

Z. DOYLE.
Washing-Machine.

No. 218,242.

Patented Aug. 5, 1879.

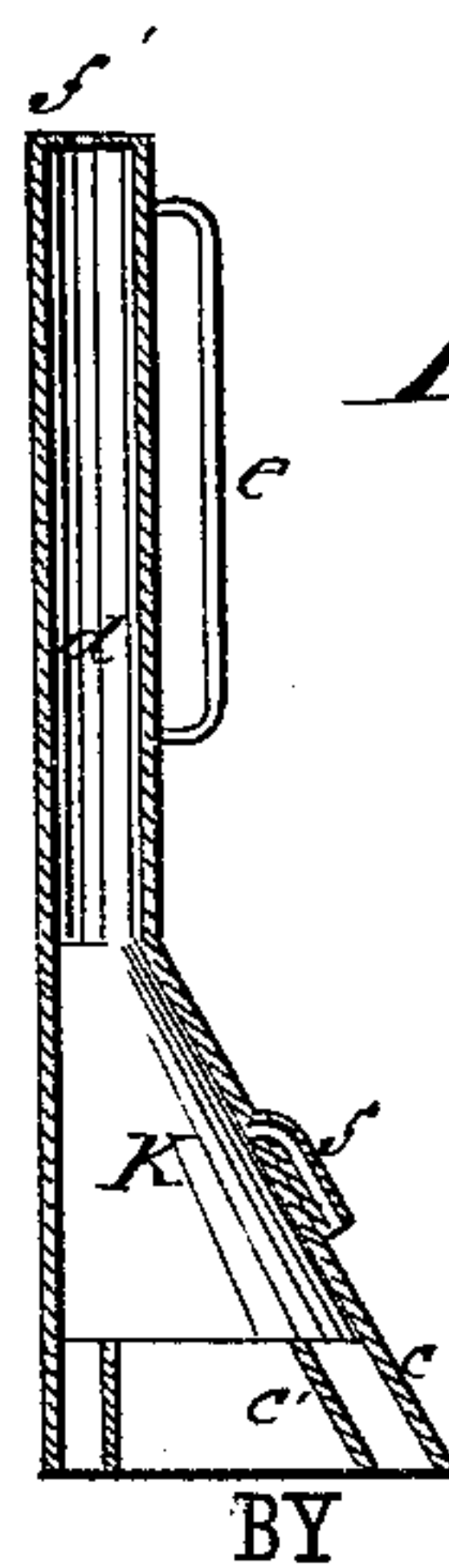
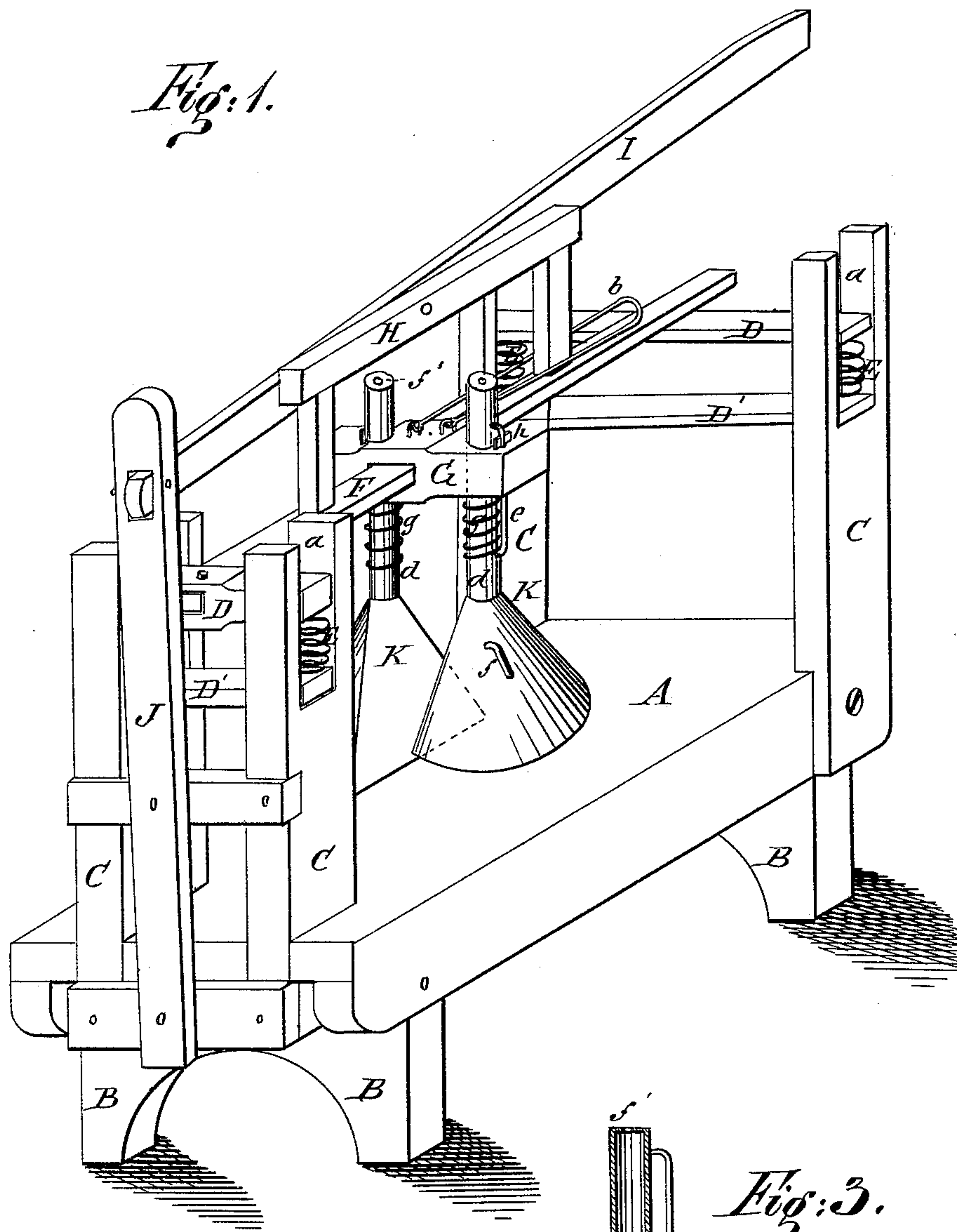


