D. JENNINGS.

WASHING-MACHINE.

No. 174,681. Patented March 14, 1876.

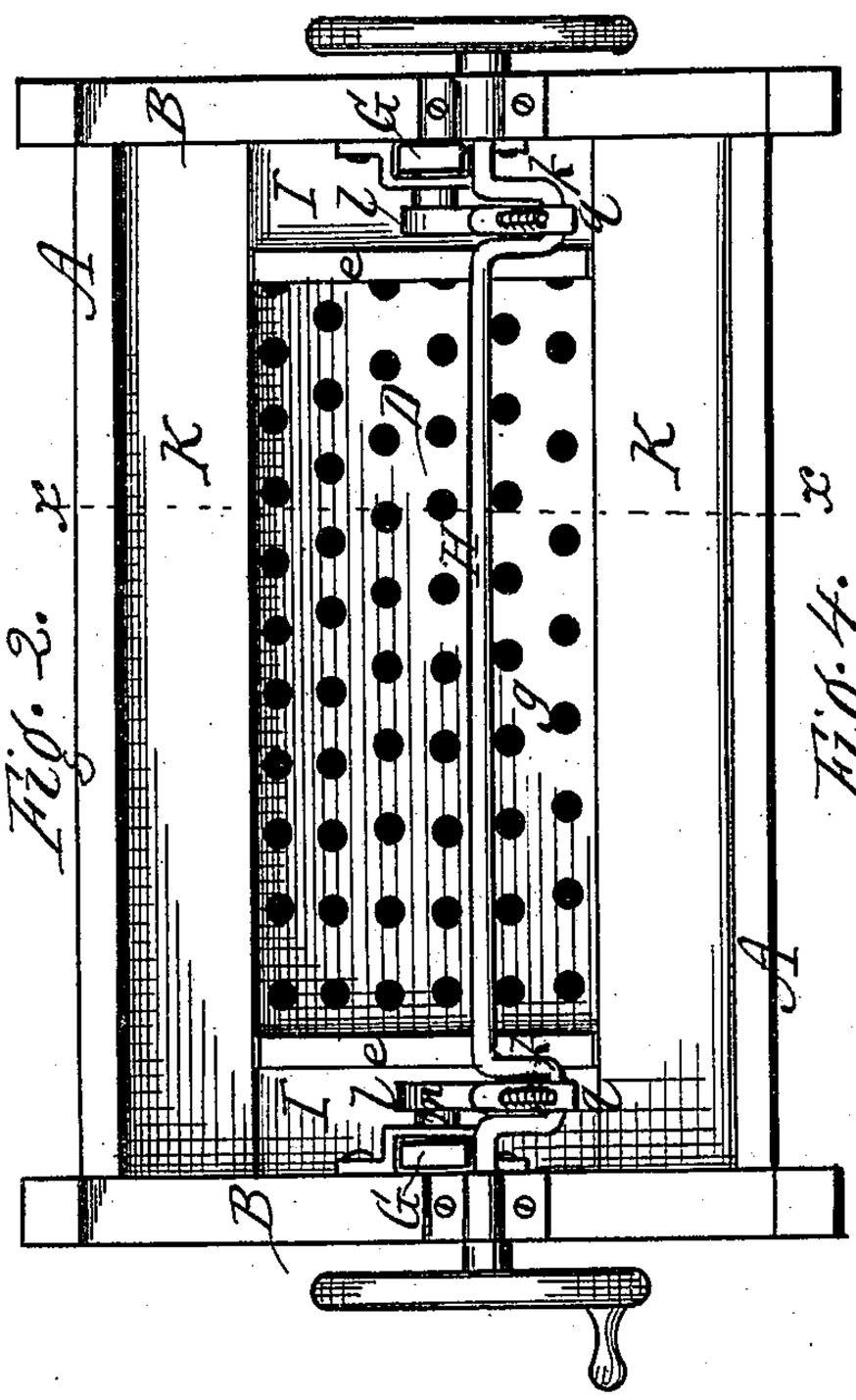

Fig. 2.

