

No. 694,143.

Patented Feb. 25, 1902.

J. H. ELLIS.
WASHING MACHINE.

(Application filed July 12, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

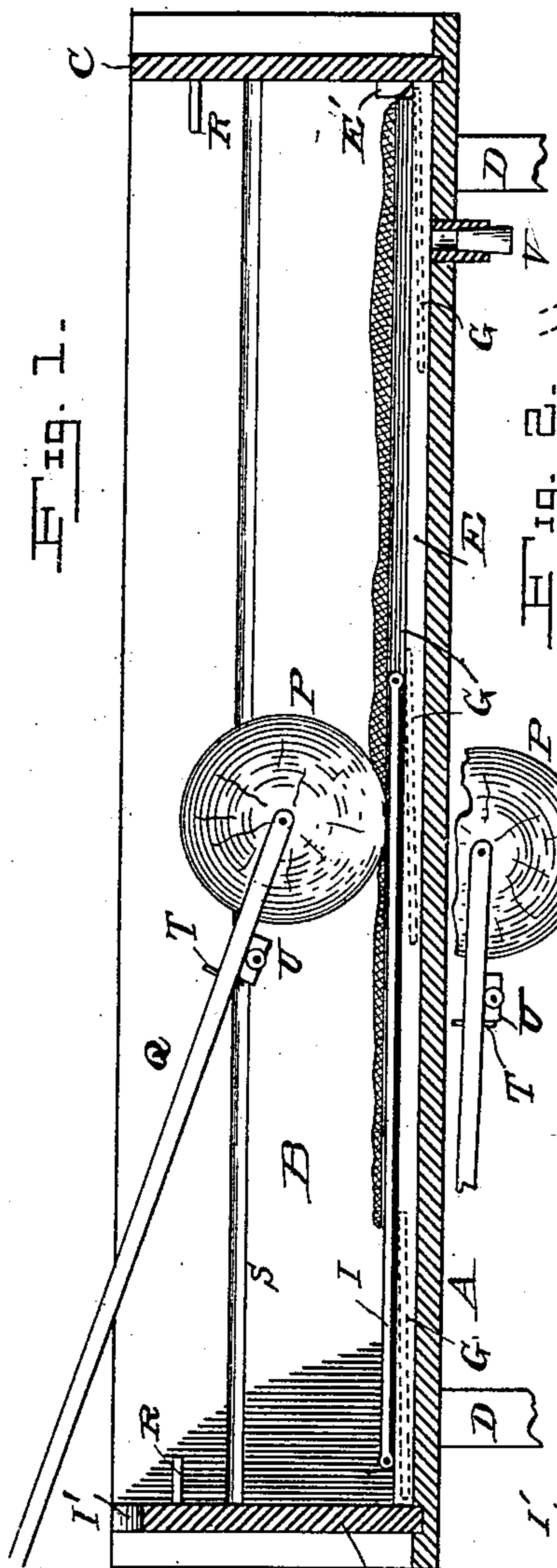


Fig. 2.

