I. B. STILLMAN.

Washing-Machines.

No. 133,389. Patented Nov. 26, 1872.

Fig. 1

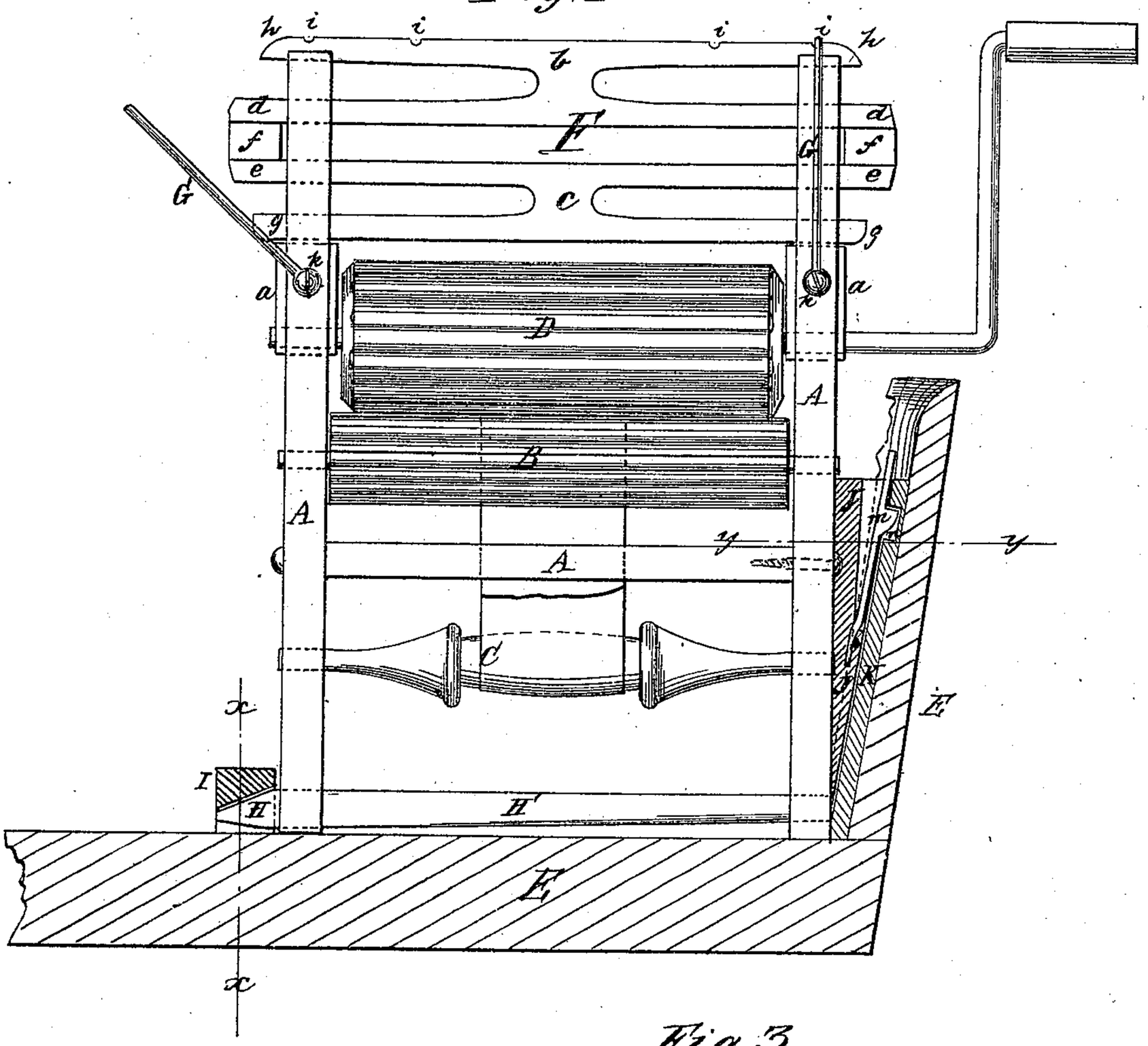


Fig. 2

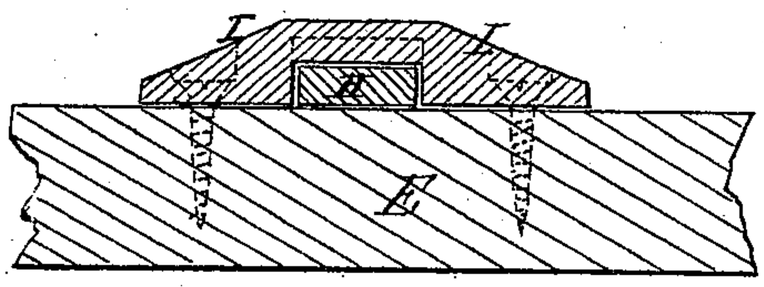
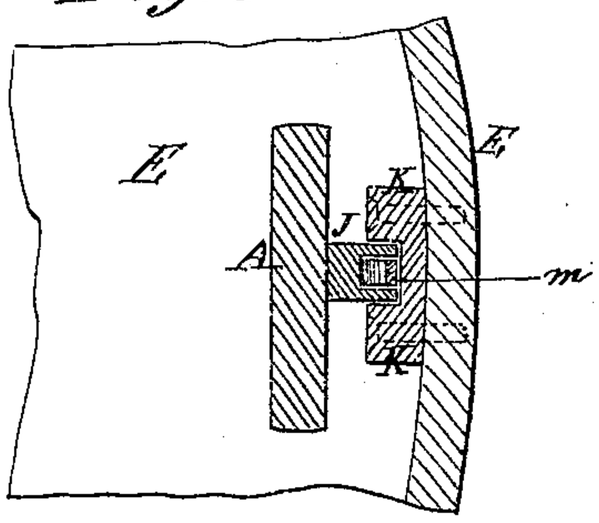


Fig. 3



Witnesses:

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UNITED STATES PATENT OFFICE.