Fig:3.

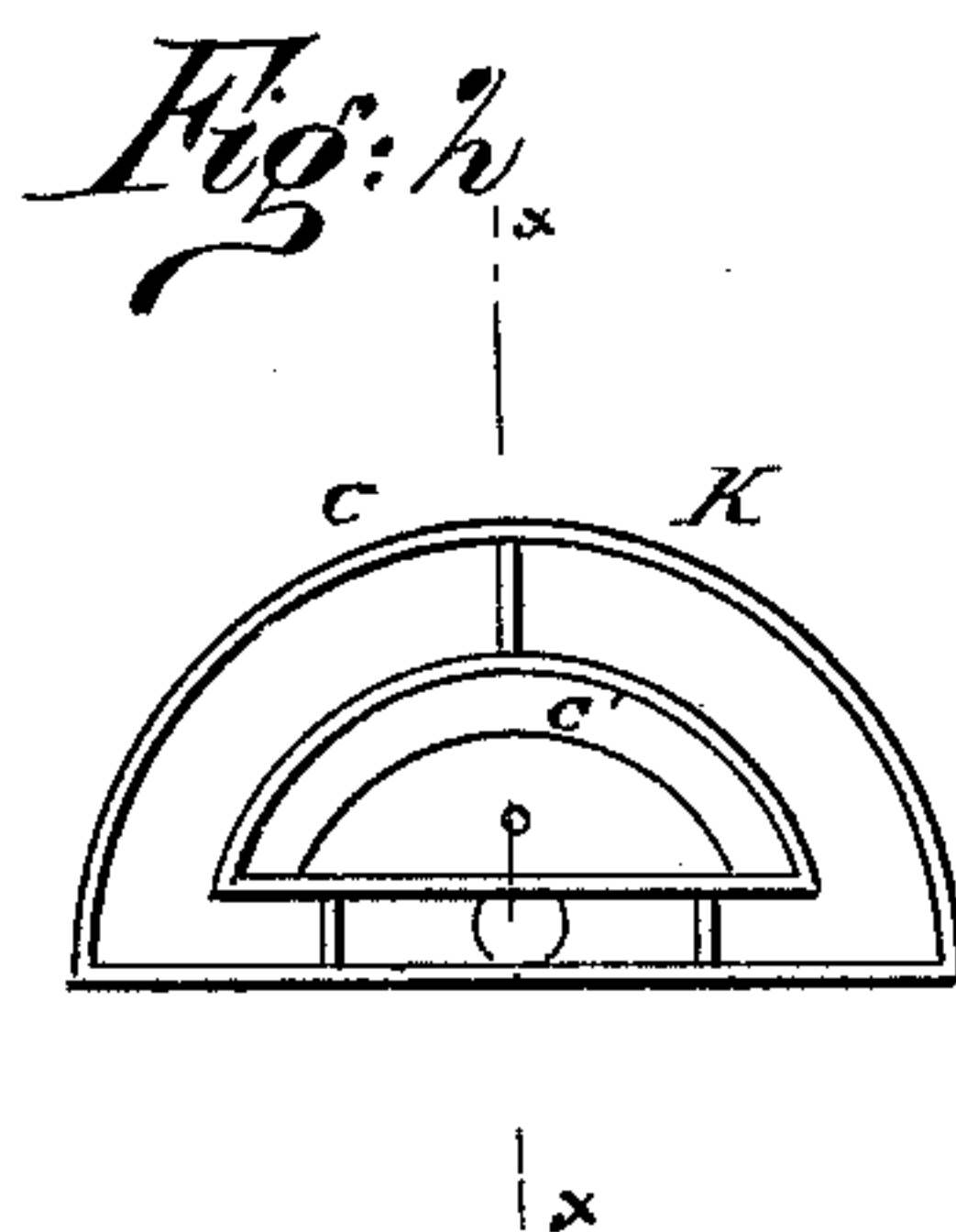


Fig: 2

WITNESSES:

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UNITED STATES PATENT OFFICE.

