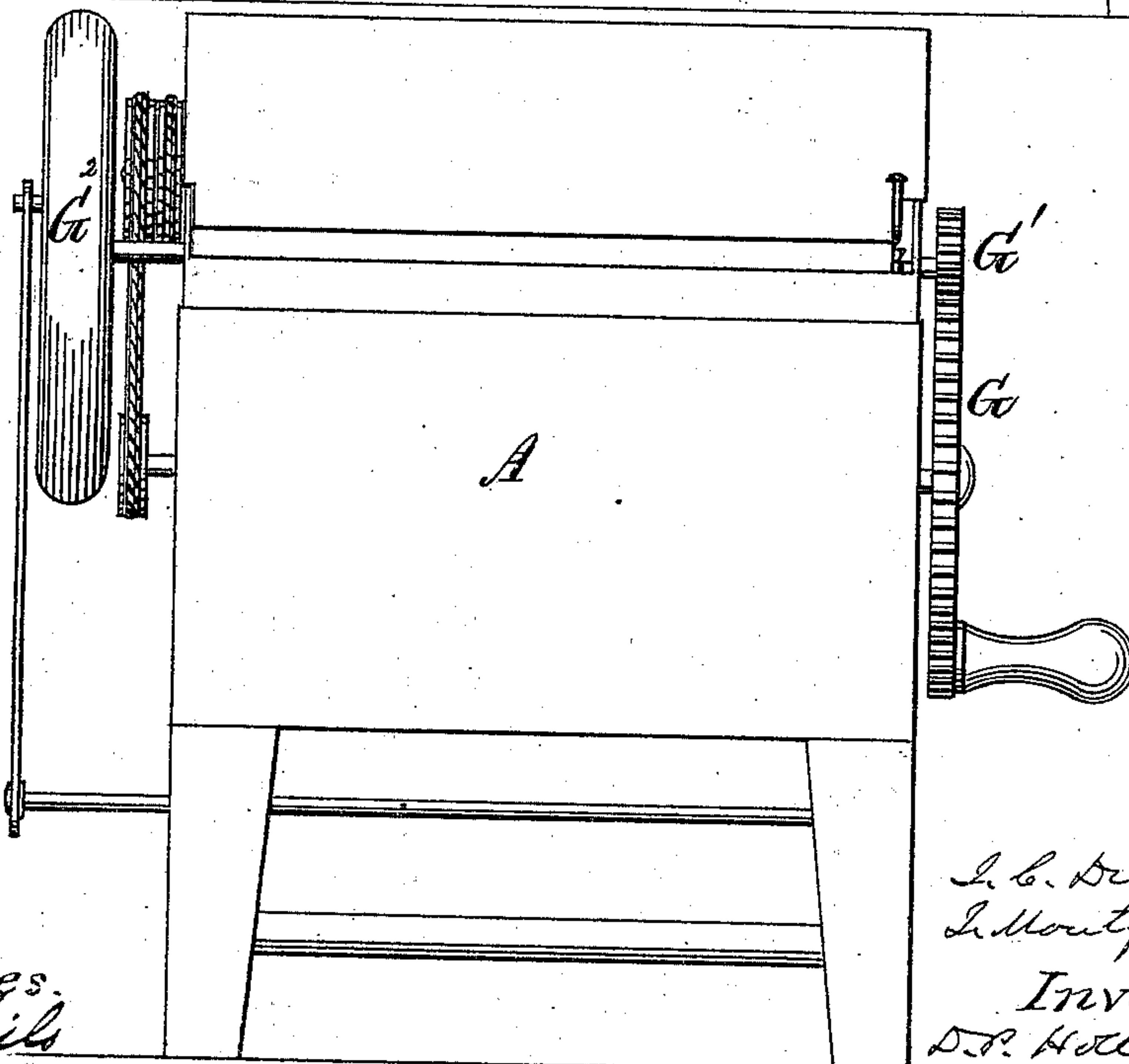
