

(No Model.)

H. HASSENPFLUG. WASHING MACHINE.

No. 427,861.

Patented May 13, 1890.

Fig. 1.

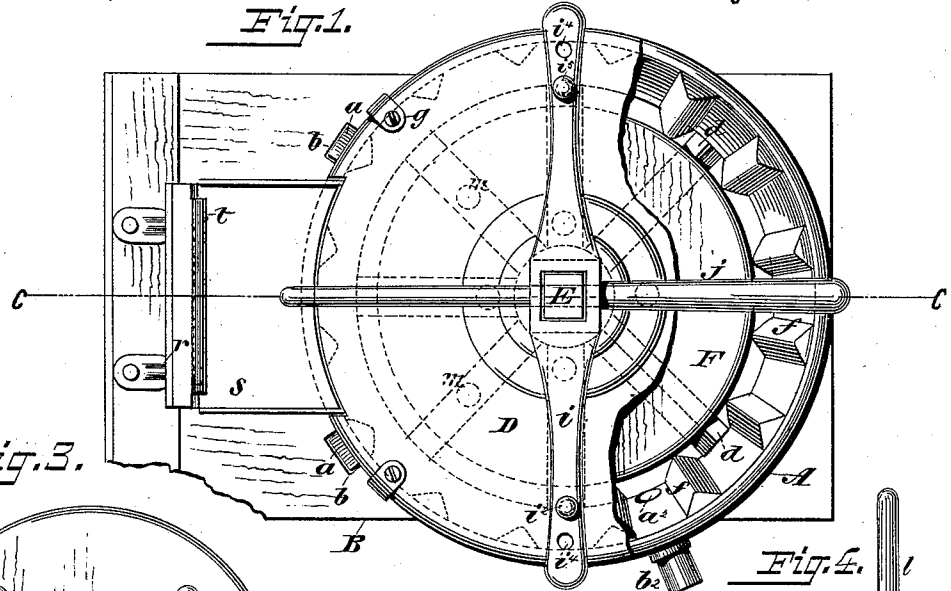


Fig. 3.

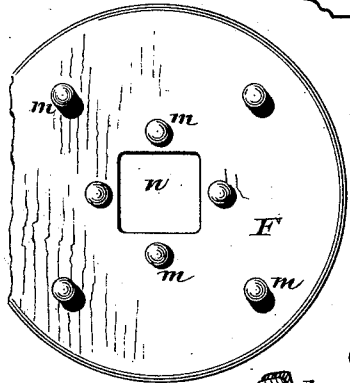


Fig. 2.

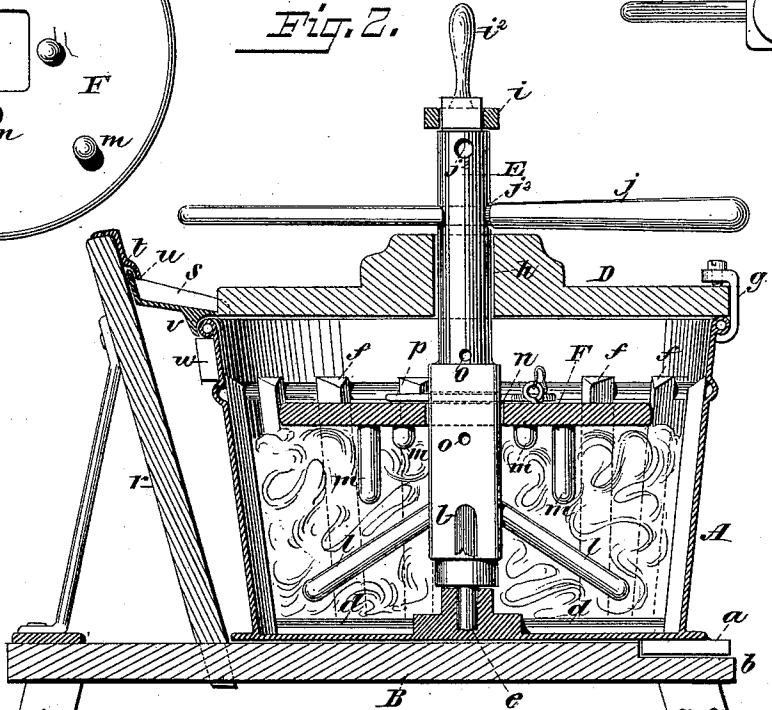
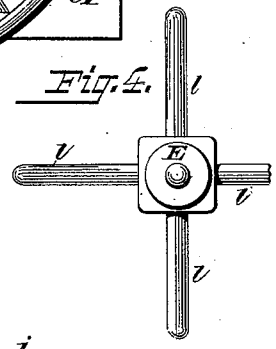