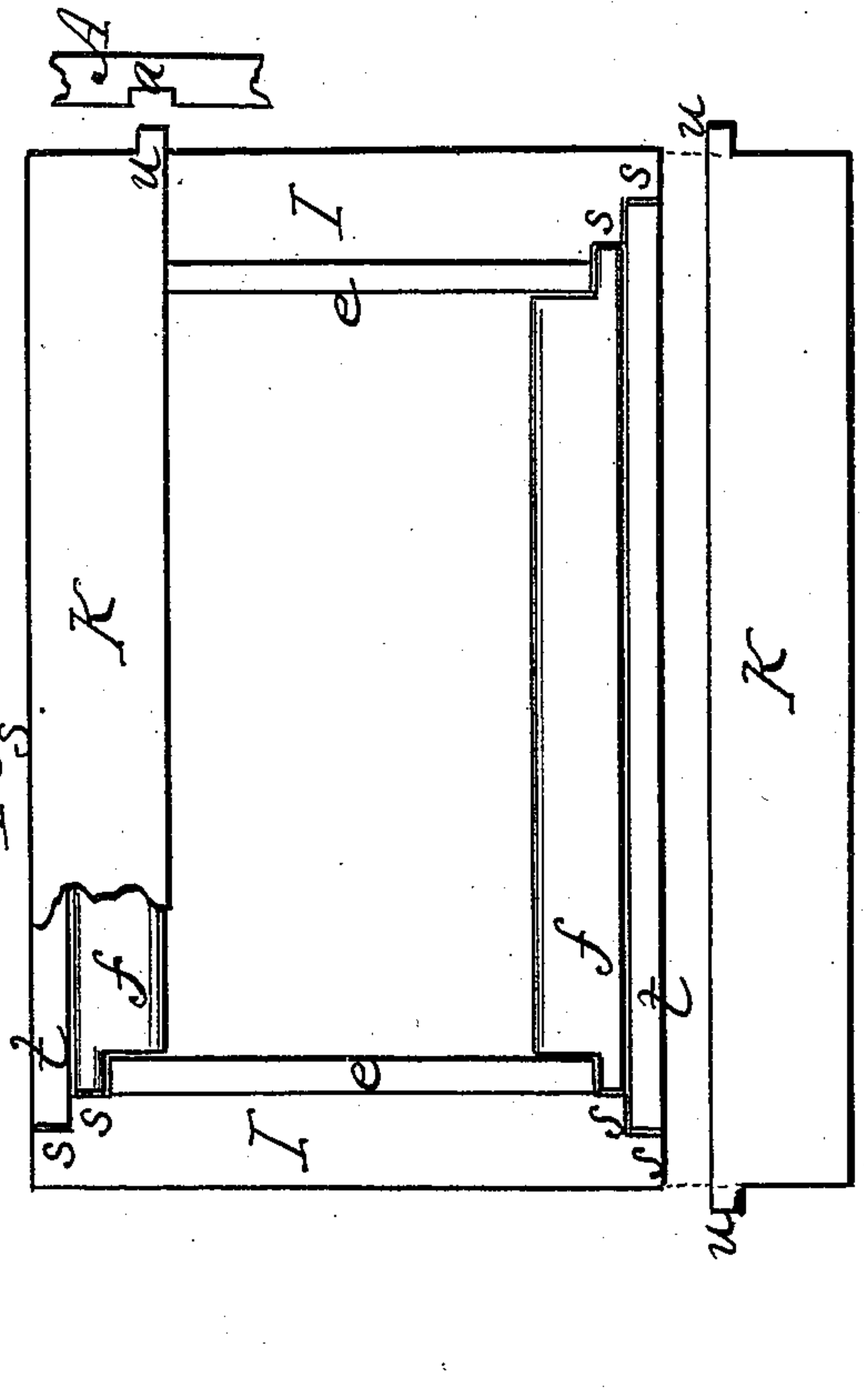

Fig. 4.

