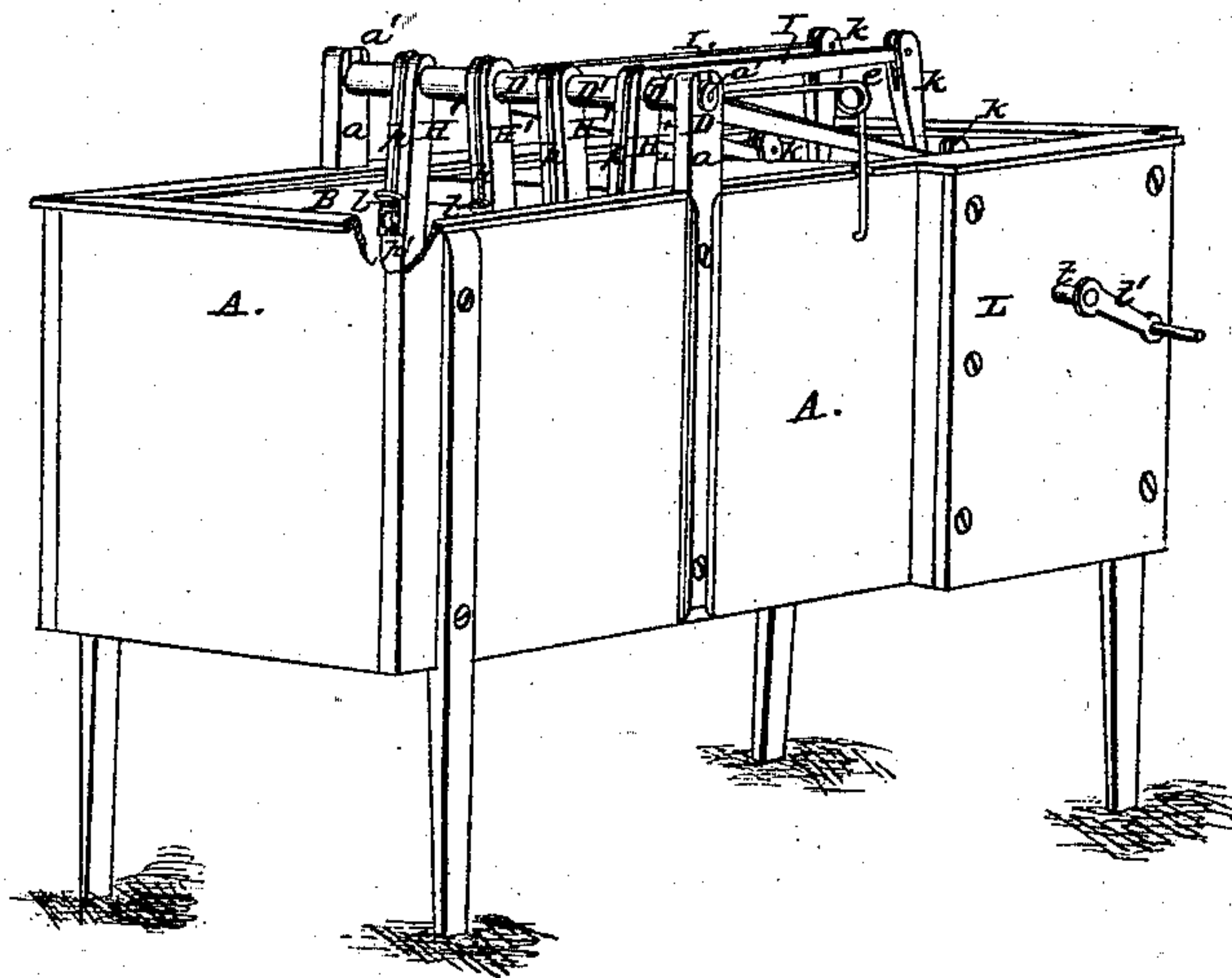


Fig. 2.