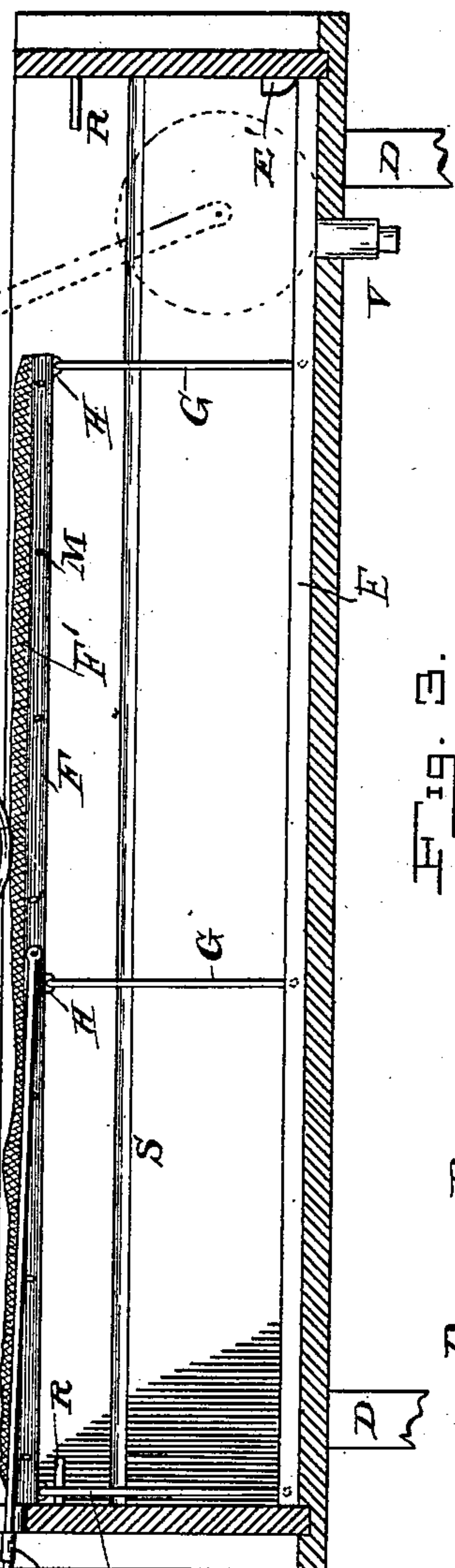


Fig. 3.

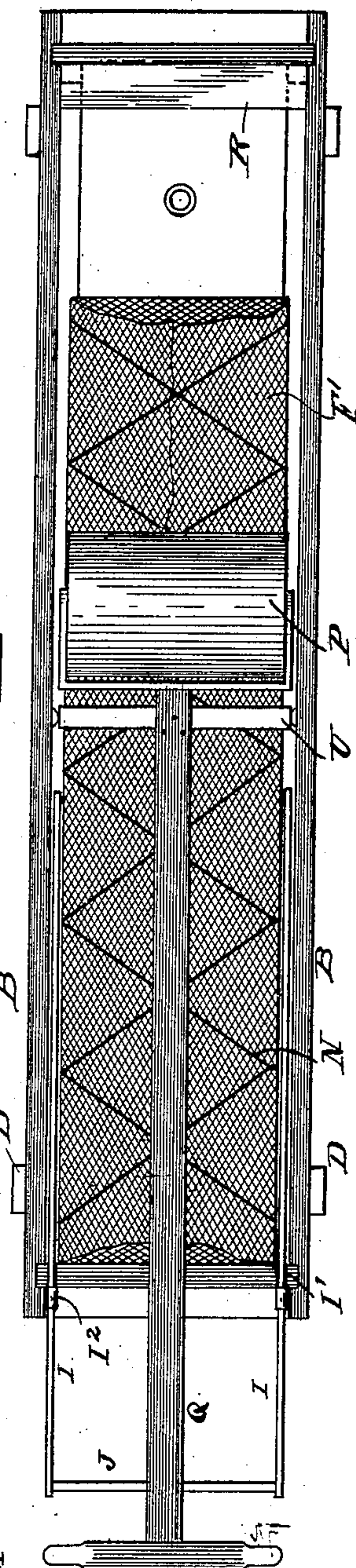


Fig. 4.