ZOHAR DOYLE, OF OGDEN, ILLINOIS.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **218,242**, dated August 5, 1879; application filed March 27, 1879.

To all whom it may concern:

Be it known that I, ZOHAR DOYLE, of Ogden, in the county of Champaign and State of Illinois, have invented a new and Improved Washing-Machine, of which the following is a specification.

The object of this invention is to provide a simple, durable, and easily-operated machine for washing clothing.

It consists of two semi-conical pressers, with air-tubes to prevent suction, mounted in a head held upon a frame operated by a lever and springs, and adapted to be shifted about, so as to be directed upon the surface of all the clothing.

In the accompanying drawings, Figure 1 is a perspective view of my improvement. Fig. 2 is a bottom view of one of the pressers; and Fig. 3 is a longitudinal section of the same on line *x x*, Fig. 2.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the platform of the machine, supported on legs B a short distance above the floor. C represents standards rising from each end of the platform, and provided with short vertical slots *a* at the top. Placed in these slots transversely are bars D D', joined together at the ends by spiral springs E, the upper bar forming thus an elastic support.

Through the upper bar, D, at the rear end of the machine, is made a mortise, and in the mortise is pivoted one end of a bar, F, the opposite end resting upon the upper bar, D, at the front of the machine.

G represents a head, with a mortise through it, through which is passed the bar F, the head being held between the uprights of the square frame H, erected above the bar F, the head sliding freely back and forth between the uprights.

A loop, *b*, lying upon the bar around the forward upright, has its ends hooked to the head G, whereby the said head is moved back and forth on the bar by the operator standing at the front of the machine without changing his position.

I represents a lever, having one end fulcrumed in the upper end of the standard J, rising up from the rear end of the machine, and pivoted at its center to the cross-bar of

the frame H, while its working end extends beyond the front end of the machine.

K K are the semi-conical pressers, each composed of two concentric conoidal pieces of sheet metal, *c c'*, connected together, the inner one being about one-fourth the length of the outer, to which it is connected, while the outer one is joined above to the straight hollow tube *d*, having on the outside a keeper, *e*. In the side of the cone is a bent tube, *f*, opening from the exterior within the same, for the passage of air, and at the top of the tube is another air-hole, *f'*. These pressers are connected with the head, with the flat sides toward each other, by passing the tubes through holes provided for them in its ends, a recess being provided for the keepers *e*; and a spiral spring, *g*, wrapped around the tube between the ends of the keeper, has one end bearing against the under side of the head, while the other bears against the lower end of the keeper, where it joins the tube, thus giving elasticity to the pressers.

A wedge, *h*, passed under the keepers on the upper side of the head, enables the pressers to be raised and lowered in the heads, to enable their height above the platform to be accommodated to the depth of the tub.

The operation of the machine is as follows: The tub, containing the clothing, soap, and water or other washing material, is placed on the platform A, and the pressers are placed within the tub over the clothing. Then by means of the lever I the pressers are forced down on the clothing, while the springs under the bars D force them and the lever up again. Thus a continuous up-and-down motion is given to the pressers, which operate upon the clothing, and this can be given to all the clothing in the tub, as the bar F has a side-wise movement between the standards C at the front of the machine, moving the pressers from side to side of the tub, while by means of the loop *b* they can be moved along the bar F, thus enabling the operator to direct their operations to any part of the surface of the clothing in the tub.

As the pressers descend into the tub the air underneath them is expelled through air-tube *f* and air-hole *f'*, and when lifted these give entrance to the air, and thus prevent suction.

Having thus described my invention, I claim

as new and desire to secure by Letters Patent—

1. As an improvement in washing-machines, the combination and arrangement of the spring-bars *D D* at each end, supported in the standards *C*, the bar *F*, supported by the bars *D*, the head *G* on bar *F*, the frame *H*, pressers *K*, supported in head *G*, and the lever *I*, whereby a vertical movement can be given to the pressers *K*, for the purpose of washing clothing, substantially as described.

2. The semi-conical pressers *K*, composed of parts *c c'*, hollow tubes *d*, and keepers *e*, and having air-vents *f f'*, in combination with the head *G*, bar *F*, supported on spring-bars *D*, and lever *I*, substantially as described.

ZOHAR DOYLE.

Witnesses:

ABNER HART,
W. F. HART,
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