

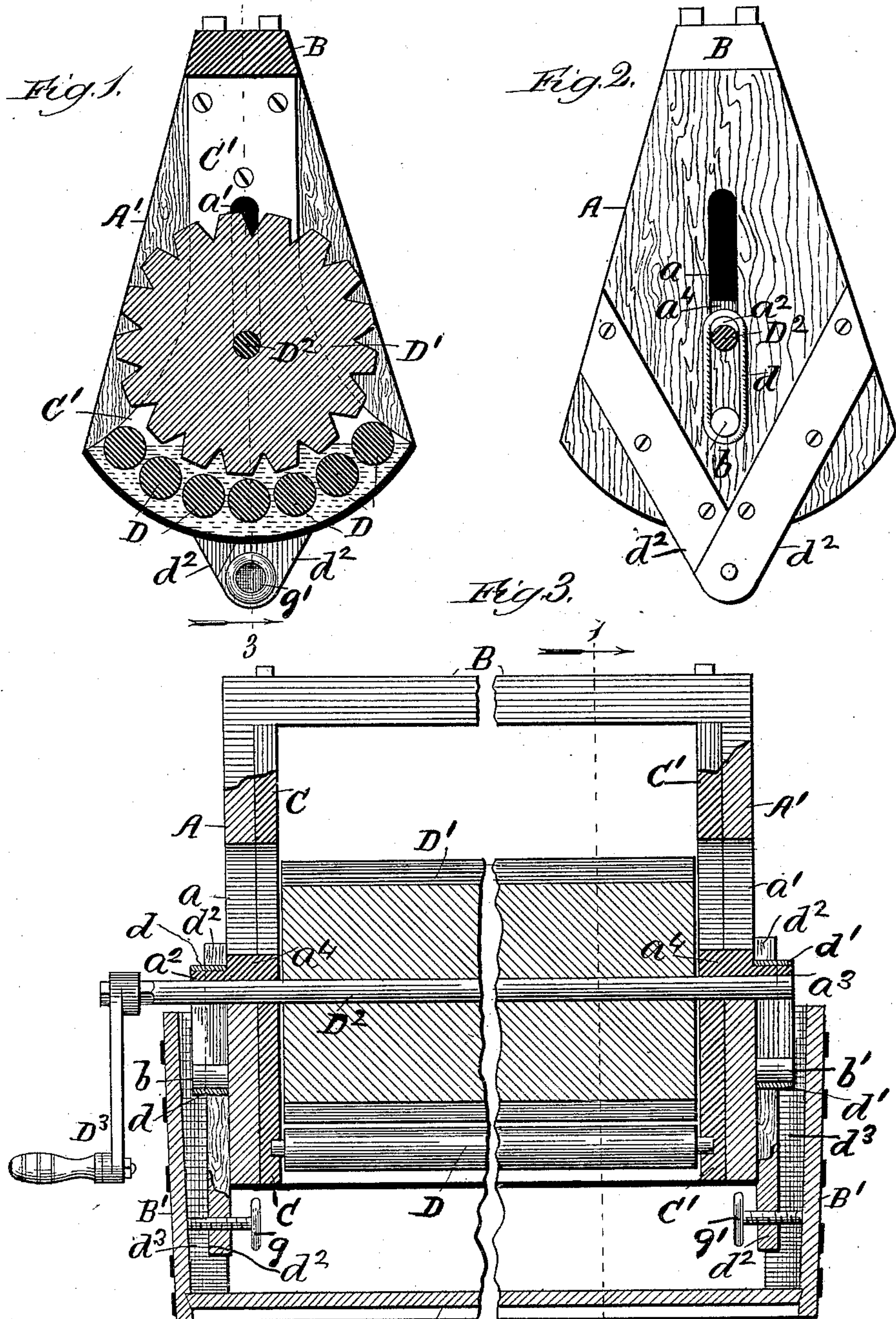
(No Model.)

2 Sheets—Sheet 1.

J. CARLISLE.  
WASHING MACHINE.

No. 418,331.