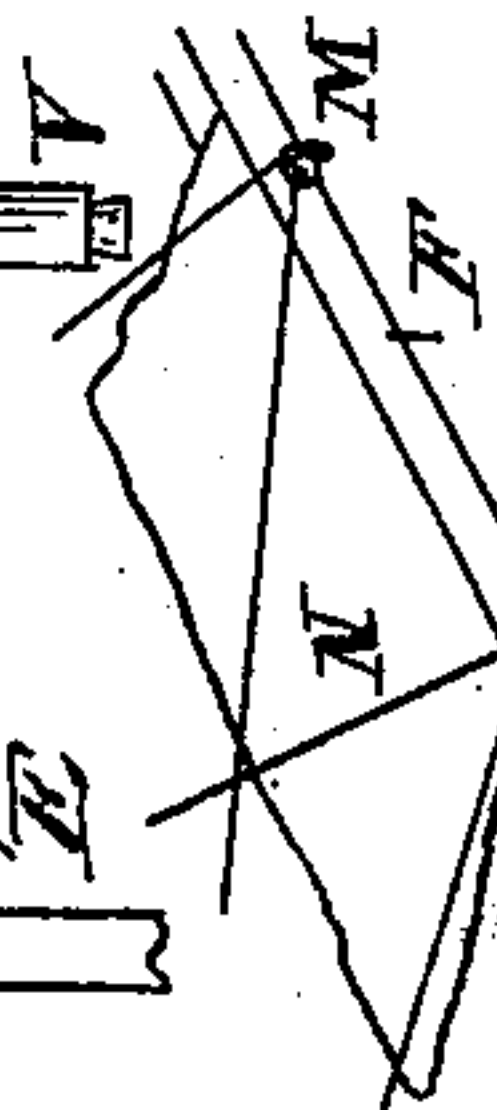
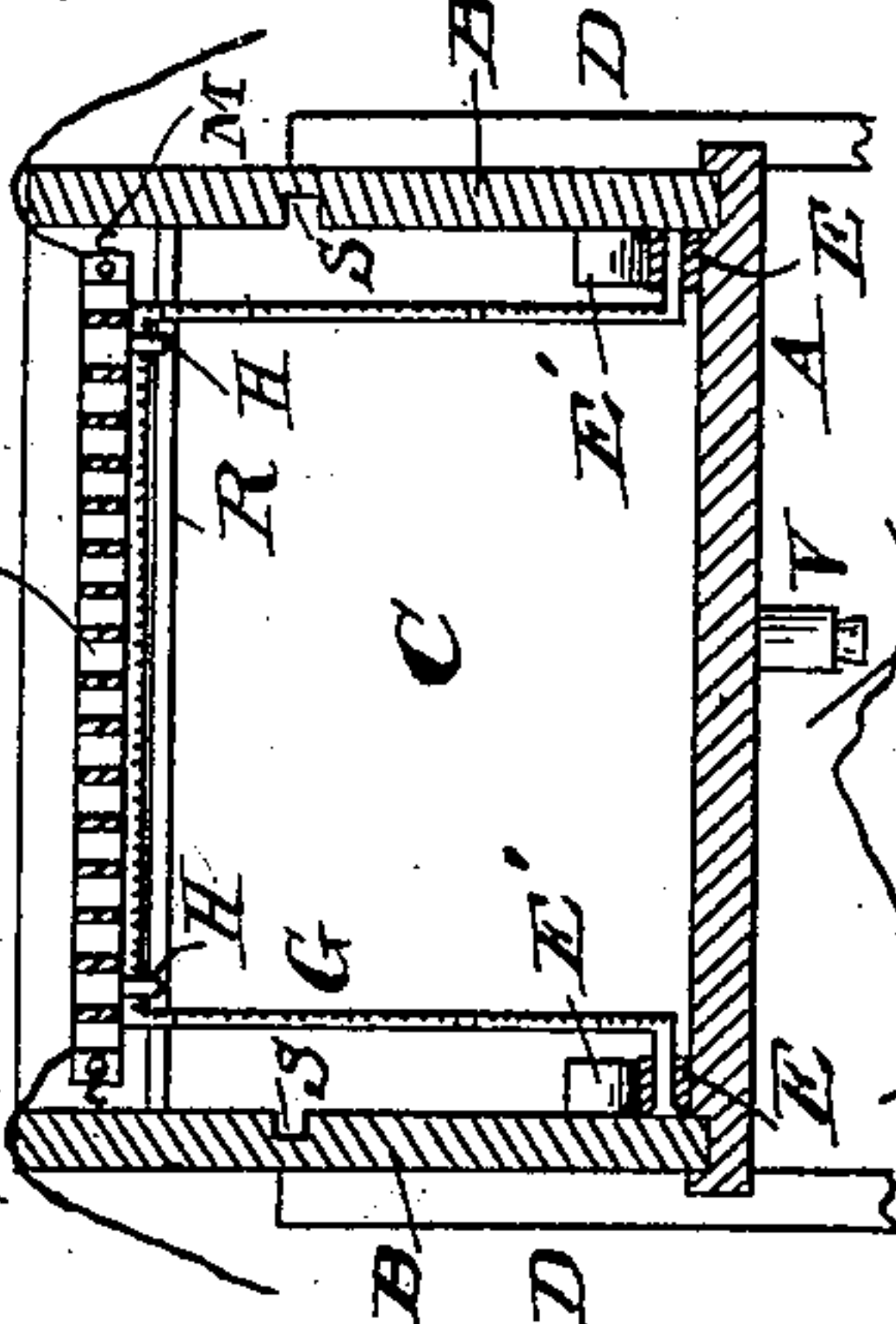


