S. T. Lamb,

Washing Machine.

No. 30,412. Patented Oct. 16, 1860.

Fig. 1.

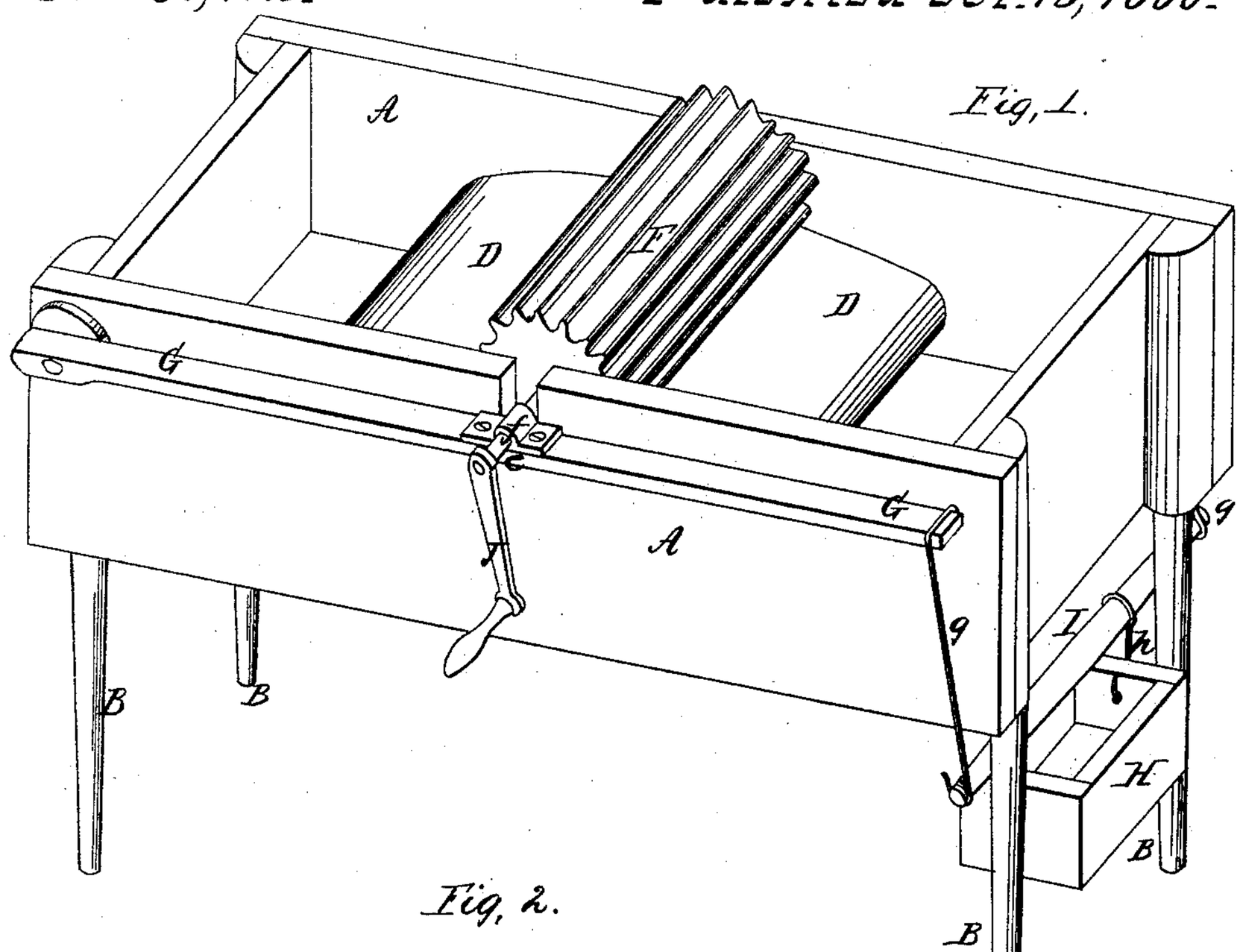


Fig. 2.