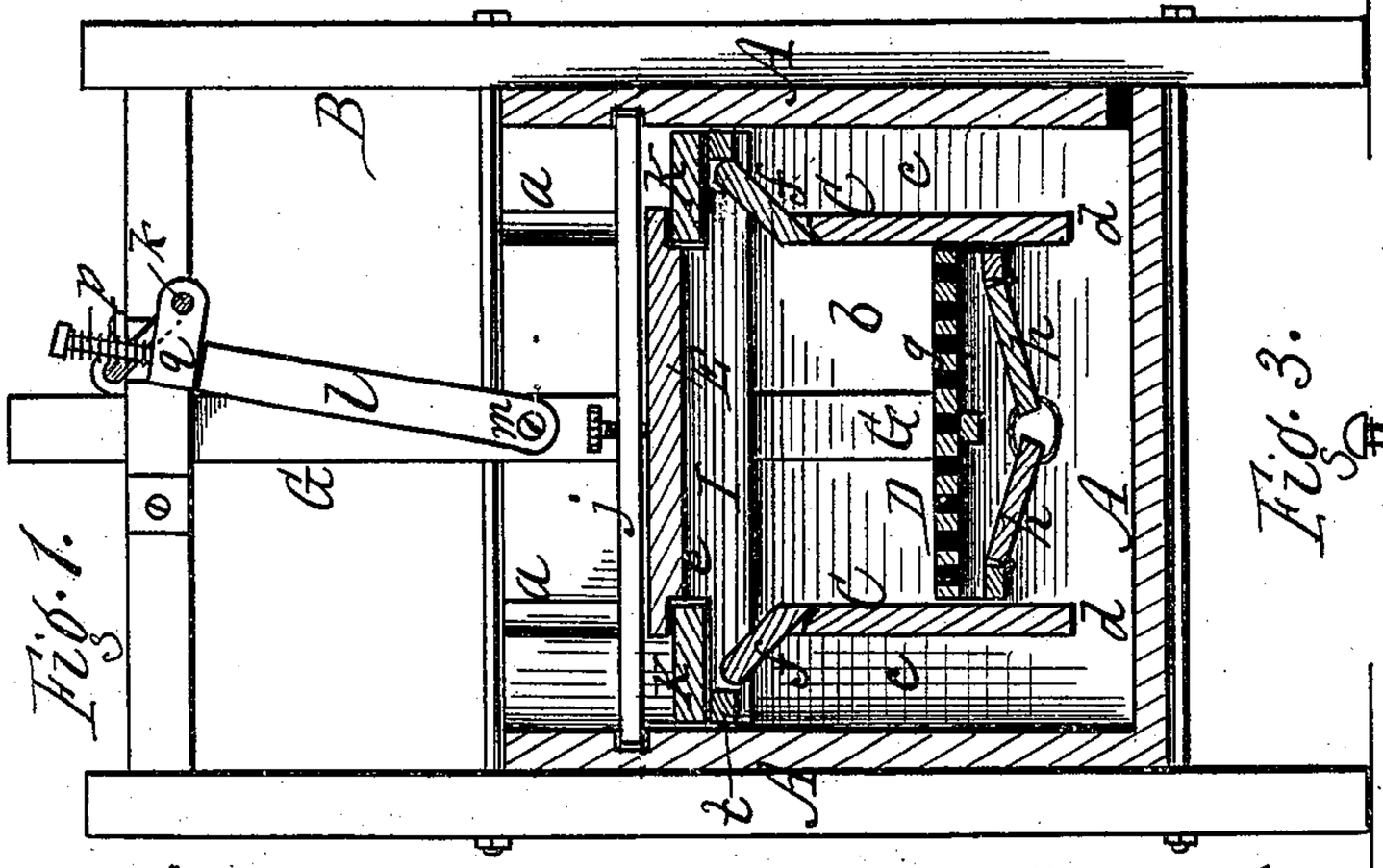

Fig. 1.

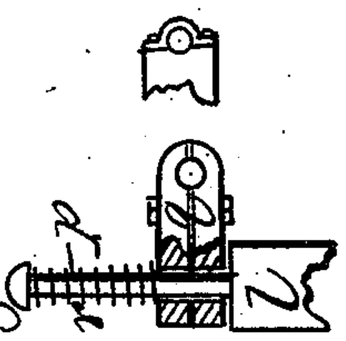

Fig. 3.

Witnesses.
E. D. Scott.
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UNITED STATES PATENT OFFICE.

DAVID JENNINGS, OF LYONS, NEW YORK.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **174,681**, dated March 14, 1876; application filed February 4, 1876.

To all whom it may concern:

Be it known that I, DAVID JENNINGS, of Lyons, in the county of Wayne and State of New York, have invented a certain new and useful Improvement in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical cross-section in line *x x* of Fig. 2. Fig. 2 is a plan. Fig. 3 is a view of the spring crank-connection. Fig. 4 is a plan of the loose blocking.