Fig. 6.

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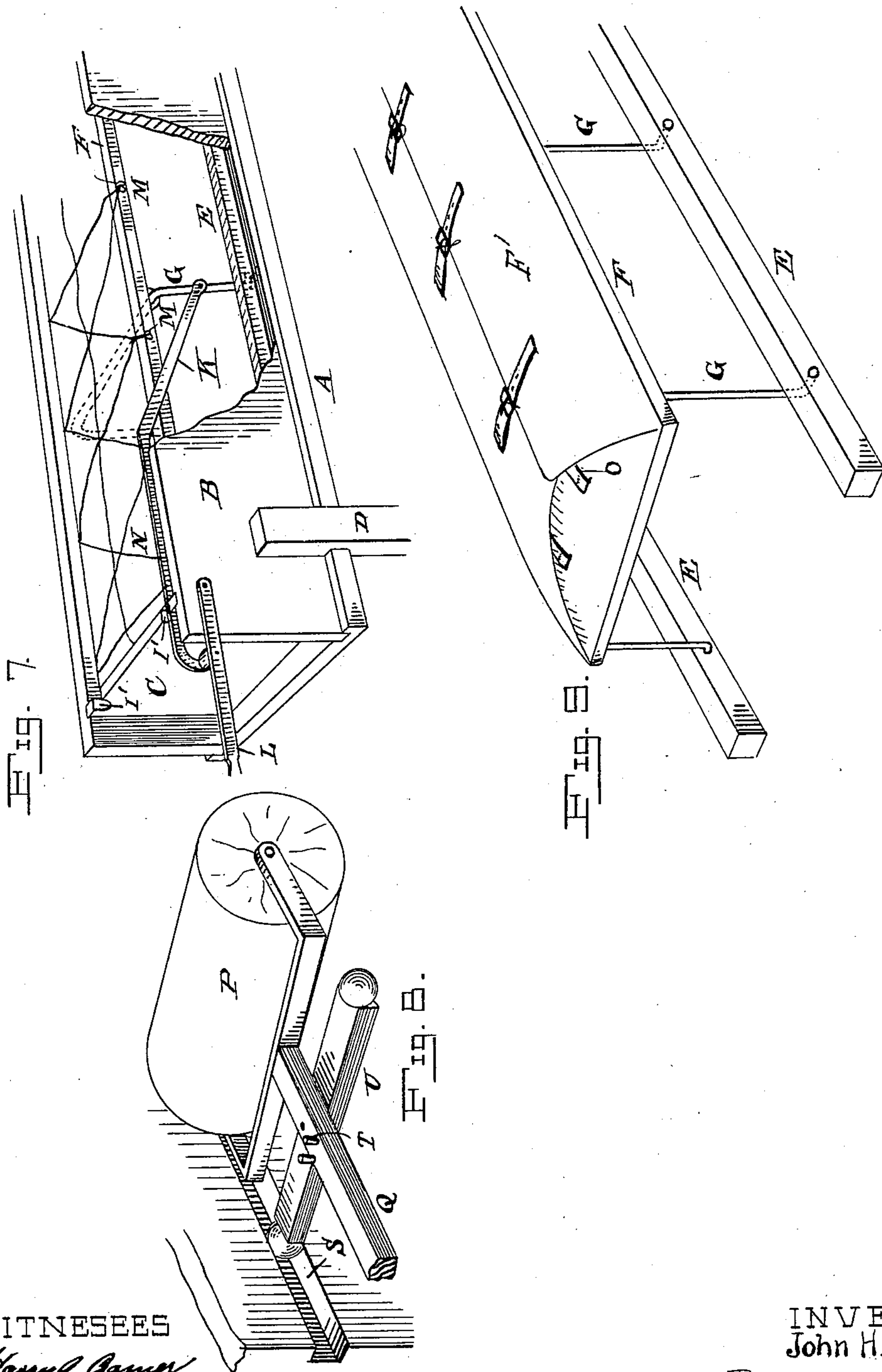
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

