

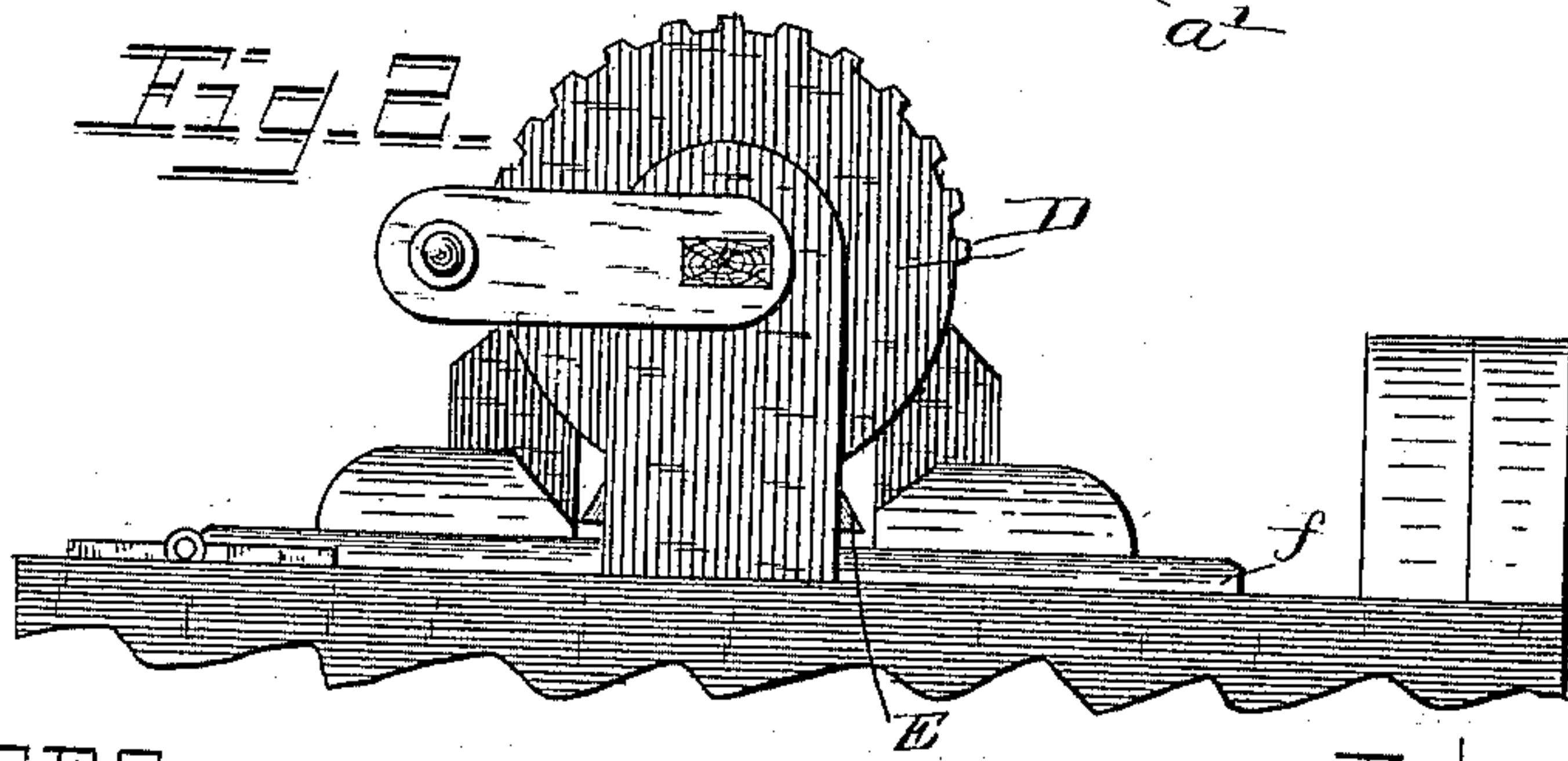