Fig. 4.



WITNESSES

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HENRY HASSENPFUG, OF HUNTINGDON, PENNSYLVANIA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 427,861, dated May 13, 1890.

Application filed June 28, 1889. Serial No. 315,931. (No model.)

To all whom it may concern:

Be it known that I, HENRY HASSENPFUG, a resident of Huntingdon, Huntingdon county, Pennsylvania, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification.

The object of my invention is to provide a washing-machine that will be simple in construction, efficient in use, and easily operated.

The invention consists in the details of improvement and the combinations of parts that will be more fully hereinafter set forth.

Reference is to be had to the accompanying drawings, forming part of this specification, wherein—

Figure 1 is a partly-broken plan view of my improved washing-machine. Fig. 2 is a vertical longitudinal section on the plane of the line *c c*, Fig. 1. Fig. 3 is a face view of the under side of the disk F, and Fig. 4 is a view looking at the inner end of the main operating-shaft.

The letter A in the drawings represents a tub or other receptacle, within which the clothes to be washed are to be placed. The tub A is shown supported by a stand B, which may be of suitable construction. On the bottom of the tub A are teeth or lugs *a*, which enter sockets or recesses *b* in the stand B, whereby the tub is kept from turning on said stand; but the tub may be otherwise suitably supported and held, if desired.

d are a series of ribs that extend along the bottom of the tub A, on the inside thereof, as shown in Figs. 1 and 2. The ribs *d* preferably radiate from a step or bearing *e* at the center of the bottom of the tub.

f are vertical ribs that extend along the sides of the tub, as shown. These ribs *d f* constitute rubbing-surfaces for the clothes in the act of washing. The tub A may be made of zinc or other suitable metal, and the ribs *d f* made of similar material, and in order to prevent dirt, &c., getting between the ribs and the walls of the tub I firmly solder the ribs to the tub. By this means also the tub is made very strong and will withstand a large amount of wear.

D is the cover for the tub A, which may be held in place, if desired, by means of a suit-

able clamp *g*; but I do not consider it necessary at all times to use a clamp for holding the cover on the tub.

E is a shaft that passes vertically within the tub A and that is journaled at its lower end in the step *e* and at its upper part is guided in an aperture *h* in the cover D. By this means the shaft E is permitted vertical movement for the purpose hereinafter shown. The shaft E is provided with handles or levers *i j*, whereby it may be either rotated or given a rotary reciprocating motion, as may be desired. Said handles are removable, so that the cover D may be separated from the shaft. The shaft E is shown provided with two apertures *j*², one above the other, whereby the handle *j* may be adjusted at different heights. The handle *i* is shown provided with two knobs or the like *i*² and with a number of apertures *i*⁴ to receive said knobs, so that the latter may be adjusted to different points on the handle *i* to give more or less leverage. At its lower part the shaft E carries a number of downwardly and outwardly projecting rods or arms *l*, as shown in Fig. 2. These rods or arms normally come close to the bottom of the tub and are adapted to cause part of the clothes in the tub to be rubbed or dragged over the ribs *d* and *f*. The shaft E also carries a disk F, that is provided with a series of downwardly-projecting rods or arms *m*, which are adapted to engage the clothes in the tub so as to agitate the clothes within the same. Some of the rods or arms *m* are shown quite short. They could be replaced by ribs, if desired. These rods or arms are to rub the clothes under certain conditions. The disk F, I make removable from the shaft E and movable up and down on the same, and for this purpose I provide the disk with an aperture *n*, through which the shaft E may pass. The shaft E, I provide with one or more holes *o*, through which a key or pin *p* may pass, so as to prevent the disk rising above the desired point and to hold the disk F in the proper position on the shaft. In order that the disk may rotate with the shaft, I prefer to make the shaft E square or angled at the part that supports the disk and to make the aperture *n* in the disk F of

