

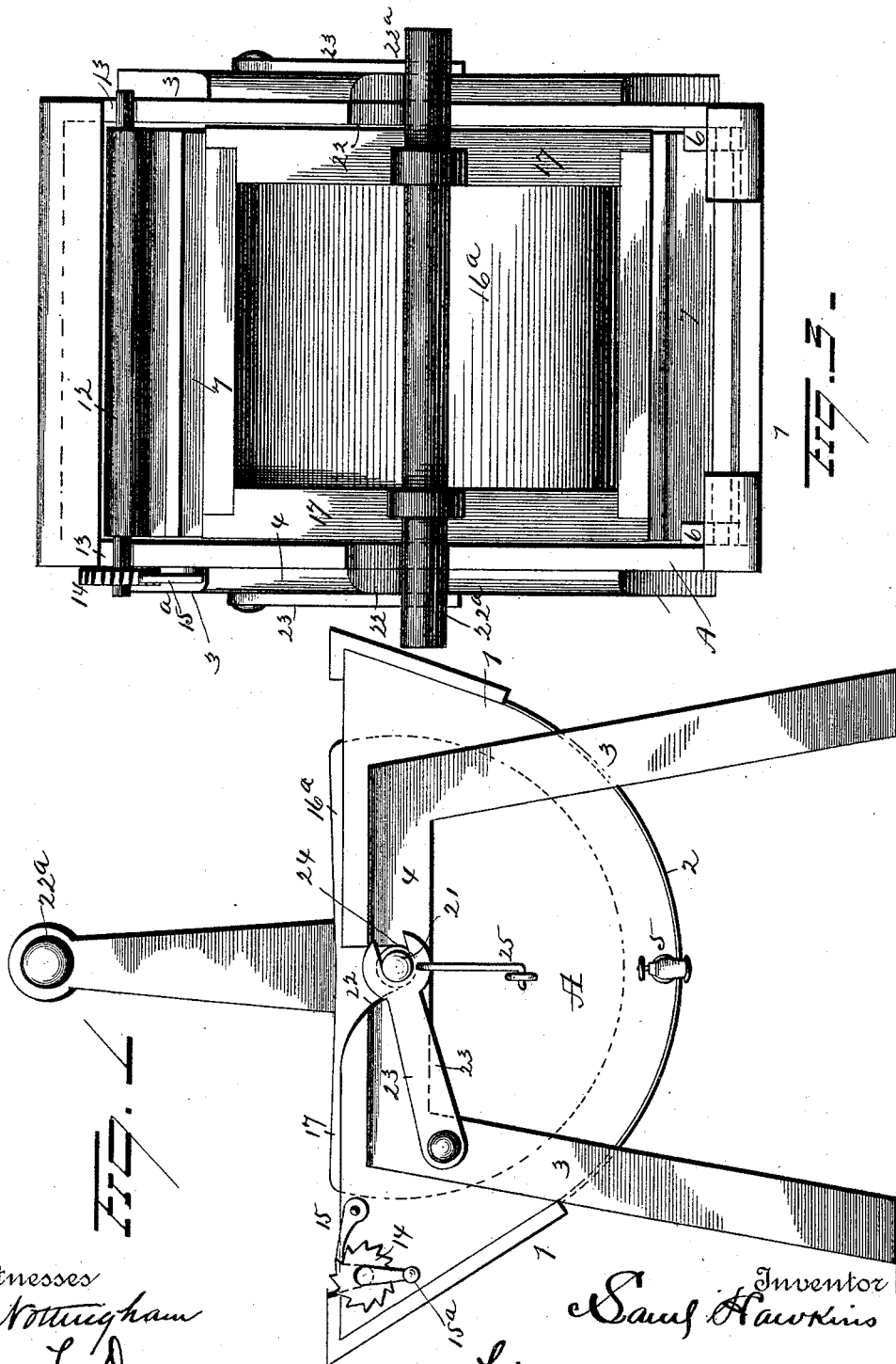
(No Model.)

2 Sheets—Sheet 1.

S. HAWKINS.  
WASHING MACHINE.

No. 419,669.

Patented Jan. 21, 1890.



Witnesses  
B. Nottingham  
Geo. F. Downing.

Inventor  
Saul Hawkins  
By his Attorney  
H. Seymour.