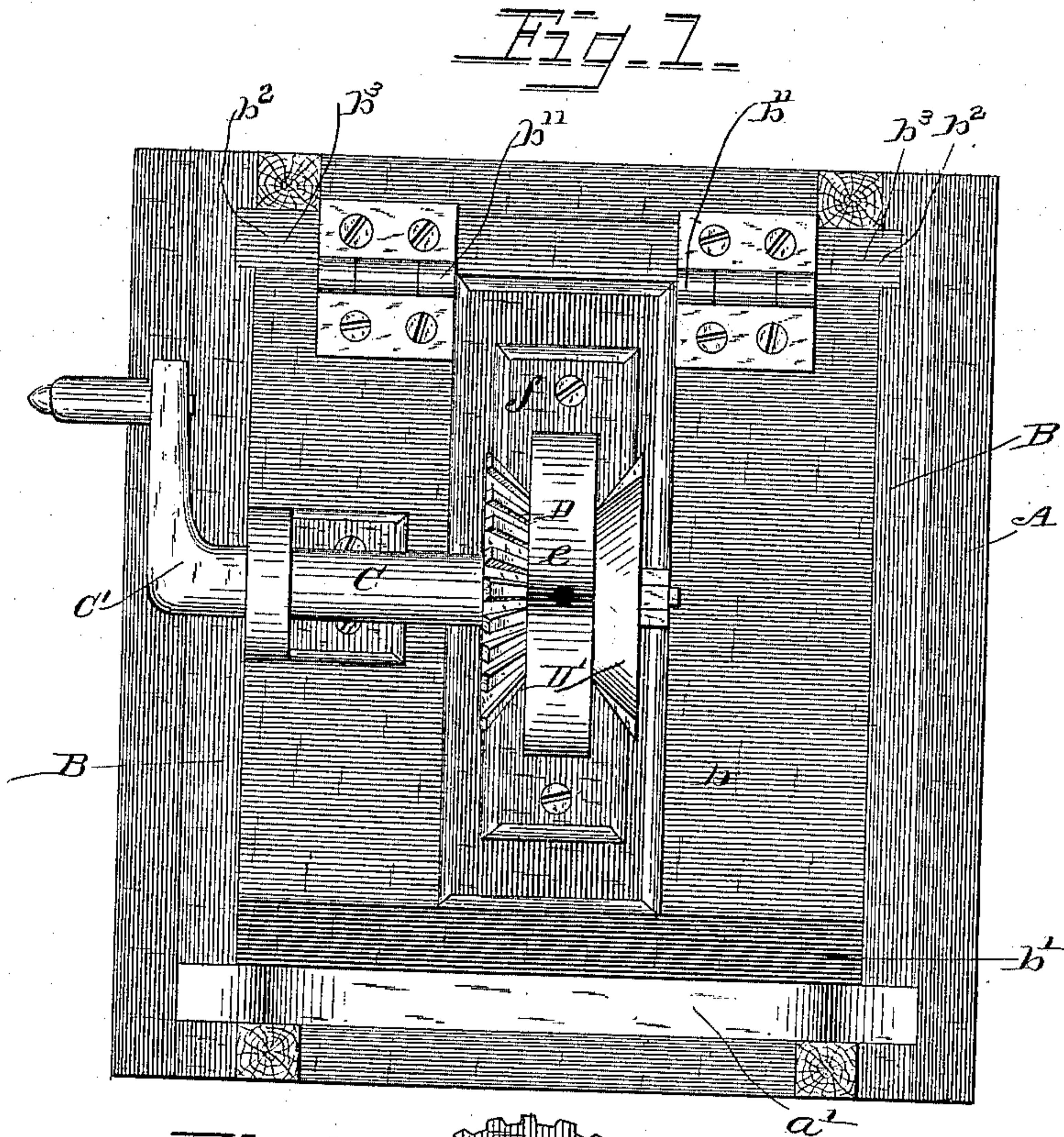
(No Model.)