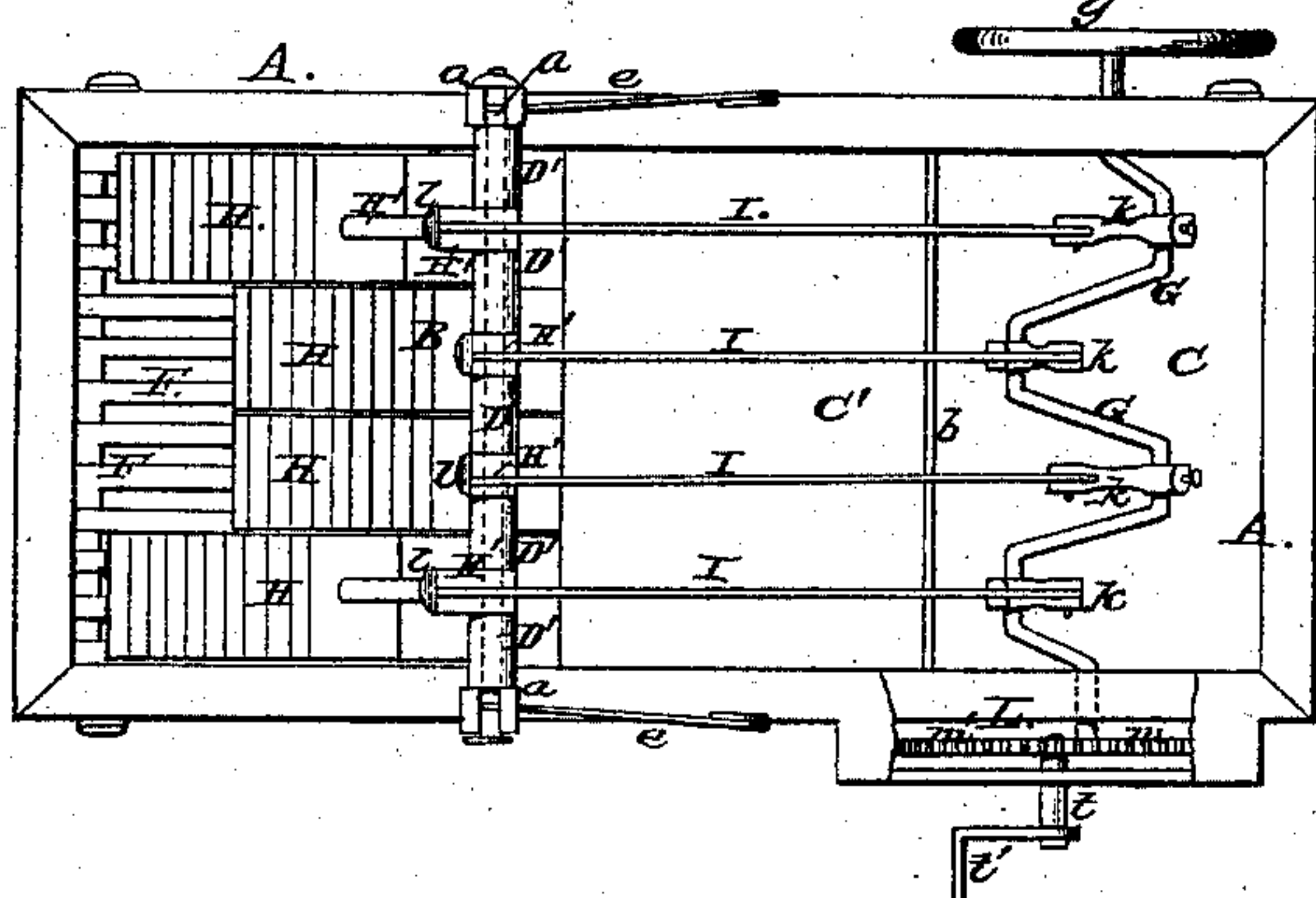


Fig. 3.

