

(No Model.)

5 Sheets—Sheet 1.

R. NEWELL.
WASHING MACHINE.

No. 463,914.

Patented Nov. 24, 1891.

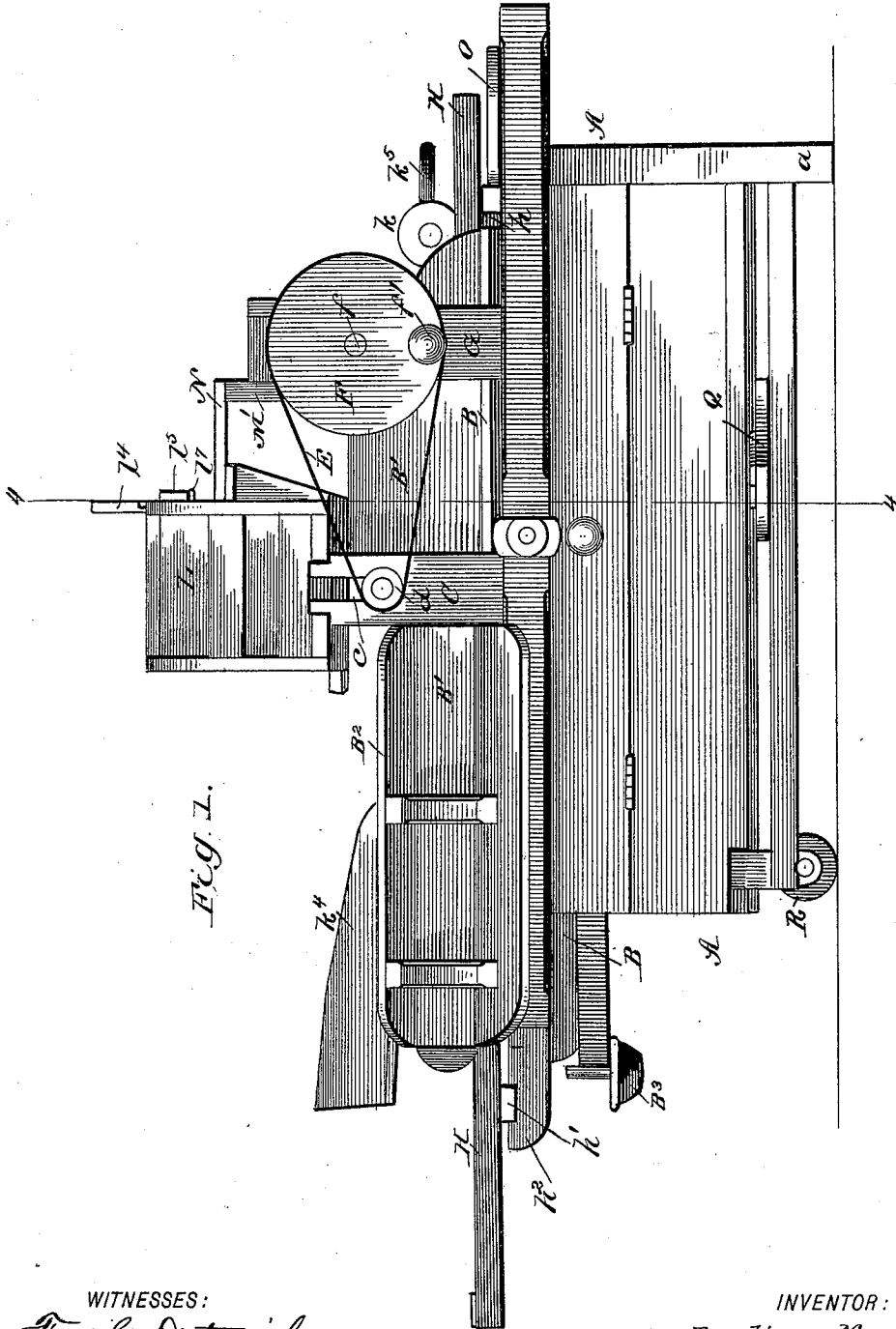


Fig. 1.

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INVENTOR:

Randison Newell.

BY

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ATTORNEYS

(No Model.)