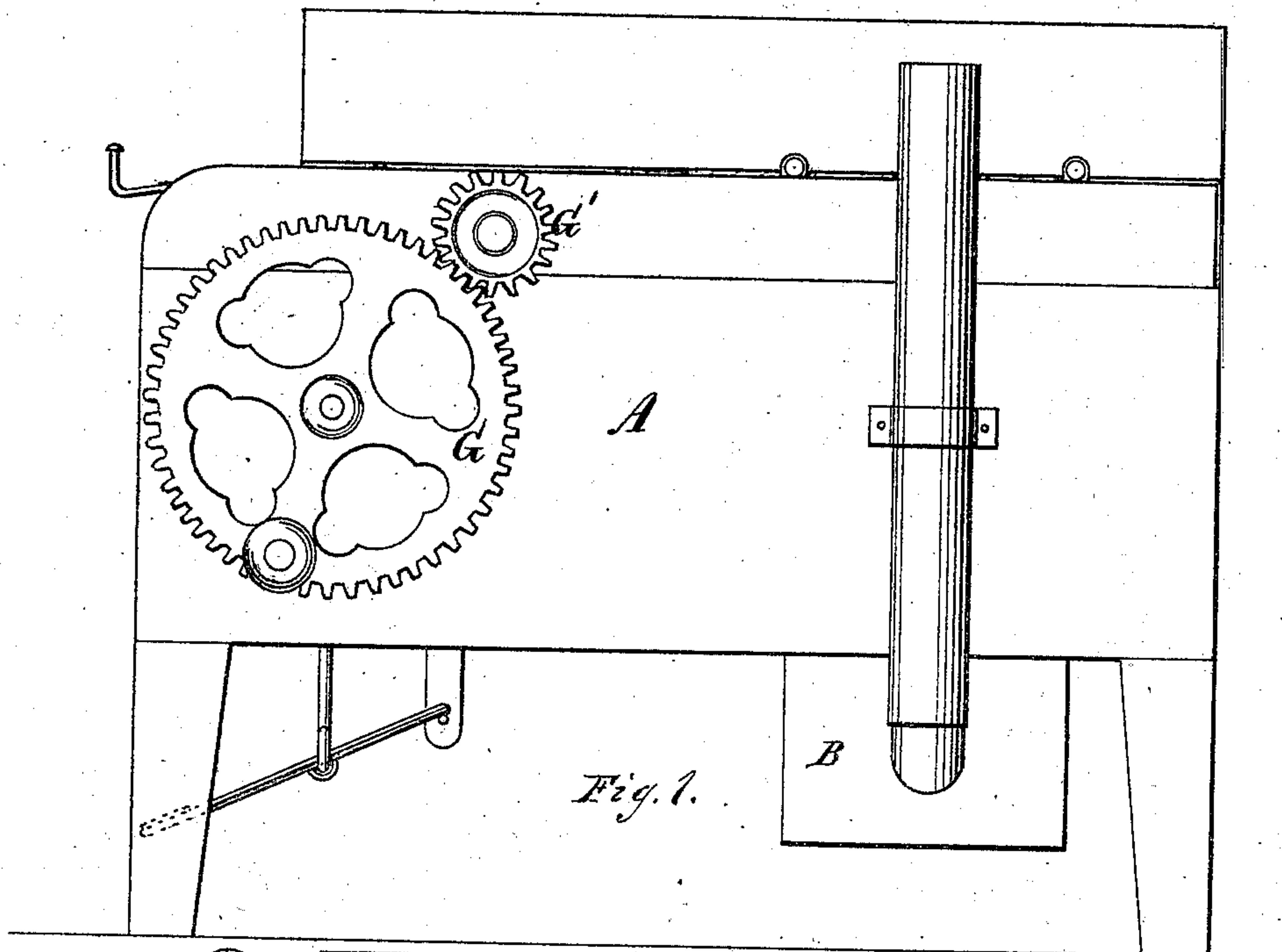