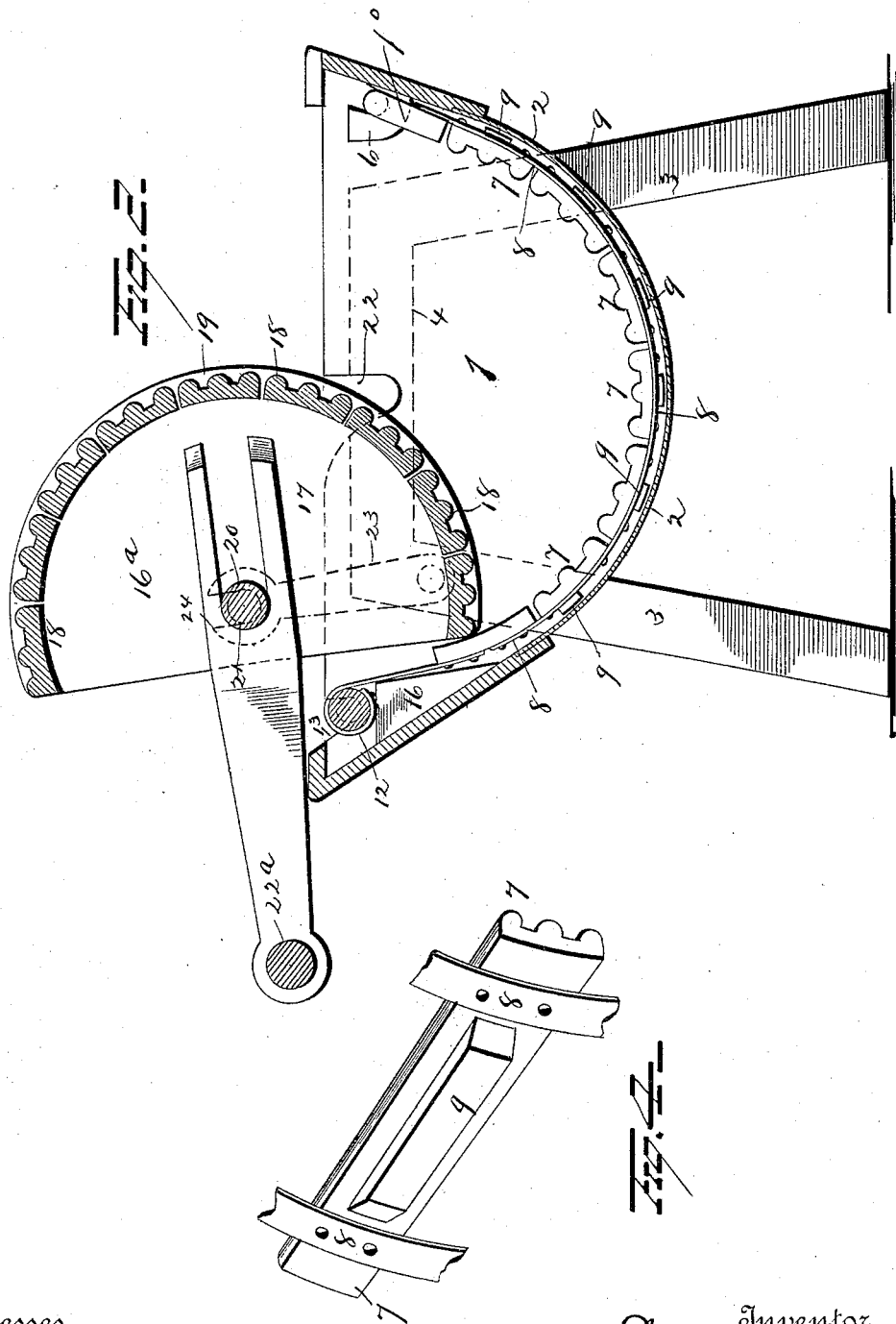
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# UNITED STATES PATENT OFFICE.

SAMUEL HAWKINS, OF ST. LOUIS, MISSOURI.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 419,669, dated January 21, 1890.

Application filed August 16, 1889. Serial No. 320,920. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL HAWKINS, of St. Louis, in the State of Missouri, 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 invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in washing-machines, the object being to provide increased facilities for effectually washing clothes and lessen cost of material and construction of the same.

A further object is to provide means for the easy insertion or removal of the clothes from the machine, and, further, to furnish such an arrangement of parts as will prevent undue friction or wear, and at the same time provide for the renewal of parts in case they do become worn or get out of order.