IRA B. STILLMAN, OF ALMOND, NEW YORK.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **133,389**, dated November 26, 1872.

To all whom it may concern:

Be it known that I, IRA B. STILLMAN, of Almond, in the county of Allegany and State of New York, have invented a new and useful Improvement in Washing-Machine, of which the following is a specification:

My invention relates to that class of washing-machines in which the washing is performed by passing the clothes between a set of rollers held to their work by spring power; and it consists in the construction of the pressure-spring, whereby a greater range of elasticity is effected than has been gained by springs heretofore used, and in the manner of adjusting the said spring to the different degrees of pressure required. It also consists in a device whereby the machine may be readily and securely attached to and conveniently detached from the tub or other vessel in connection with which it may be desired to be used, as will be hereinafter more fully described.

In the accompanying drawing making a part of this specification, Figure 1 represents a front elevation (partly in section) of a washing-machine. Figs. 2 and 3 are detail cross-sections of the same through the line *x x* and *y y* of Fig. 1, respectively.

Similar letters of reference indicate corresponding parts.

A is the frame of the machine; B, the two lower rollers, over which and around the guide-roller C is applied an endless canvas belt in the usual manner. D is the pressure-roller mounted in sliding bearings *a* in the frame A, so as to adjust itself to different thicknesses of the clothes to be operated upon, and which are passed and compressed between the said roller D and the rollers B in the ordinary manner. E is a section of a tub, to which the washing-machine is represented as being attached. F is the spring, by the pressure of which upon the sliding bearings *a a* the roller D is held down against the rollers B. In order to increase the range of elasticity the spring F is composed of two ordinary springs, *b* and *c*, united or connected together by interposing between their extreme ends *d* and *e* the rubber blocks *f*, as seen in the drawing, so that the said elastic blocks *f* will thus be placed one at each end of the horizontal center line of the spring F, the ends *g g* of which rest on the sliding bearings *a*, while its upper ends *h h* are provided with notches *i*, into which fit the upper ends of the hooks or clasps G, the lower ends of which latter are pivoted at *k* to the frame A in such a manner that the hooks G may be swung out of contact with the notches *i*, and the spring F lifted out of the frame A when desired. To apply pressure on the roller D the clasps G are swung upward and inward over the curved ends *h* of the spring F until they lodge in a perpendicular position into the first or outer notches *i*. To increase the pressure so applied on the roller D the spring F may be further compressed against the bearings *a* by forcing the clasps G toward each other further inward from the ends *h* over the springs F until the upper ends of the clasps G lodge in the inner notches *i* nearer the center of the machine. By increasing the number of notches *i* the position of the clasps G on the spring F, and thereby the compression of the latter, may be varied indefinitely.

I will now describe the second part of my invention—viz., the device for attaching the machine to the wash-tub E or other vessel. To the lower end of one of the two uprights of the frame A I attach a projecting lug or toe, H, which may preferably be made the projecting end of a brace, H′, reaching across the machine and secured to both of the uprights of the frame A. I is a clamp provided with an opening to fit the toe H, and into which the said toe is inserted when attaching the washing-machine, the clamp I having previously been secured by screws or otherwise to the bottom of the tub E. To the other upright of the machine I attach an incline or wedge-shaped piece, J, edge downward, and recessed in its center sufficiently for the attaching and free working of a spring-catch, *m*. K is a slotted or recessed piece attachable by screws or otherwise on the inside of the staves of the tub. The recess in K is made to receive and fit snugly to three sides of the wedge or incline J, and is made deep enough to give a thorough lateral support to the machine when in position for work. In the bottom of said recess is a notch, *n*, for the reception and retention of the spring-catch *m*.

To attach the washer to the tub E, insert it between the clamp I and K, so that the toe H will enter the former and the wedge J the latter, and press down until the spring-catch *m* enters the notch *n*, when the machine will be firmly locked in position for work. To detach the same, lift the spring-catch *m* out of the notch *n* and raise this side of the machine out of the recess in K, while raising, withdrawing the toe H from the clamp I.

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

1. The pressure-spring F, (composed of the two separate springs *b c* and the rubber blocks *f*,) in combination with the hooks or clasps G, frame A, and bearings *a a* and rollers D B, substantially as and for the purpose specified.

2. The combination of the toe and clamp H I with the incline J, spring-catch *m*, and recessed and notched piece K, substantially as and for the purpose specified.

IRA B. STILLMAN.

Witnesses:

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1,250 words