Patented Dec. 31, 1889.



Witnesses:  
E. S. Gaylord.  
L. M. Freeman.

Inventor:  
J. Carlisle  
By L. B. Coupland & Co  
Attys

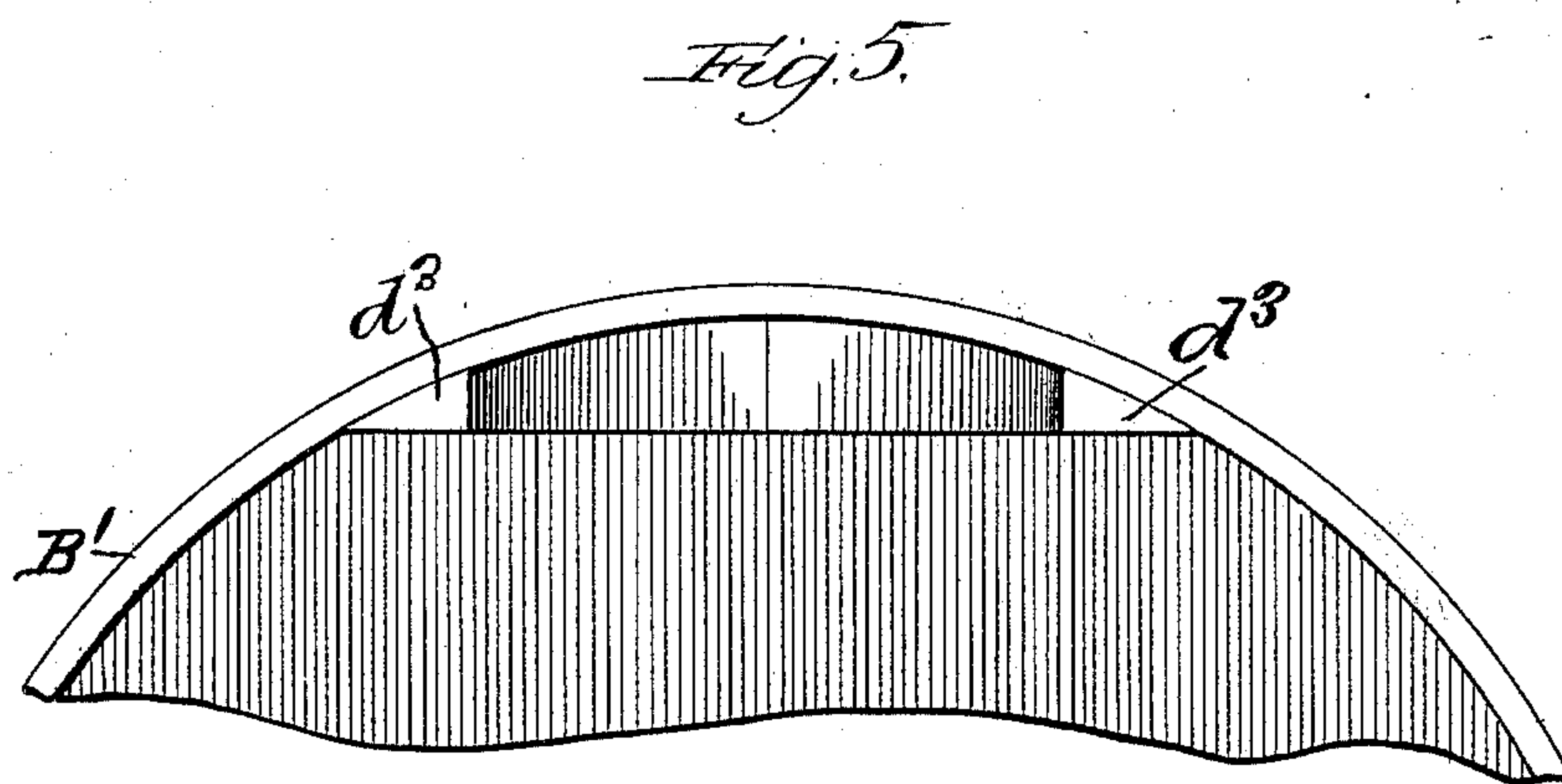
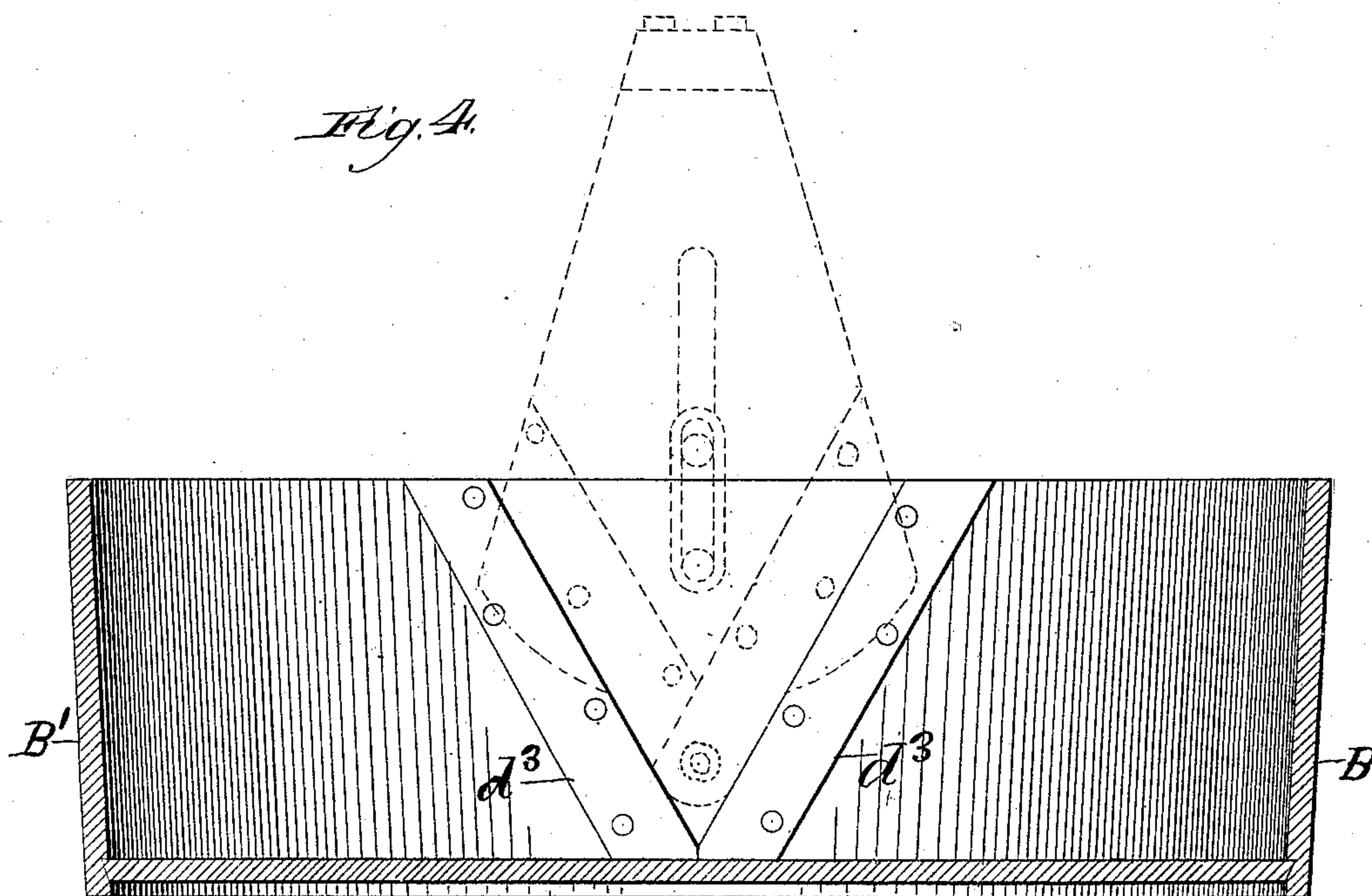
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# UNITED STATES PATENT OFFICE.