This improvement relates to a washing-machine having a perforated follower upon which the clothes are laid, with valves and waterways so arranged that the clothes are compressed by an upward action of the follower, and the water makes a circuit through the clothes.

The invention consists, essentially, in the combination, with the working parts of the machine, of a loose blocking, as hereinafter described; also, of a spring-connection to the crank, whereby the follower can adapt itself to the compression of a larger or smaller body of the clothes, as will be more fully set forth.

A represents the box or body of the machine. B B is a frame attached to the two ends of the box, for strengthening the same, rising some distance above, as shown. C C are two boards which slide vertically down in grooves *a a* of the box, and form the central chamber or well *b*, and the two side passages *c c*. At the bottom of these boards are ports or passages *d d*, and at the top similar ports covered by inclined valves *f f*, which shut down on top the boards C C. D is the follower, which moves up and down in the central chamber or well *b*. The follower consists of a perforated top plate, *g*, and two valves, *h h*, which open from the center downward. The clothes are placed on top the follower, and in the upward motion of the latter they are compressed against the cover or lid E, the expressed water passing downward through the perforations in the follower, and thence through the valves *h h*. In this upward movement of the follower the valves *f f* are kept closed by the inside pressure against them, thereby confining the water above the follower. On the reverse or down movement of the follower the valves *h h* close, and the valves *f f* open, and the water under the follower is driven around through the side passages *c c* over the top of the follower again, completing the circuit. A constant circuit of the water is thus made through the clothes. G G are two standards attached to the ends of the follower, guiding it in its up-and-down movements, and preventing binding. H is a shaft resting over the top of the machine, having balance-wheels on its ends, and two cranks, *k k*, with which engage pitman-rods *l l* pivoted at *m* to the standards G G, by which means the follower receives its up-and-down motion. The top of each of the pitmen *l l* has a headed pin, *p*, on which rests a loose block, *q*, connecting with the crank, and held down by a coiled spring, *r*, Fig. 3. The object of this is to allow the follower to yield when a large body of clothes is placed thereon, thereby preventing binding or breaking of the machine by too much strain in compressing the clothes between the follower and the cover; also, insuring easy action in operating the machine. This spring device forms one of the features of my invention. The cover E is held in place by a cross-bar, *j*, which may enter slots in the side of the box A, and a set-screw may pass down through the cross-bar to tighten the cover in place.

I employ, in combination with the valves *f f* and follower, a system of loose blocks, shown in Figs. 1 and 4, for the purpose of holding said valves in place, yet allowing a ready removal of said valves, the follower, and all the working parts, without removing nails or screws. I I are the two end blocks resting on the boards C C, and to which are secured cleats *e e*. The extremities of these blocks, on the inner edge, are double-notched half-way down, as shown at *s s*, Fig. 4. In the outer notches fit longitudinal stay-strips *t t*, and in the inner notches fit the projecting journals of the valves *f f*. On top of these end blocks, and covering the valves *f f*, are fitted side blocks K K extending the whole length, and having projecting tenons *u u*, which fit and slide loosely in the grooves *a a* of the box A. These side

blocks K K, together with the cleats *e e* attached to the end blocks, form the horizontal seat on which rests the cover or lid E.

This system of loose blockings, while it builds up and covers the valves *f f* and other working parts of the machine, and forms the seat for the cover to the well, are all loose and removable without removing nails or screws, and hence are a great convenience for inserting or taking out the follower or valves, or for washing the machine. If it is desired at any time to make them permanent for transportation or other use, small iron brackets may be attached in the corners over the loose blockings. By the use of these blockings I avoid nailing any of the interior parts in place; but all are readily removable at any time, leaving the whole box A open.

What I claim as new is—

1. The combination, with the valves *f f*, boards C C, and follower D, of the loose blocks I K and stays *t t*, arranged to operate in the manner and for the purpose specified.

2. The combination, with the crank *k* and pitman *l*, of the block *q* resting in the pin *p* of the pitman, and pressed down by the spring *r*, the whole arranged to operate in the manner and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

DAVID JENNINGS.

Witnesses:
GEORGE ENNIS,
THOMAS J. PAINE.