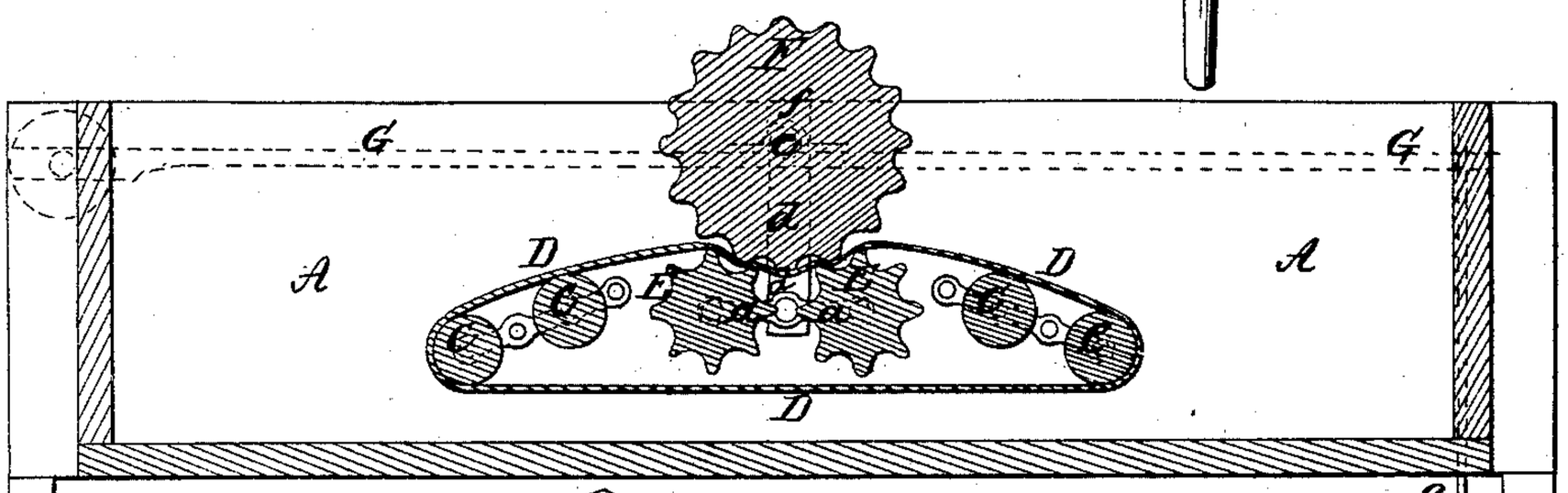


Fig. 3.

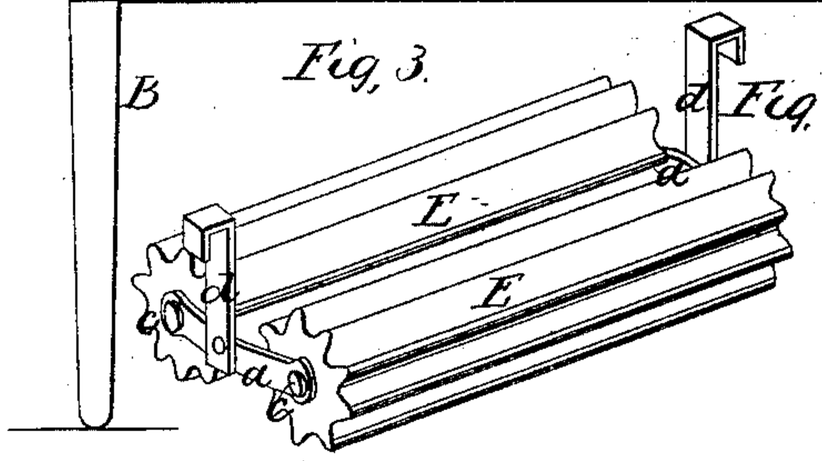
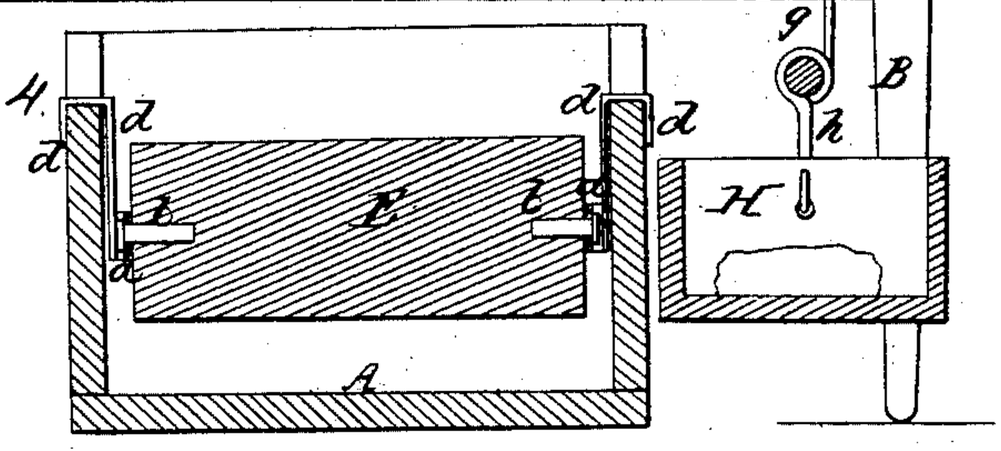


Fig. 4.



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Inventor,
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UNITED STATES PATENT OFFICE.

SALEM T. LAMB, OF NEW WASHINGTON, INDIANA.

WASHING-MACHINE.

Specification of Letters Patent No. 30,412, dated October 16, 1860.

To all whom it may concern:

Be it known that I, SALEM T. LAMB, of New Washington, in the county of Clark and State of Indiana, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, represents a perspective view of the machine. Fig. 2, represents a longitudinal vertical section. Fig. 3, represents in perspective a pair of the under rolls detached, and their means of being united with the wash box, and, Fig. 4, represents a vertical section through one of the rolls of Fig. 3, taken in the line of its length, to show the form of its journals and mode of fastening.