JOSEPH CARLISLE, OF CHICAGO, ILLINOIS.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 418,331, dated December 31, 1889.

Application filed February 2, 1889. Serial No. 298,478. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH CARLISLE, a subject of the Queen of Great Britain, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Washing-Machine, of which the following is a full, clear, and exact description, that will enable others to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to an improvement in washing-machines, the same consisting of certain novel features in the construction, combination, and arrangement of the several parts, as will be hereinafter set forth.

Figure 1 is a vertical transverse section in plane 1, Fig. 3; Fig. 2, an exterior elevation of the machine removed from the suds-box; Fig. 3, a vertical longitudinal section in plane 3, Fig. 1, showing the machine in position in the tub. Fig. 4 is a vertical transverse section of the tub or suds-box, the relative position of the machine being indicated in dotted lines; and Fig. 5, a broken-away plan of one side of the tub, the machine being removed.

Referring to the drawings, A A' represent the end pieces of the machine, connected at the top by the cross-bar B, bolted thereto, and B' a tub or suds-box. The vertical plates C C' are rigidly secured to the inner sides of the respective end pieces, and are of a length corresponding thereto, as shown in Figs. 1 and 3. A number of small rollers D are journaled in the widened lower ends of the plates C C', and are arranged in the arc of a circle, as shown in Fig. 1. A large fluted roller D' is rigidly mounted on the horizontal shaft D<sup>2</sup>, and is located just above the series of smaller rollers D and in close proximity to the concave rubbing-surface presented by the same. The hand-crank D<sup>3</sup>, mounted on one end of the shaft D<sup>2</sup>, provides means whereby the required rotary motion may be imparted to the fluted roller. The framing ends have the elongated openings a a', in which are inserted the respective ends of the shaft D<sup>2</sup>, which provides for a vertical adjustment of said shaft

and the fluted roller mounted thereon. When in a normal position, the ends of the shaft D<sup>2</sup> have a bearing on the bottom of the journal-openings a a' and just hold the fluted roller out of contact with the small rollers. On the upper side of the respective ends of the shaft D<sup>2</sup> are placed the loosely-arranged bearing-caps a<sup>2</sup> a<sup>3</sup>, the upper square part a<sup>4</sup> of which bears against the inclosing sides of the journal-opening, and is thereby prevented from turning with the rotating shaft. The framing ends are provided with the fixed horizontally-projecting pins b b', located some way below the lowest position of the ends of the shaft D<sup>2</sup>, as shown in Figs. 2 and 3. The rubber-spring bands d d' connect the bearing-caps a<sup>2</sup> a<sup>3</sup> and the fixed pins b b', and provide for a vertical movement and adjustment of the fluted roller with reference to the small rollers in accordance with the thickness of the garments or articles placed between the fluted roller and its rubbing-surface in the process of washing. The inclined bars d<sup>2</sup> d<sup>2</sup> are rigidly fastened to the outer lower side of the end pieces A A', the lower ends coming together in a V form, and which are adapted to engage with the correspondingly-arranged bars or frame d<sup>3</sup> secured inside of the tub or suds-box, as shown in Figs. 4 and 5, by which arrangement the machine is removably supported in a proper working position, and is secured in place by means of the hand clamping-screws g g'.

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

In a washing-machine, the combination, with the ends A A', of the cross-bar B, the inclined bars d<sup>2</sup> d<sup>2</sup>, secured to the outside surface of said ends, the tub or suds-box B', the bars or frame d<sup>3</sup>, arranged inside of the suds-box, and the hand-screws g g', substantially as and for the purpose set forth.

JOSEPH CARLISLE.

Witnesses:

L. M. FREEMAN,  
L. B. COUPLAND.