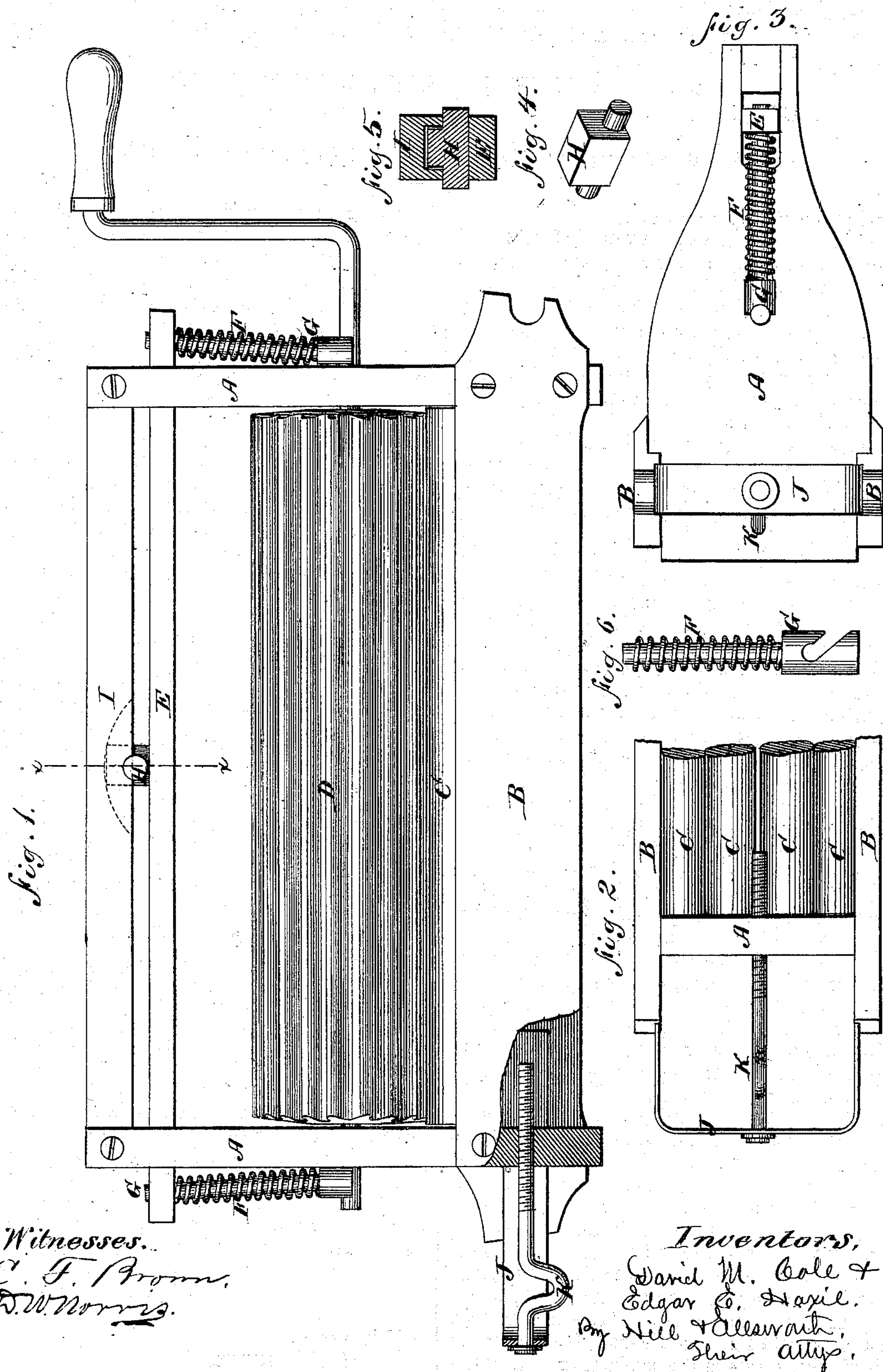


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Improvement in Washing Machines.

No. 125,542.

Patented April 9, 1872.



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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 125,542, dated April 9, 1872.

*To all whom it may concern:*

Be it known that we, DAVID M. COLE and EDGAR E. HOXIE, of Elgin, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Washing-Machines; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a side elevation of a washing-machine, showing the application of our improvements. Fig. 2 is a bottom-plan view, showing the means employed for adjusting the machine in tubs of different size. Fig. 3 is an elevation of one of the end pieces of the frame. Fig. 4 is a perspective view of the cam for adjusting the equalizing-bar. Fig. 5 is a sectional view taken in the line *x x*, showing the application of the cam; and Fig. 6 is a detached view of devices for connecting the pressure-roller with the equalizing-bar.

Similar letters of reference indicate the same parts in the several figures of the drawing.

Our invention relates to that class of washing-machines in which a large corrugated roller is arranged to operate in connection with a series of small rollers placed beneath it; and has for its object to improve the means for holding the large roller in contact with the small rollers. To this end the invention consists in connecting the presser-bar to the journals of the roller by guide-rods and springs arranged outside the end pieces of the frame. This arrangement adapts the pressure-bar to operate as an equalizer to distribute the pressure throughout the springs of both journals during the washing process, and also permits the easy removal of the spring connections, equalizing-bar, and roller.

In the accompanying drawing, A represents the end pieces of the machine, secured together by the side strips B, and affording bearings for the small rollers C, which are arranged in the arc of a circle between or over the side pieces. D is the large corrugated pressing-roller, having its journals arranged in the slots of the end pieces A; and E is the equalizing-bar, whose ends pass through such slots above the journals of the roller. F are the springs, each surrounding a guide-rod, G, the upper end of which enters the projecting end of the equalizing-bar, and whose enlarged lower end

bears against or is fitted over the journal of the roller outside the end pieces of the frame. The spring is retained in place by the equalizing-bar, and a shoulder formed on the guide-rod, so that, when compressed, the rod shall move freely through it and the end of the bar. If desired, an inclined side recess may be formed in the head of the guide-rod, which bears upon the crank end of the journal, as shown in Fig. 6, so that such rod can be easily slipped off and on the journal when required. By this arrangement the connections between the equalizing-bar and the pressure-roller are all outside the ends of the frame, and can be removed and replaced at any time when desirable or necessary. No holding devices are required to keep the spring connections within or against the frame, or to guide the roller in its vertical movements, and the whole cost of the machine is, therefore, materially reduced. The pressure-bar is adjusted to regulate the tension of the springs by a set-screw or by a cam, H, arranged between the bar and the top piece I of the frame. The location of the spring connections outside the end pieces of the frame also permits a limited longitudinal movement of the equalizing-bar, and allows it to rock slightly on the cam, so that the tension shall be the same upon both springs when either end of the roller is raised higher than the other in the operation of washing. This provision relieves the springs and prevents them from being broken by inequality of tension.

The machine is adapted to fit different-sized tubs by means of a metal loop, J, entering the end of the frame, and adjusted by a screw-crank, K, as shown in Figs. 1 and 2; but this feature we do not claim as our joint invention.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The adjustable equalizing-bar E, in combination with the pressing-roller D, when the two are connected outside the ends of the frame by removable spring connections, as herein described, for the purposes specified.

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