2 Sheets—Sheet 1.

G. C. HARLIN.
WASHING MACHINE.

No. 330,323.

Patented Nov. 10, 1885.



WITNESSES.

E. J. Schneider.
John McGill.

INVENTOR

George C. Harlin
By Myers & Co
ATTORNEYS

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Fig. 3.

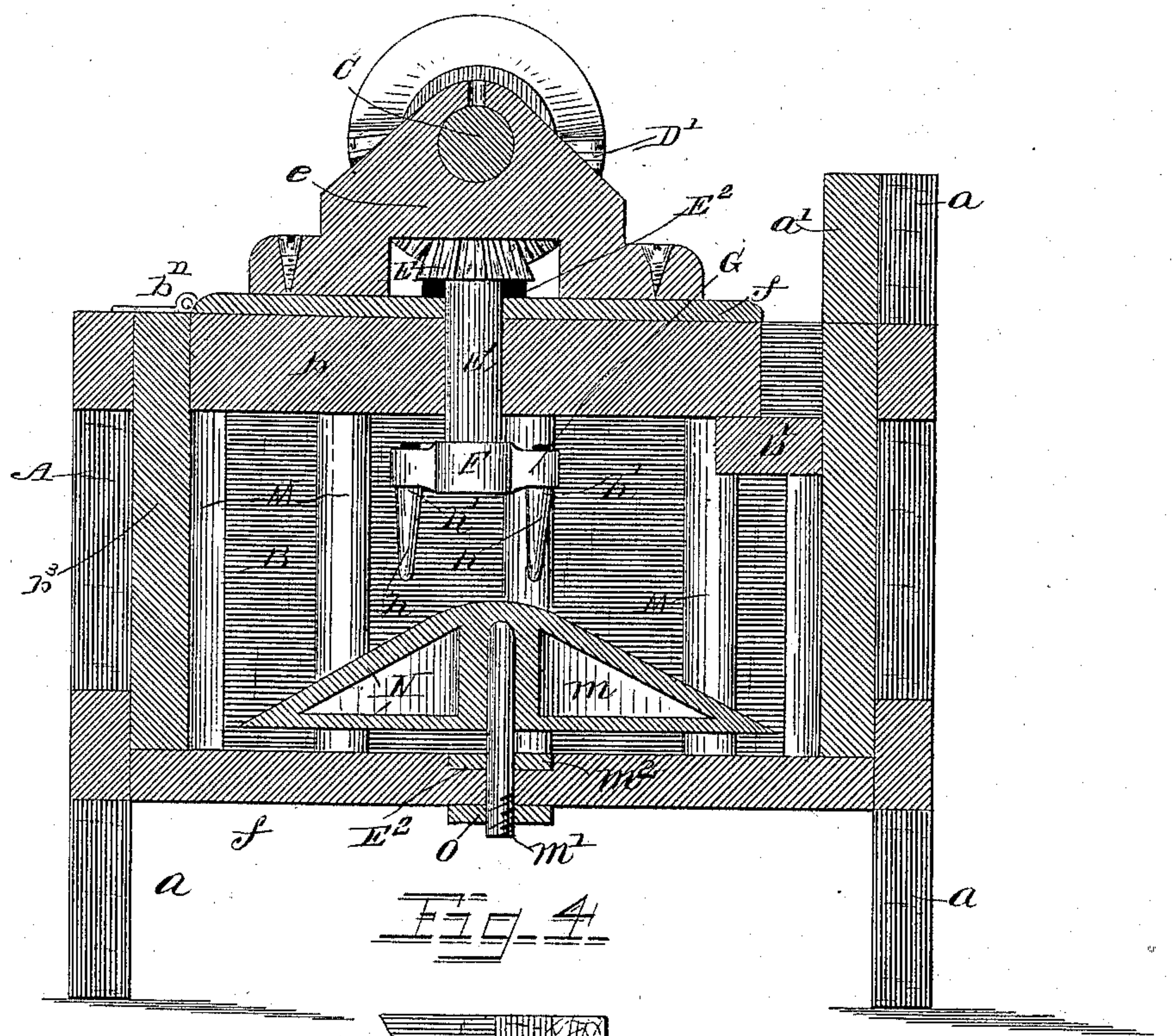
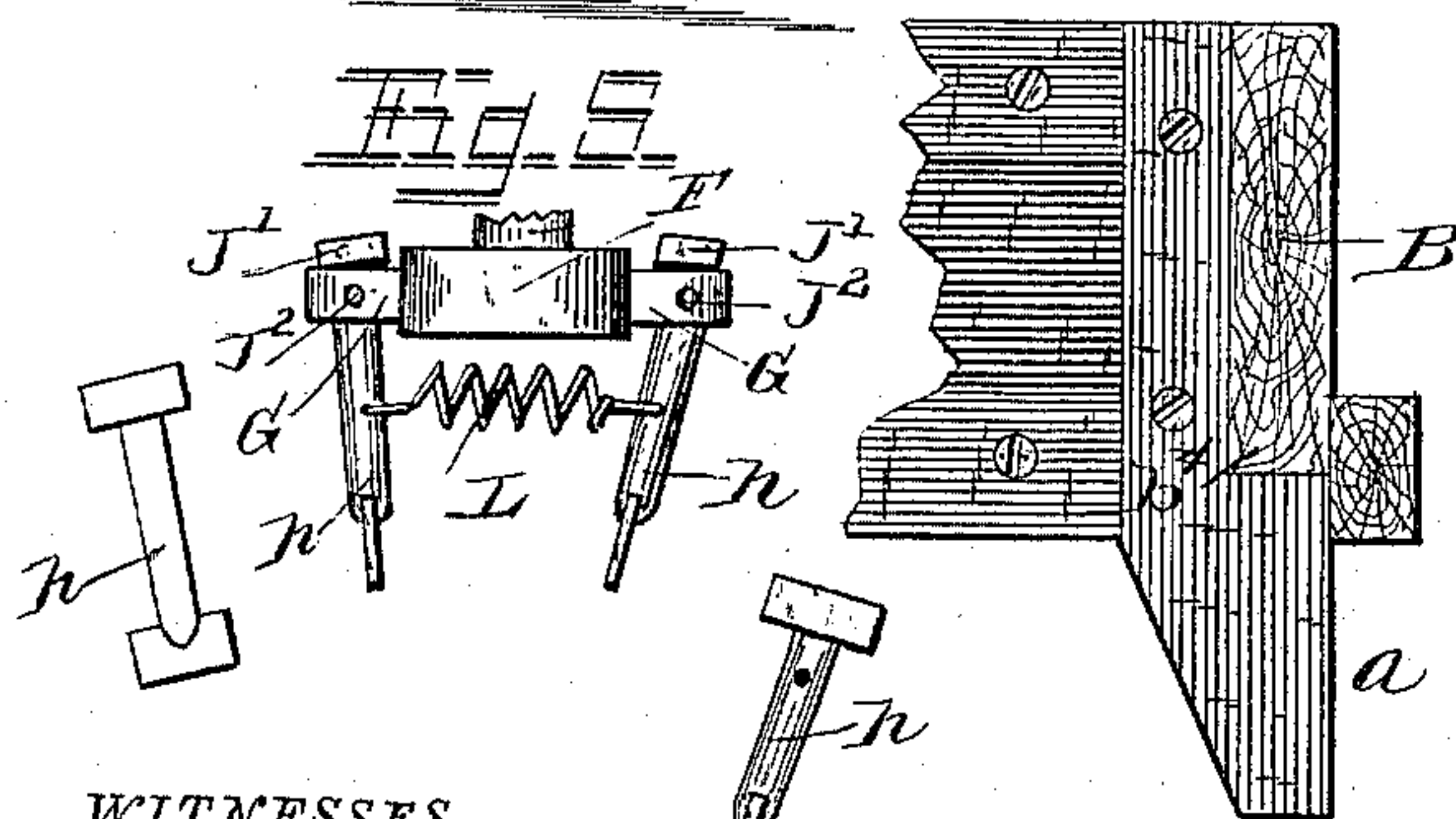