JOHN H. ELLIS, OF PEORIA, ILLINOIS.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 694,143, dated February 25, 1902.

Application filed July 12, 1901. Serial No. 68,123. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. ELLIS, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention pertains to a washing-machine.

The object of my invention is to construct a machine which will be found to be as well adapted for cleaning heavy clothing—such as coats, vests, and other padded garments—as for washing ordinary articles.

Another object is to provide a machine in which the clothing being washed or cleaned can be raised out of the water on a suitable platform or carrier for inspection.

A still further object is to provide improved means for holding the clothes so that they cannot possibly roll up into a ball while being cleaned, and, further, that the padding or wadding in garments will not become disarranged and will pass through the cleaning process without injury of any kind. These various objects and advantages will appear as the description proceeds.

In the appended drawings, Figure 1 is a longitudinal sectional elevation of the machine, showing its parts in the normal operating position. Fig. 2 is a like view showing another position of its parts. Fig. 3 is a plan view of the machine. Fig. 4 is a perspective view of a strainer and carrying-platform. Fig. 5 is a transverse section. Fig. 6 is a perspective view of a portion of the arrangement shown in Fig. 4. Fig. 7 is a perspective view of a portion of the machine, showing a modified form of its working parts. Fig. 8 is a perspective view of a roller, showing its connection with the slotted sides of the machine. Fig. 9 is a perspective view of the strainer and carrying-platform already alluded to.

In the figures, A represents the bottom, B the sides, and C the ends, of a tank for holding water and which forms the body of the machine as I prefer to construct it. Supports or legs D are provided for this tank, and in the bottom of the latter in each cor-

ner is a bar E, Fig. 9, arranged as indicated in Fig. 5. Resting upon these bars when in operative position is a platform F, consisting of a series of slats forming a grill, as shown in Figs. 4 and 5. Upon this platform is placed and fastened a sheet of loosely-woven fabric F', which will project on all sides, as shown in Fig. 4. The said platform is carried by means of bails G, the extremities of which project through the bars E in a horizontal direction and whose looped portions support the platform to which they are stayed by means of staples H. Thus arranged the platform is free to move in the arc of a circle, using the staples and the bars E as bearings for the said bails. Said platform is shorter than the length of the tank, so that it will freely rise and fall from its highest to its lowest position without hindrance. When raised, the platform rests against one end of the tank, and the means for holding it in that position is indicated in Fig. 3. It consists of two rods I, pivotally connected at one end to the sides of the platform at about the middle. The free ends project beyond the end of the tank in Figs. 2 and 3 and lie in notches I'. A cross-bar J connects said free ends and form a handle by which the platform may be manipulated. A collar I² or other similar device is affixed to each rod I in such manner as to just rest behind the end of the tank at the outside when the platform is at its full height.