With these ends in view my invention consists in certain novel features of construction and combinations of parts, as will be herein-after described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved machine. Fig. 2 is a sectional view. Fig. 3 is a plan view, and Fig. 4 is a detached view of the flexible bottom.

A represents the body of the machine. This is preferably semicircular in shape, having the wooden sides 1 1 and the wood and sheet-metal bottom 2. The body is supported at a convenient height by means of legs 3 3, and these legs are conveniently connected at their upper ends with re-enforcing strips 4 4. A faucet 5 is located at a convenient position to draw off the dirty water after the operation of washing is completed. An inner flexible bottom is suspended inside the body in bearings 6 6 and 13 13 at the corners. This bottom consists of a series of corrugated slats 7 7, which reach across the body and are connected at short distances apart by two or more flexible straps 8 8. Cleats 9 9 are secured to the lower faces of several of these corrugated slats to hold them a suitable distance from the bottom to permit a free circulation of water beneath the flexible or false bottom, the cleats also preventing the screws in the bottom of the corrugated concave mar-

ring or cutting the metal bottom of the box. The end slat 10 of the flexible bottom is hung loosely in the bearings 6 6 at one end, and to the other end slat an apron 11 is secured. The opposite end of this apron is secured to a winding-drum 12, which is revolvably supported in bearings 13 13 opposite bearings 6 6. A ratchet-toothed wheel 14 is affixed at one end of this drum, and a pawl 15 is pivoted in position to engage these teeth and lock the drum in position. The drum is turned by the handle or crank 15<sup>a</sup>. Guides 16 16 in the corners of the body guide the end to which the apron is attached as it is drawn upward. By means of the drum the flexible bottom is tightened or loosened to bring it closer or remove it from the rocking rubber to compensate for a greater or less quantity of clothes being washed, or to facilitate the washing of a large or small article, or to compensate for wear. When the apron is unwound as far as possible, the flexible bottom lies against the bottom 2, or as close to it as the cleats 9 9 will admit.

By winding the apron on the drum the flexible bottom is raised and brought closer to the rocking rubber, which will now be described. The numeral 16<sup>a</sup> represents this rubber. It consists of the sides 17 17, substantially semicircular in form. The edges of these sides are recessed on the inner half, and several corrugated slats 18 18 are secured thereto, so that the outer edges 19 19 project outward beyond the corrugations, forming a protection for them, which prevents the slats of the flexible bottom and the rubber from touching each other as the rubber is rocked back and forth, no matter how tight the flexible bottom is drawn. A rod 20 extends through the rubber, terminating at its ends in trunnions 21 21, upon which the rubber is supported in the recesses 22 22, formed in the sides 1 1 and the re-enforcing strips 4 4. The rubber is rocked by means of the handle 22<sup>a</sup>. A pair of levers 23 23 are pivoted to the sides of the machine and provided with recesses 24 24 in their free ends, which receive the trunnions 21 21, they falling opposite or alongside the recesses 22 22 when lowered into the position shown in Fig. 2. These levers are fastened down by means of hooks, latches, or similar devices 25 25, and when

fastened on during the washing these levers prevent the rubber from being removed or working out of place; but when the rubber is to be removed or the clothes are to be removed or a new supply to be put into the machine the levers are unfastened and swung upward, as shown in Fig. 2. This throws the rubber temporarily out of the way or to one side.

By the construction described it will be seen that springs and other such frail devices, which are liable to get out of order, are entirely dispensed with. It will also be readily seen that the parts are few and not liable to get out of order easily or become worn. In many machines the rubbers touch each other, and hence soon lose their efficiency; but in mine this objection is entirely obviated. The water has plenty of room to circulate back and forth through the flexible bottom, and also through the rubber, and by this means a constant circulation is kept up, and in addition the machine is capable of adjustment to suit the number or size of the pieces being washed, and anything from a napkin or a handkerchief to a bed-quilt may be thoroughly washed with the utmost ease and perfection.

It is evident that slight changes might be

resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the particular construction herein set forth; but,

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a washing-machine, the combination, with a body, of a flexible bottom, cleats on said flexible bottom, and a rocking rubber mounted in the body, substantially as set forth.

2. In a washing-machine, the combination, with a body, of a flexible bottom composed of a series of corrugated strips held together by means of flexible straps, cleats on the under side of the corrugated strips, and a rocking rubber mounted in the body, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

SAMUEL HAWKINS.

Witnesses:

A. ROBISON,  
J. A. CASTILLOO.