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE C. HARLIN, OF HAYESVILLE, IOWA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 330,323, dated November 10, 1885.

Application filed February 5, 1885. Serial No. 155,035. (No model.)

To all whom it may concern:

Be it known that I, GEORGE C. HARLIN, a citizen of the United States of America, residing at Hayesville, in the county of Keokuk and State of Iowa, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improvement in washing-machines; and it consists in the peculiar structure of the mechanism for producing reciprocating motion and for holding the clothes and forcing them against counter-currents of fluid, and in the combination and arrangement of the parts, substantially as hereinafter more fully shown and described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of my washing-machine. Fig. 2 is a detail view thereof. Fig. 3 is a cross-section on the line *xx* of Fig. 1, and Figs. 4 and 5 are detail views.

In the accompanying drawings, A represents the clothes-receptacle, having legs *a*, the vertically-projecting wall *a'*, the lid *b*, and the lid-support *b'*, the lid being hinged, as shown, at *b''*. The longitudinal walls B of the clothes-receptacle or tub are recessed, as shown at *b²*, Fig. 1, for reception of the lateral walls *b³*, and the legs are also recessed at *b⁴*, for reception of the longitudinal walls B, (see Fig. 4;) but I do not restrict myself to any particular shape for the clothes-receptacle or tub, as it is obvious that a round or tub-shaped receptacle may in like manner be employed.

The actuating mechanism, which is mounted on the lid *b*, consists of the beveled cog-wheels D and D', disposed on either side of the bracket *e*, said cog-wheels having a segmental portion of their cogs an equidistant space, the segmental portion of each cog-wheel being faced by the cogs of its corresponding cog-wheel, the cog-wheels having their bearings on the crank-shaft C. The beveled cog-wheels D D' mesh alternately with the correspondingly-beveled cog-wheel E, which is rigidly secured to the shaft E' of the clothes-clutch F. The clothes-clutch F comprises the shaft E', which is surmounted with the bev-

eled cog-wheel E, as aforesaid, the lower face of the cog-wheel having secured thereto a washer, E², which has its bearings on the platform-bar *f*, the shaft E projecting vertically through a coincident orifice provided in said platform-bar and lid *b*, and having secured thereto by ordinary means the prong-holder G, which is provided with a central square orifice adapted to the coincidently-shaped end of shaft E. The prong-holder G has also on either side of its central or shaft orifice obliquely-projecting slots for reception of clamps *h*, shouldered at J', and respectively secured by a transverse pin, J², passed through the prong-holder G, the clamps *h* being actuated by a spring, L, for clamping the clothes, as seen in Fig. 5.

I do not, however, limit myself to this formation of the clothes-prongs or device for holding the clothes during the operation of washing, as the clothes-clutching mechanism may consist (*vide* Fig. 3) of the prong-holder G, which has formed on either side of its central or shaft orifice obliquely-projecting female-screw orifices, wherein are rigidly secured the clothes-prongs *h h*. These prongs are shouldered at *h'* to prevent their being forced upward, and are provided with male screws adapted to the coincident screw-orifices of the prong-holder.

The inner walls of the machine have rigidly secured thereto a series, more or less in number, of vertical semi-round bars M, the outer faces of which are thus rounded to present a smooth surface for contact with the clothes. The clothes-carriage N consists of a cone-shaped support, *m*, whose base is on the same plane as the bottom of the receptacle, having a central orifice for reception of the vertical pivoted bar *m'*. The vertical pivoted bar *m'*, forming the bearings of the clothes-carriage N, has rigidly secured thereto the metallic disk *m²*, disposed in a corresponding recess formed in the bottom of the clothes-receptacle, and the nut O, which together hold it rigidly in a vertical position.

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

1. In a washing-machine, the combination, with the cover having the bracket, the wheels

having segmental portions, and the shaft having a pinion, of the prong-holder and the clothes-clamps connected by a spring, substantially as shown and described.

5 2. In a washing-machine, the prong-holder connected to a shaft having a pinion gearing with the segmental pinions, and having the clamps connected by a spring, in combination with the receptacle having a cone-shaped
10 clothes-carriage, substantially as shown and described.

3. In a washing-machine, the combination of the cover having the bracket, the wheels

having segmental portions, the shaft having a pinion, and a prong-holder, the receptacle 15 having the cone-shaped clothes-carriage, and the semi-round bars secured to the inner sides of the said receptacle, substantially as shown and described.

In testimony whereof I affix my signature in 20 presence of two witnesses.

GEORGE C. HARLIN.

Witnesses:

S. HARROD,

J. W. HARLIN.