In Fig. 7 I have shown another manner of raising the platform. A rod K is connected pivotally with a lever L, which is carried at the side of the tank, and the opposite end of said rod is loosely connected with the bail G, as shown. When the lever is thrown back and forth, the platform will rise and fall, depending, of course, upon the direction of movement, and when said lever is thrown to the extreme left, as viewed in said figure, the connection of the rod K therewith is carried below the center and forms a lock, so that the platform cannot fall. From the foregoing it will be seen that I do not confine myself to any particular form of mechanism for accomplishing the purposes set forth. In the first form described the rods I and bar J lie at the bottom of the tank out of the way, as shown in Fig. 1.

The fabric F' before mentioned projects at each side and end, as already intimated, and these when folded over upon the platform form an envelop within which the clothes to be cleaned are placed, and in order to hold these in position I employ cords N, as indicated in Figs. 2, 5, 6, and 7, wherein also are shown a series of hooks M in the side of the platform and under which the cords are caught and zigzagged back and forth across the platform and the inclosing fabric. The end flaps are held together by means of cords O thereon, as in Figs. 4 and 9. In the latter figure I show another means of holding the side flaps. It consists of straps secured to said portions and answering the same as the cords O on the end ones, and these are tied in the same manner, all of which is easily understood. I use with my machine a roller P, which is passed back and forth upon the enveloped clothes as they lie in the water at the bottom of the tank, as in Fig. 1. This operation forces the water from the clothes as it passes over them, and a continued motion back and forth constantly moves the water through and through the clothes by a kneading process. In addition to the weight of the roller I add an additional pressure when desired through the means shown in Fig. 8. This consists in pivoting a cross-arm U to the handle Q near the roller proper. This arm carries a ball-roller at each end, which is seated in a slot S in each side of the tank. By means of pins T or other suitable devices the arm is held against movement on its pivot while at work. When it is desired to remove the roller from the tank, the pins are removed and the arm turned to withdraw the rollers from the slots, all of which will be readily understood.

While I show and describe the roller P as having connection with the machine, it is by no means necessary to do so; but I prefer to use it both ways; but by attaching it to the machine more pressure can be put upon the clothes by raising the handle, and by the same rule if less pressure is wanted a pressure upon the handle will raise the roller.

The operation of the machine is as follows: The platform F is first raised to the position shown in Fig. 2 and the flaps of the fabric opened. The clothes are then laid upon the platform to the desired depth, after which the flaps are laid over them and the cords fastened, as described. The tank being filled with water to the desired depth, the platform is lowered to the bottom and the roller P inserted and locked within the slots S, if desired, or simply left free to be rolled back and forth. When it is desired to examine the clothes, the roller is removed from the tank and the platform raised by the lever L or the rods I, as the case may be, and the flaps opened to expose the clothes to view. If thoroughly clean, the clothes are removed and others put in their place; but if it is found to require more washing the process is again undergone. If a particular spot is to be treated,

the roller can be applied locally to quickly remove it. Since the platform is perforated, the water can quickly drain through it when raised out of the tank, and before examining the articles the roller, if run over them, will quickly force the water out. My device is well adapted for cleaning clothes with gasoline or other cutting fluids in which it is sometimes desirable to wash them and it becomes unnecessary to put the hands into these liquids when using a machine of this kind. In the backward-and-forward movement of the roller the water will naturally be thrown in a flood toward each end of the tank and by impinging upon the ends will splash up and out, and in order to prevent this in an effectual manner I provide a deflecting-plate R at each end, whereby when the water strikes the end it will also strike the plate and be deflected downward into the tank. To this, however, I attach no claim. The entire platform and its various parts may be removed from the tank quite easily, since the arms E E merely pass under blocks E' attached at one end C of the tank and are used to prevent the said arms rising when the platform is pulled up. The opposite ends of the arms simply lie on the bottom and when lifted can be slipped from under the blocks E' at the other end.