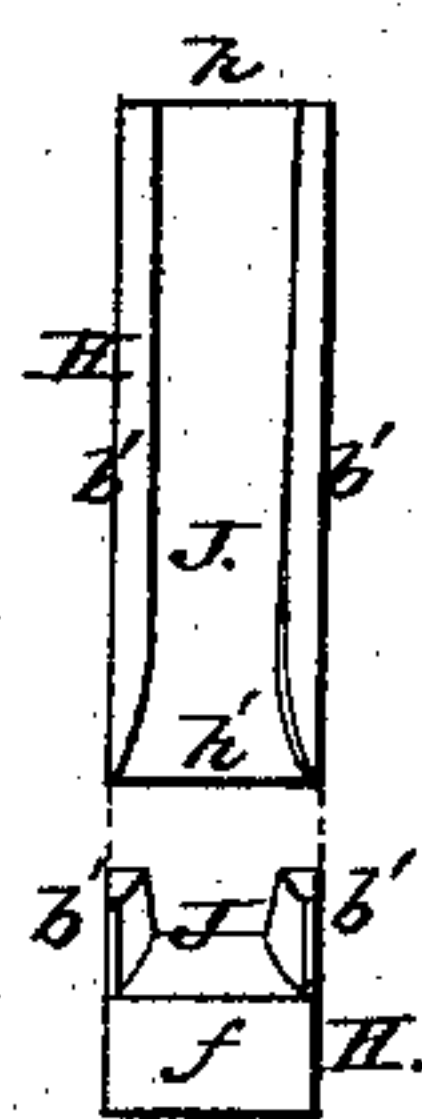


Fig. 4.

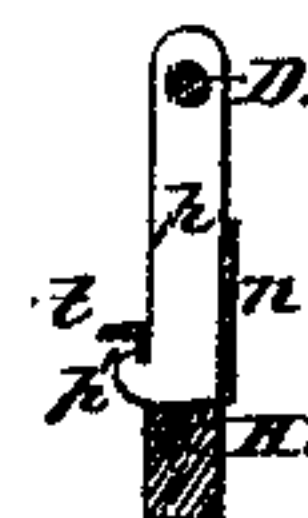


Fig. 5.

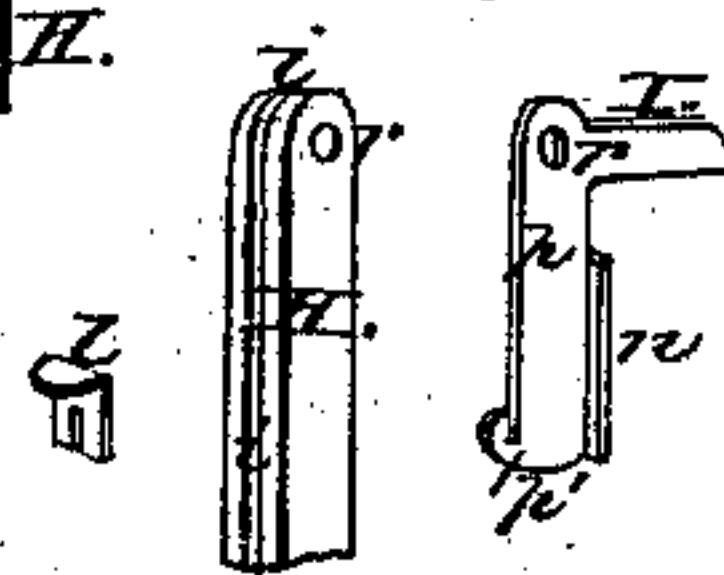
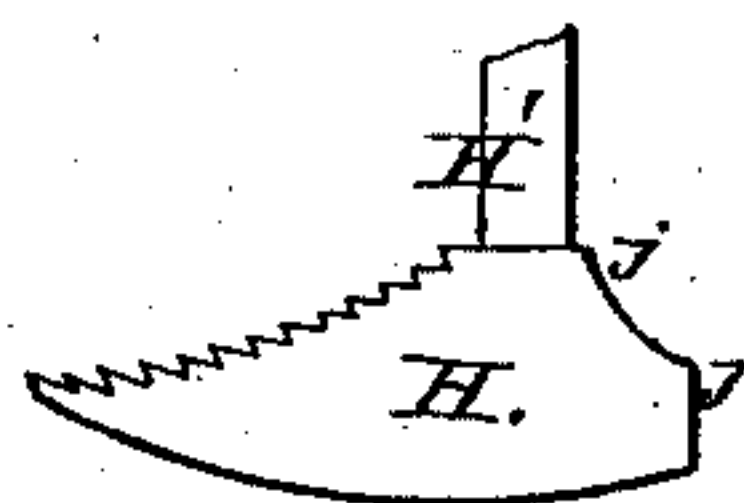


Fig. 6.



Witnesses:

W. H. Burnage  
J. Holmes.

Inventor.

Hiram Brown.



# UNITED STATES PATENT OFFICE.

HIRAM BROWN, OF BURTON, OHIO.

## IMPROVED WASHING-MACHINE.

Specification forming part of Letters Patent No. 47,924, dated May 30, 1865.