J. C. DURBIN & J. MONTGOMERY.

Improvement in Washing-Machines.

No. 130,704.

Patented Aug. 20, 1872.



Witnesses.
C. J. Hils
A. Ruppert

J. C. Durbin &
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Atty

Fig. 2.

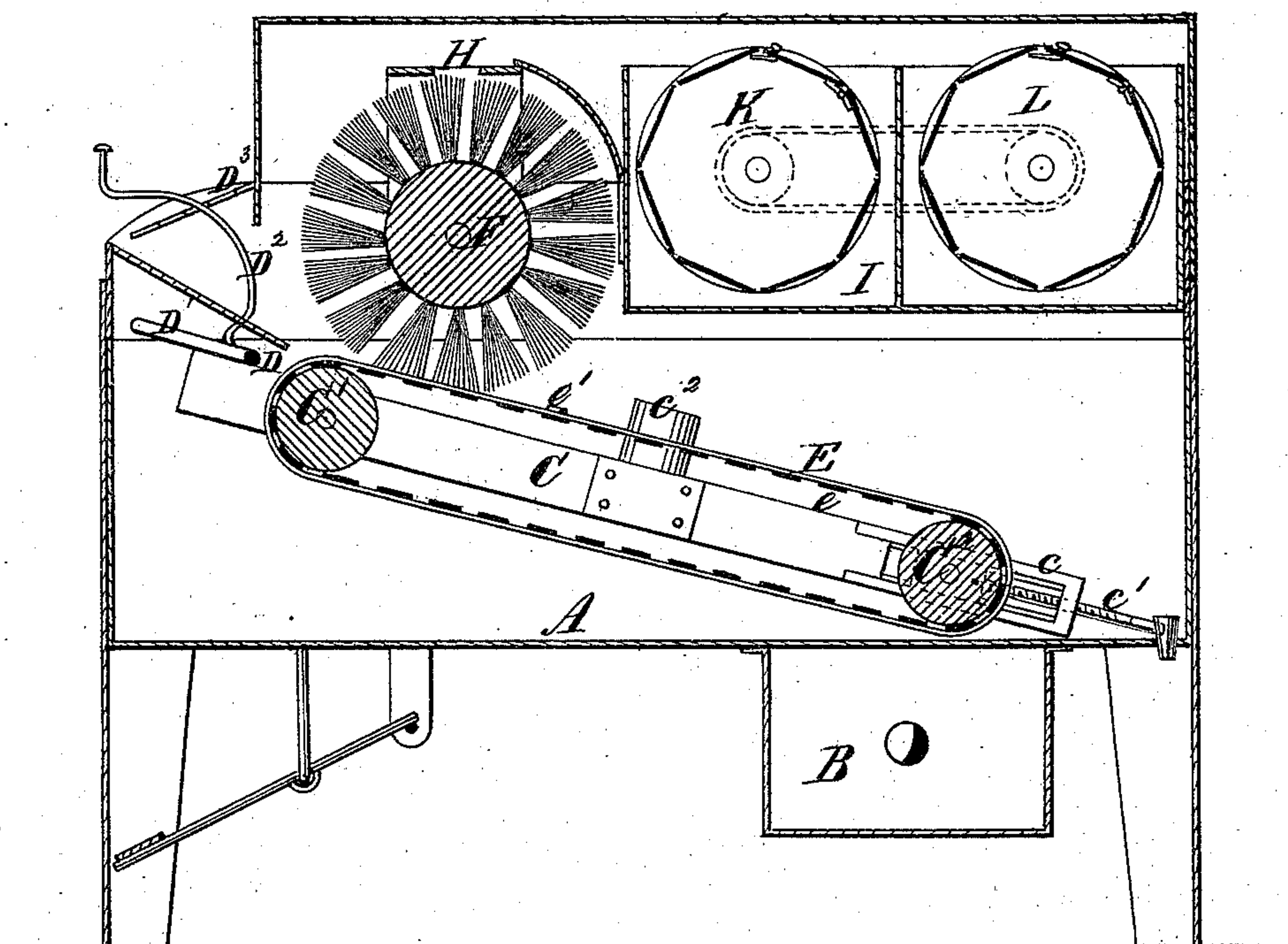
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Fig. 3.



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UNITED STATES PATENT OFFICE.

JOSEPH C. DURBIN AND JAMES MONTGOMERY, OF EUREKA, CALIFORNIA.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 130,704, dated August 20, 1872.

Specification describing certain Improvements in Washing-Machines, invented by JOSEPH C. DURBIN and JAMES MONTGOMERY, residing at Eureka, in the county of Humboldt and State of California.