By removing the entire inner apparatus the tank can be readily cleaned and sweetened, and I provide in the bottom a plug V, through which the water may be drawn.

When the platform is raised, as in Fig. 2, an open space is left at the right end, as viewed in the drawings, and upon the end of the tank may be placed the wringer, and the clothes as they are taken from the platform can be passed immediately through said wringer or first rinsed in the open end of the tank just mentioned. Thus it is seen that the entire device is very convenient for the user.

My device is admirably adapted for cleaning coats and other garments of whatever nature having padding therein. These can be washed very readily without disturbing the padding in the least, as will be seen. In addition to washing garments blankets containing padding may also be mentioned.

Lace curtains can be readily washed without the slightest injury by reason of employing the roller, and other fabrics of even a more delicate nature can be treated as easily. The value of the machine may thus be appreciated.

Having made all my objects and advantages clear, I claim—

1. In a washing-machine, a tank for holding water, a removable platform secured in said tank and adapted to rise and fall for the purposes set forth, supporting means for said platform for holding it horizontally in all positions, means for raising and lowering said platform upon its supporting means and an inclosing fabric on said platform for envelop-

ing the clothes substantially as set forth and for the purposes described.

2. A washing-machine comprising a tank, a perforated platform therein for carrying the clothes, the same adapted to be raised and lowered, means for carrying the same in a horizontal position, an enveloping fabric attached to and covering the platform for the purposes set forth, horizontal slots in the sides of the tank, a roller for traversing the length of the platform upon the clothes for the purposes explained, a handle for operating said roller, a cross-bar on the handle, entering and moving within the slots all being arranged substantially as described.

3. A washing-machine comprising a tank, a perforated platform F, bails G for supporting it and permitting it be raised and lowered as described, fabric secured to the platform for enveloping the clothes to be washed and a roller P for passage over the clothes upon the platform as set forth.

4. In a washing-machine, a tank, a perforated platform F therein, bails G for supporting the same, the arm E E in the bottom of the tank in which the extremities of the bails are carried, fabric on the platform for inclosing the clothes to be washed, a roller P for traversing the platform from end to end upon the clothes, a slot in each side of the tank from end to end, a handle for the roller and a cross-piece on said handle for entering and moving within the slots substantially as and for the purposes described.

5. In a washing-machine the tank, a movable platform F therein, bails G for carrying the same, the fabric on the platform for enveloping the clothes, means for moving the

platform and locking it in its raised position, a roller P within the tank and means for guiding it in its movements and producing more or less pressure upon the clothes as set forth and described.

6. In a washing-machine the tank A, B, C of rectangular form, the arms E in the bottom, the bails G pivoted thereto at their lower ends, the perforated platform supported at the top of said bails, the enveloping fabric F' secured to the top of the platform for inclosing the clothes to be washed, the arms I for raising and lowering the platform for the purposes described, means for holding the latter after being raised and the roller P for moving over the platform for washing the clothes within the fabric F' all being arranged substantially as and for the purposes described.

7. In a washing-machine the tank A, B, C of rectangular form, slots S in the sides thereof, the arms E in the bottom, the bails G pivoted thereto at their lower ends, the perforated platform supported at the top of said bails, the enveloping fabric F' secured to the top of the platform for inclosing the clothes to be washed, the arms I for raising and lowering the platform for the purposes described, means for holding the latter after being raised, the roller P, the handle Q for the same, the cross-arm U pivoted thereto and engaging the said slot S all for the purposes set forth and described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN H. ELLIS.

Witnesses:

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FRANK T. MILLER.