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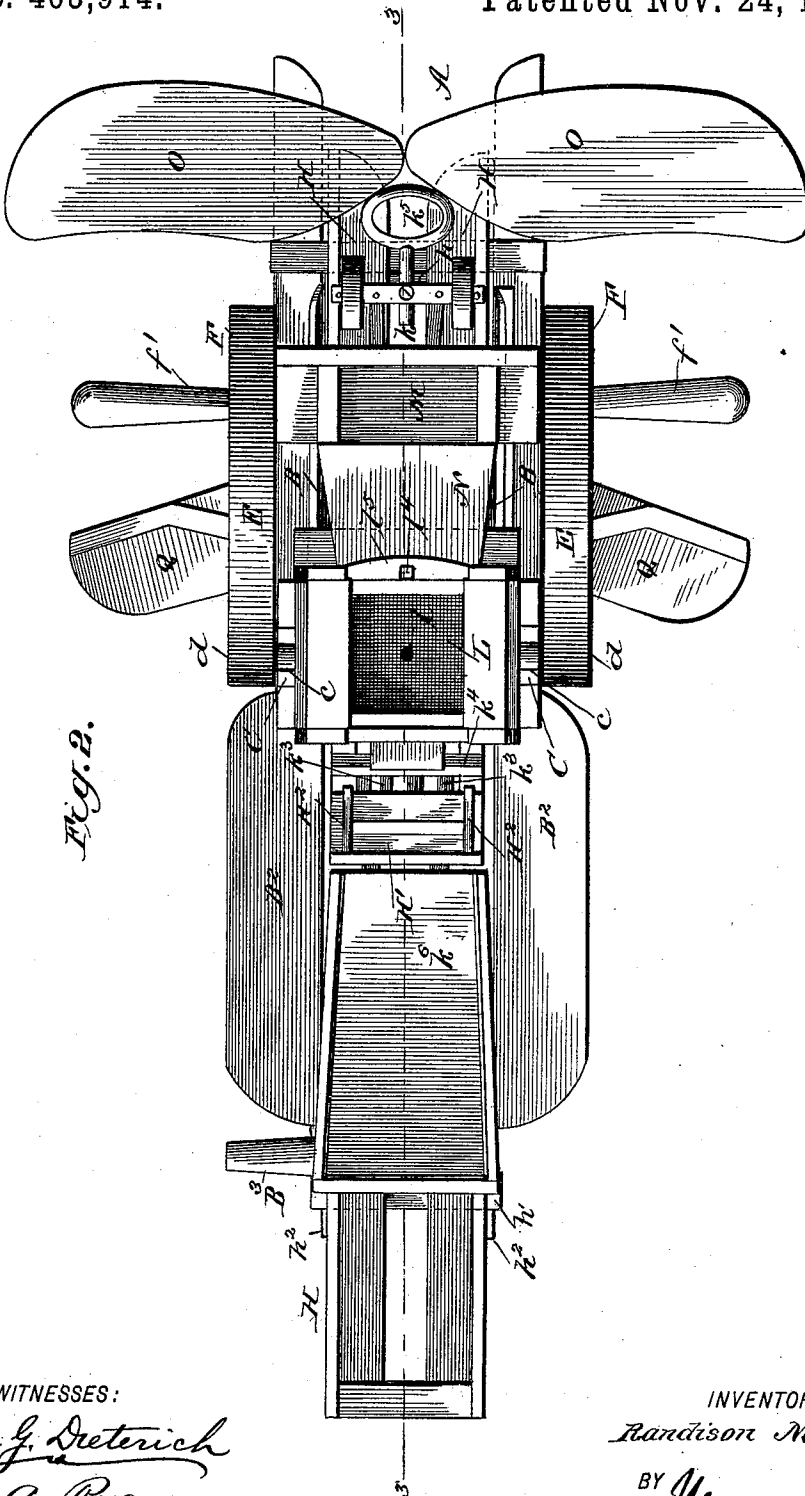


Fig. 2.