Similar letters of reference where they occur in the separate figures denote like parts of the machine in all the drawings.

In washing machines, where the clothes are carried by an apron under an elastic roller, it has been usual to hang said roller on springs either coiled, elliptic, or india rubber. Any spring will to a certain extent yield, to allow thicker or thinner material, or more or less clothes to pass under the roller controlled by them, but as all springs grow stronger as they are compressed, the amount of elasticity is constantly varying, and there is no uniformity of elasticity or of pressure, and sometimes with ordinary pieces of clothing, choke or stop.

The object of my invention is to so construct this class of washing machines, that the roller will yield uniformly, and the pressure be the same upon thin or thick material passing under it, and not clog or choke, as the present constructed machines with a spring pressure will do. And the nature of my invention consists in hanging the presser roller upon weighted spring levers so that said roller will always rise against the weight on the levers, which is uniform, and press equally on thin, or thick clothes carried under it, and prevent choking or clogging.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

A represents a wash box, supported on legs B. On the inside of the box, are arranged the carrying rolls C C, which may be permanently fixed to the box. Around these rolls C C, pass an endless apron D, for carrying the clothes to be washed under and between the pressing and washing rolls as will be described.

E, E, are a pair of fluted or grooved rolls over which the apron D, passes. This pair of rolls, are hung to a bar *a* by means of journals *b* that have heads *c* upon them, so that said journals cannot draw out of the bar *a*, or let down the rolls. At about the center of the bar *a*, there is pivoted an upright hook *d*, which catches over the sides of the wash box A, and thus suspend said rolls from the wash box, and leave them free to rock or work on their journals, as well as on the pivoted connection between the hook piece *d*, and the bar *a*, to accommodate themselves to the material that passes over them. The hooks on *d*, take over the sides of the box, in the bottoms of the recesses cut in said sides for the reception of the journals or shaft *e*, of the main presser roller F, as seen in Figs. 1, 2, and 4.

To one end of the wash box, are pivoted (one on each side thereof) the levers G, which extend nearly or quite to the other end of said box; and at about the centers in length of these levers, are placed the journal boxes *f*, in which the journals *e* of the main presser roller F, are supported and turn. The roller F, is also fluted or grooved as shown. At the forward or free ends of the levers G, are rods *g*, *g*, to which a box H, is suspended by a cross bar I, and rods *h*, or in any other manner, said box being designed as a weight, or to carry weight applied to the free ends of the levers G. The effect of this arrangement is that the roller F is always held down to the rollers E, by a uniform pressure, and consequently the same pressure is applied to a thin piece of linen passing between said rolls that there would be to a thick piece, or double pieces of thicker material—the weight of, or in the box defining the amount of pressure, and this can be so adjusted or regulated that a child may turn the machine, or a grown person, there being no possibility of stopping the rolls by thick any more than by thin material, for if the pressure be, say, 25 pounds on the under rolls E E, without any clothes between them and the upper roller F it will be no more when any ordinary clothes

are passing through whether thick or thin. When a spring is used instead of a weighted lever the power of the spring must be regulated so as to give a certain amount of pressure on the thinnest material, and when thicker material is passed under the roll—the compression of the spring begets so much pressure as to tear the clothes, and sometimes entirely clog up the machine. This cannot occur in the use of weighted levers.

The roll F, is turned by a crank J, and its flutings taking into those of E, and pressing the apron therein causes the apron and all the rolls to turn on their journals. By unhooking the bar I from the rods *g*, the two levers G, with the roller F, supported on them can be raised up and swung back clear of the machine. By unlacing the apron D, it may also be removed, and then the rolls E E can also be lifted out.

When the wash box is filled with water, and particularly with hot water, the swelling of the wood causes the sides to bulge out, and if the journals of the rolls are supported in these sides they drop out and become loose, and if the journals are long enough to prevent their thus dropping out, then they must go clear through the sides, and this would make an opening that would have to be packed to keep it from leaking. By hanging the rolls E, to the plate *a*, and suspending them by the hooks *d* it is immaterial how much the sides swell out, the rolls are free to rock and roll, and accommodate themselves to any passing article that is being washed between them and the top roll F, and having headed journals cannot drop out of their bearings.

I have called the levers G, spring levers. They are so to a certain extent, but when the journals *e*, *e*, of the roller F are resting against the sides of the box then the spring in the levers is very minute, if anything but when the roll F, is raised up, and the levers act throughout their entire length, there may be more spring in them; but even then the clothes between the rolls act as a fulcrum to the levers, and counteracting the spring motion. The levers may be said to be practically levers only, though sometimes possessing the properties of springs.

Having thus fully described the nature and object of my invention what I claim is—

Hanging the roller F, in the weighted levers G, for the purpose, and in the manner herein set forth.

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Witnesses:

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