The first part of our invention consists in the employment of an endless belt arranged in a suitable suds-box, in combination with a revolving brush-cylinder, by which the clothes carried by the belt are scrubbed, for the purpose of removing all the foreign matter in them. The second part of our improvement consists in hanging the endless clothes-belt in a frame, pivoted near one end to the suds-box, which frame may be turned on its axis, for the purpose of regulating the distance between the brush-cylinder and the belt, by means of arms or cams on a rock-shaft which is controlled by a hand-lever. The third part of our invention consists in constructing the frame carrying the brush-cylinder with an open-bottomed box in its top, for the reception of bars of soap, which thus automatically soap the brushes. The fourth part of our invention consists in the employment, in combination with the suds-box of a washing-machine, of a tank divided into two compartments, each of which contains a basket-cylinder, one being for the purpose of soaking the dirty linen before it is put in the washing-machine, and the other for the purpose of rinsing the linen after it has been washed.

Figure 1 is a side elevation of our improved washing-machine. Fig. 2 is an end elevation of the same. Fig. 3 is a vertical longitudinal section.

The same letters of reference are employed in all the figures in the designation of identical parts.

The suds-box A is constructed with a metallic bottom under which a furnace, B, is arranged, for the purpose of heating the water used, and of keeping the suds in a properly heated state during the process of washing. The suds-box contains a frame-work, C, which is pivoted to the sides of the suds-box near one end, upon the projecting journals of the roller C¹, which pass through the sides of the frame-work and have their bearings therein. The side pieces of the frame-work extend some distance beyond the journals of the roller C¹, under the arms D¹ of a rock-shaft D, which is

journaled in the sides of the suds-box, and oscillated by means of a hand-lever, D², the latter being controlled by a stationary rack, D³, in manner well known. By oscillating the rock-shaft, its arms may be made to bear down upon the side pieces of the frame-work C, so as to turn it upon its axis and raise its other end. At this end it carries a second roller, C², which is placed, with its journals, in boxes which are movable in ways c, and controlled by screw-spindles c¹, for the purpose of stretching the endless belt E, which passes around these rollers C¹ and C², to the proper tension. This endless belt is stiffened by slats e, secured across it upon its interior side at suitable distances apart, and it is kept in proper position on the rollers by means of guides c² on the adjustable frame C. The belt is also provided with a strap or bail, e', passing across it, to which the clothes are to be secured. The brush-cylinder F is arranged above the endless belt so that its brushes shall come nearly in contact with the latter, causing the clothes to be scrubbed as they are passed under it by the belt. The brush-cylinder and belt are operated to travel in the same direction, but the former at a much greater velocity than the latter. They may, however, be made to travel in opposite directions, if preferred. Brushes may also be placed upon the upper surface of the belt where it is strengthened by the slats. The brush-cylinder and belt may be worked by a treadle, or by means of a crank on the gear-wheel, fastened to the overhung end of the journal of the roller C¹, both ways being shown in the drawing. The spur-wheel G driving the roller C¹ meshes into a pinion, G¹, on the journal of the brush-cylinder, which is provided with a fly-wheel, G², fastened on its other journal. The soap used is placed in a box, H, above the brush-cylinder, the box having an open bottom so that the soap will feed automatically to the brushes. I refers to a tank, supported on cleats in the top of the suds-box, in rear of the brush-cylinder. The tank is divided into two separate compartments, in each of which a many-sided slotted cylinder is arranged to revolve. The cylinder K is intended for the reception of the dirty linen, for the purpose of soaking them preparatory to washing, while the cylinder L is to receive the clothes after they have been washed, for the purpose

of rinsing them. One journal of each cylinder projects through its bearing for the reception of pulleys, by means of which and suitable belts to operate the cylinders, one pulley being connected by a belt with a pulley on the journal of the roller C¹, from which the power for driving the cylinders is derived.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination of the endless belt and the revolving brush-cylinder, substantially as and for the purpose specified.

2. The brush-cylinder, in combination with endless belt, pivoted frame C, and rock-shaft D provided with arms D¹ and hand-lever and rack D² D³, substantially as specified.

3. The soap-box H having an open bottom, in combination with the brush-cylinder, substantially as set forth.

4. In combination with a washing-machine, the divided tank I, carrying in each compartment a revolving slotted cylinder, substantially as and for the purposes set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOSEPH C. DURBIN.
JAMES MONTGOMERY.

Witnesses:

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HENRY ASHWORTH.