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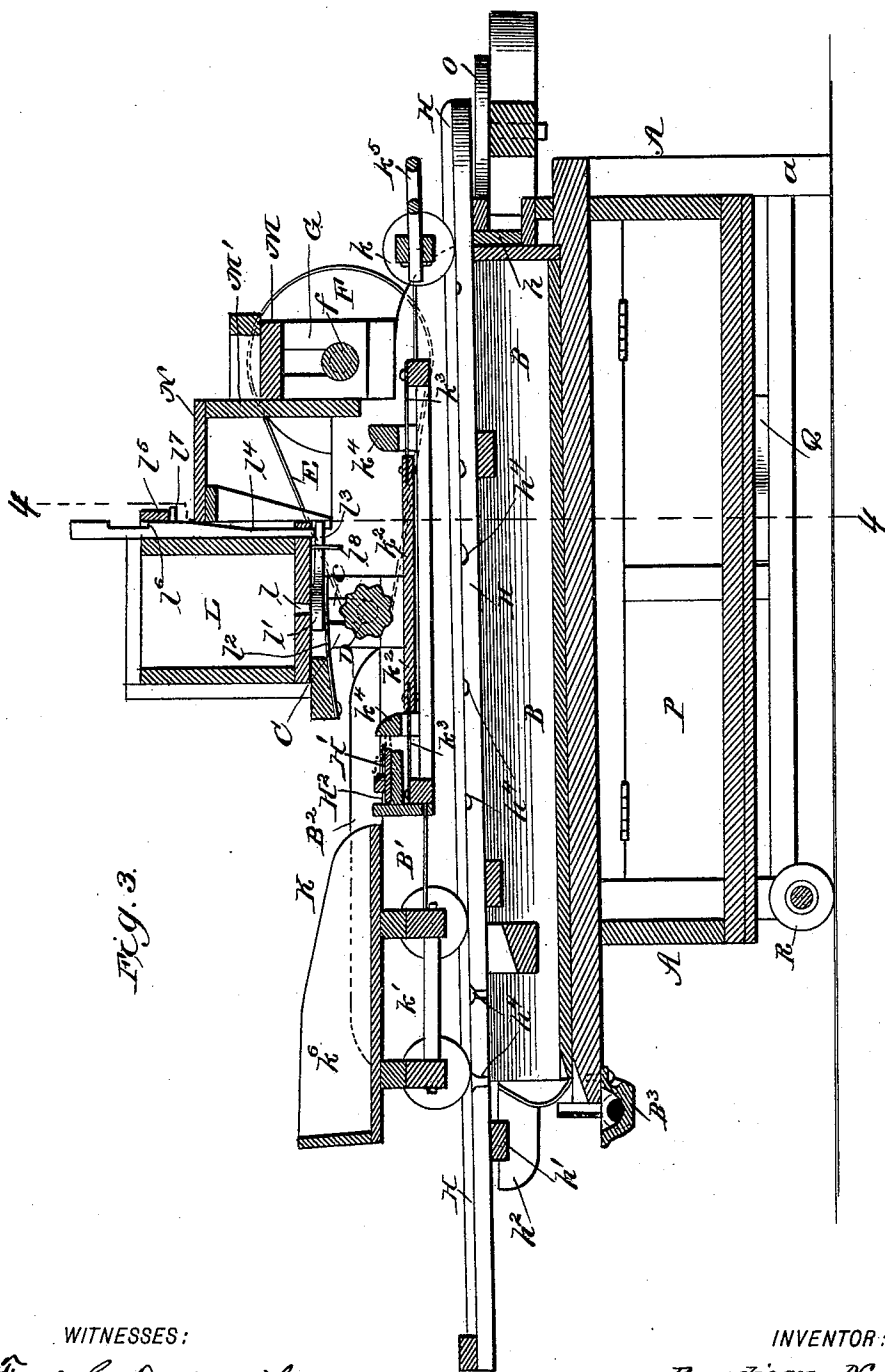


Fig. 3.