corresponding shape; but it is evident that the shaft and disk may be otherwise connected, if desired.

a^2 is an aperture at the lower part of the tub A, through which water may be drawn from the tub. Said aperture may be closed by a plug b^2 . (See Fig. 1.)

As shown in Fig. 2, the stand B is provided with a standard or an upright r , upon which a wringer may be placed, and in order that the water wrung out of the clothes by the wringer may pass back to the tub A, I provide a trough or shelf s , that extends from the upright r over one edge of the tub A. (See Fig. 2.) In order that the trough or shelf s may be easily adjusted, I provide the upright r with a lip t , under which the upright part u of the shelf or trough s is adapted to pass. (See Fig. 2.) v is a lug or projection on the under side of the trough or shelf s , which is adapted to come against the side of the tub A to prevent movement of the trough.

Instead of securing the wringer to the standard r , said wringer may be secured to the side of the tub A, and for this purpose I provide the tub with one or more blocks or projections w , to assist in holding the wringer on the tub.

By means of the holes o in the shaft E and the key or pin p the disk F may be adjusted up and down upon the shaft E, so as to permit more or less clothes to be placed beneath the disk.

The washing-machine is used as follows: The handles $i j$ are first removed from the shaft E, and then the cover D and disk F are removed, leaving the shaft E in position in the tub A. The clothes to be washed are then placed in the tub so that they rest upon the arms l and upon the bottom of the tub. The water for washing is next placed in the tub and the disk F placed in the tub and upon the shaft E so that it rests upon the clothes in the tub. The cover D is next placed in position and the shaft E turned to agitate the clothes. During the turning of the shaft or the washing operation the shaft E may rise until its angular part comes against the cover

D, if the clothes should get under the arms l ; but the weight of the clothes on the arms l tends to keep the shaft E down. The arms l drag the clothes around in the tub, and the rods m on the disk F rub the clothes and assist to move the clothes around in the tub. If the clothes be quite soiled, the disk F may be lowered on the shaft E, so as to compress the clothes. The disk F may be adjusted up or down, according to the quantity of clothes in the tub. The rising and falling or longitudinal motion of the shaft E tends to agitate and rub the clothes, as well as to permit the water to thoroughly cleanse them.

I consider the adjustable disk F on the shaft E of special advantage, as the machine is thus capable of receiving more or less clothes, while either quantity may have the requisite pressure applied to it. By making the shaft E longitudinally movable the danger of injuring the clothes, if they become compacted in the machine, is overcome, and if the clothes get bunched under the arms l the shaft can rise to relieve them.

Having now described my invention, what I claim is—

1. The tub A, having step e , combined with the shaft E, having downwardly-projecting arms l , and adjustable disk F, said disk being movable on said shaft, substantially as described.

2. The tub A, having internal step e , combined with the vertically-movable shaft E, having holes o , the disk F, adapted to fit on the shaft E, and the pin p , substantially as described.

3. The tub A and stand B, having the upright r , said upright having the lip t , combined with the trough s , having the upright part u to engage said lip and the projection v , said trough extending from the upright r to the upper edge of the tub, substantially as described.

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Witnesses:

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