*To all whom it may concern:*

Be it known that I, HIRAM BROWN, of Burton, in the county of Geauga and State of Ohio, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the machine. Fig. 2 is a top view. Figs. 3, 4, 5, and 6 are detached sections that will be referred to in the description.

Like letters of reference denote like parts in the views.

My improvement relates to the manner of constructing the beaters, and of connecting them to the levers that operate them, whereby they are rendered adjustable, and can at any time be removed from the tub.

A represents the frame or case of the machine, through which there is a division at *b*, forming the tub B, and a space, C, for the crank-shaft to move in.

On the top of the inner end of the tub there is a cover, C', and a little one side of this, about the middle of the tub, there is a rod, D, (shown and indicated by the dotted lines in Fig. 2,) supported at the ends in standards *a a*, extending up from the sides. The ends of the rods fit into slots *a'*, and there are adjustable pins *e*, attached to the sides of the tub, put in above through the standards, to keep the rod down in place. By this way of putting and retaining the rod in place, the rod, with its connections, can readily be detached from the machine for any purpose.

In the outer end of the tub there are ribs F, that extend along till about the middle of the bottom, and also up on the end, being curved round in the corner, where the ribs are deeper, and from which they taper gradually to the ends.

H represents the beaters, notched on the upper surface, in front of where they are secured to the arms H', being inclined and curved down, as shown in Fig. 6, which is a side view of one of the beaters. The rear end of the beaters, from *j* to *j'*, forms an inclined curved surface on the upper side. (Seen at *f* in Fig. 3, which represents the under side of the beater,

with a view of the rear end.) The beaters are curved on the bottom, as shown in Fig. 6, the same as the ribs F, on which they move, and they are channeled out from the front end, *h*, gradually deeper to the rear end, *h'*, forming ribs *b'*, with a channel, J, between, which increases in depth from the front to the rear end. The upper ends of the arms H' of the beaters are hung on the shaft D, and connected to the levers I in a peculiar manner. The levers turn downward at right angles, forming an arm, *p*, as shown in Fig. 5, at the lower end of which there is a lip or catch, *p'*, and on the edge opposite the lip there is a cross-plate, *n*, extending up, as represented. In the upper part of each arm there is a slot, as seen at *i*, in which the arm *p* of the lever is placed in connecting the arm H' to the shaft, the shaft being put through the holes *r* of the lever and arm. The arm H' fits against the plate *n*, and there is a key, *l*, in front, that is put down in the lip, as represented in Figs. 1 and 4, firmly securing the connection of the beaters to the levers, and by means of this adjustable connection, together with elevating the rod D, the beaters can at any time be removed from the tub. On the rod D, between the arms, there are collars D', that keep them in place. The rear ends of the levers I are hung to connecting-rods *k*, that are attached at the lower ends to the crank-shaft G, by which they are operated, causing the beaters to move backward and forward alternately, washing the clothes in the most desirable manner. On one end of the crank G, outside of the case, there is a balance-wheel, *g*, and on the other end, inclosed in a box, L, there is a gear, *m*, that works in a gear, *m'*, on the shaft *t* of the crank-handle *t'*, by which the crank-shaft is revolved.

In the practical operation of this machine the advantages of the beaters as constructed are very apparent. By means of the channel J underneath and the curved surface *f* at the rear end, the beater passes back smoothly through the water, the water being allowed by the channel to flow principally under the beater and around over the curved surface *f*, preventing the violent splashing and spattering of the water that there would be if the beater were solid and straight at the rear end.

The beaters are adjustable, and can be removed from the tub, as before stated, by tak-

ing out the keys *l* and disengaging the catches *e* from the standards *a*, when the rod *D* can be elevated, so that the beaters can be lifted out and turned back over the top of the tub, when the rod *D* may be let down again into its place; or the beaters can be entirely removed from the tub by slipping out the rod *D* at one end from the collars and arms.

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

1. The beaters *H*, when constructed and ar-

ranged as herein specified, in combination with the ribs *F*, for the purpose set forth.

2. The slotted arm *H'*, in combination with the arm *p*, plate *n*, lip *p'*, and key *l*, when constructed and arranged in the manner substantially as and for the purpose set forth.

HIRAM BROWN.

Witnesses:

W. H. BURRIDGE,  
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