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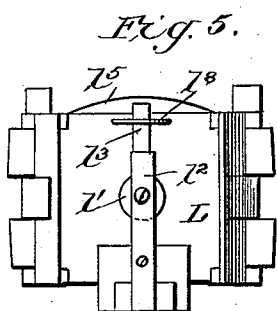
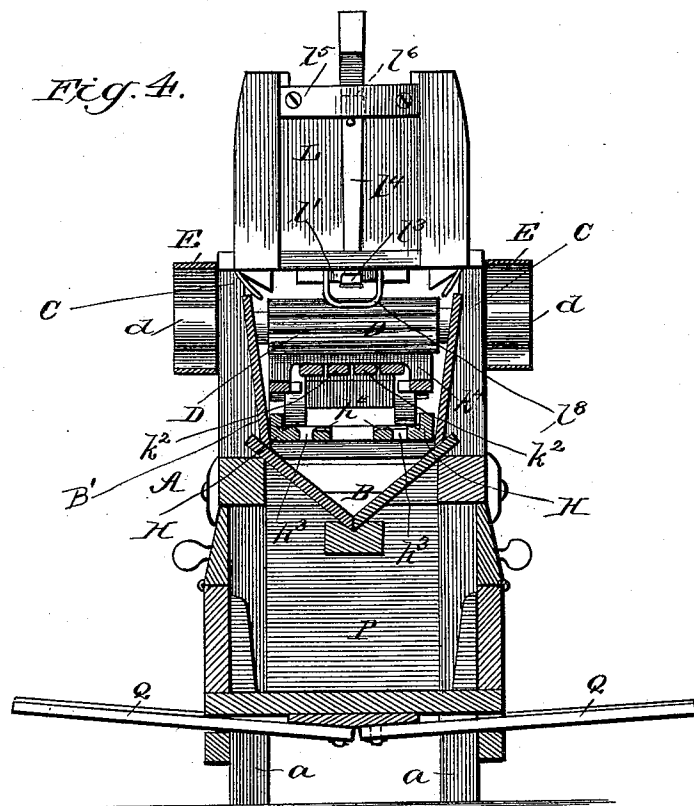
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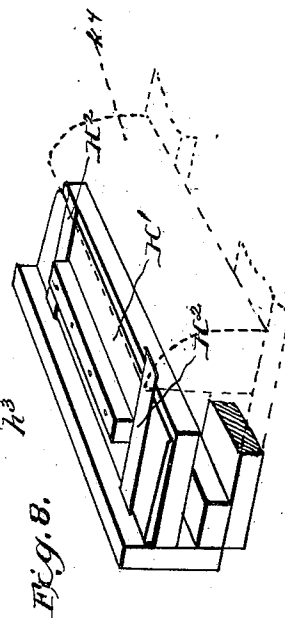
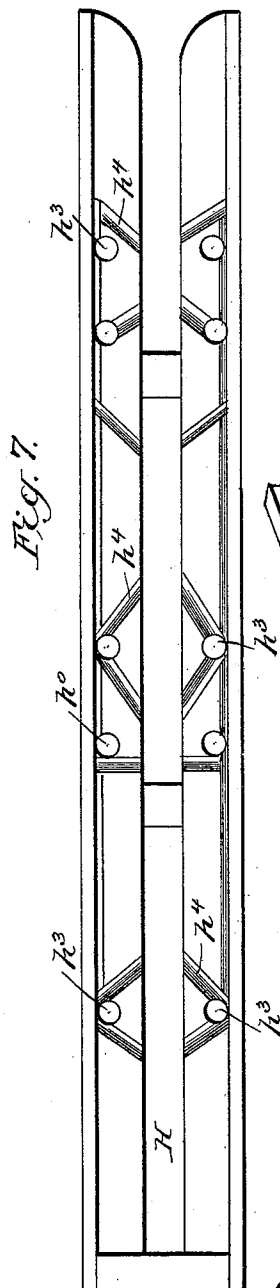
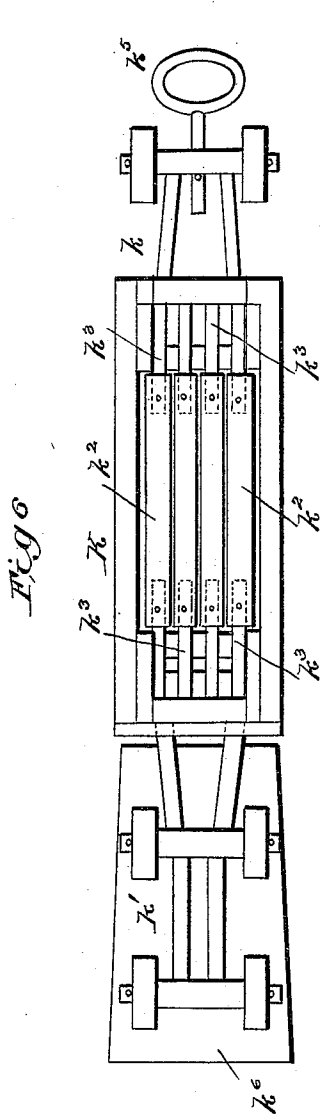
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R. NEWELL.
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Patented Nov. 24, 1891.



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UNITED STATES PATENT OFFICE.

RANDISON NEWELL, OF KENTON, TENNESSEE.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 463,914, dated November 24, 1891.

Application filed April 13, 1891. Serial No. 388,789. (No model.)

To all whom it may concern:

Be it known that I, RANDISON NEWELL, of Kenton, in the county of Obion and State of Tennessee, have invented a new and useful
5 Improvement in Washing-Machines, of which the following is a specification.

This invention relates, generally, to washing-machines, and more particularly to an improved machine which combines features
10 of those classes known as "roller and bed" and "reciprocating rubber" machines.

The object of my invention is to provide a machine of the character described that shall be cheap and simple in construction, easy and
15 convenient to operate, and one that is thoroughly efficient, cleansing the clothes rapidly, without injuring the same.

With this object in view my invention consists in certain details of construction and
20 novel combination of the various elements, all of which will be more fully hereinafter described, and designated in the appended claims.

In the drawings forming a part of this
25 specification, and in which the same letters of reference indicate the same parts, Figure 1 is a side elevation of my improved washing-machine. Fig. 2 is a top plan view. Fig. 3
30 is a vertical longitudinal section on the line 3 3, Fig. 2. Fig. 4 is a transverse section on line 4 4, Fig. 1. Fig. 5 is a detail bottom plan view of the reservoir. Fig. 6 is a bottom view of the reciprocating rubber carriage. Fig. 7
35 is a plan view of the carriage-track. Fig. 8 is a detail view of the clamping-block.

In the practical embodiment of my invention I employ a main frame A, essentially rectangular in shape, and supported upon the
40 legs *a*. A V-shaped trough B is supported longitudinally upon the main frame, said trough extending nearly the full length of the same, one end of the trough extending beyond the frame, said end being opened, as
45 clearly shown, and beneath said opened end is pivoted the spout B², which conducts water from the trough to a tub arranged beneath the same. The trough B is provided with the
50 vertical sides B', thus forming a trough-like receptacle upon the frame and in which the clothes are washed, and near the opened or rear end of said trough outwardly-flaring side boards B² are attached to the sides B'.

Upright standards C C are secured to the main frame A upon the outer sides of trough-receptacle and opposite to each other, the upper
55 ends of said standards being slotted vertically, as at *c*, and between said slotted standards is journaled the corrugated revoluble rubber D, the ends of the shaft or journal
60 carrying the rotary rubber extending beyond the upright standards, and either end of the said shaft may be provided with some means for revolving the said rubber.

In the drawings I have shown a pulley *d* applied to each end of the shaft, which pulleys are driven by the belts E E, said belts
65 being driven by the wheels F F, said wheels being mounted upon the opposite ends of a horizontal shaft *f*, which is journaled in the upright standards G G, secured to the main
70 frame, similar to the standards C, the standards G G being arranged adjacent to the closed end of the trough proper. The wheels F F are driven by hand by means of the handles *f'* *f'*, attached thereto.

A track or bed H is arranged in the trough
B, extending entirely through the same, the forward end of said track being supported by
80 a block *h*, which rests upon a portion of the main frame adjacent to the forward end of the trough, the rear end of the track being supported by a cross-beam *h'*, held upon two longitudinal
85 beams *h*², secured to the end of the main frame adjacent to the open end of the trough and extending beyond the same.

The track H is provided with a series of perforations *h*³ and grooves *h*⁴, by means of which all water dropping upon the said track
85 will be allowed to flow back into the trough.

A carriage K is adapted to be moved back
90 and forth upon the tracks H, beneath the revoluble rubber, the said carriage being constructed to carry the garment to be cleaned, and consists of a forward truck *k*, a rear truck *k'*, and a slatted apron *k*², arranged between
95 the trucks, said apron being yieldingly connected with the forward and rear trucks by means of the spring-bars *k*³. The apron is intended to hold the garment to be washed, and consists of an open rectangular frame, a
100 series of longitudinal slats connected with the frame by means of springs, and the front and rear transverse shoulder-blocks *k*⁴, secured to the upper side of the open frame

and over which the garment is stretched, the clothes being fastened upon the apron by means of a clamping-block II', which slides upon a cross-piece attached to the rear end of the open frame, and is adapted to be pressed against the rear side of the rear shoulder-block k^4 , the clamping-block being held in place by the leaf-spring II². A receptacle k^6 is mounted upon the rear truck, said receptacle being intended to hold the clothes to be washed, and a handle k^5 is attached to the forward truck, by means of which the carriage is reciprocated horizontally beneath the revoluble rubber, and whereby the clothes are subjected to the action of the revolving rubber and the reciprocating slatted apron at one and the same time. Cross-beams h' of different thicknesses may be inserted beneath the rear end of the track to increase or decrease the friction on the clothes as they pass beneath the roller, and, if necessary, a cross-beam may be placed beneath the forward end of the track.

The clothes, after being spread upon the slatted apron and clamped, may be soaped and watered, as desired; but I prefer to arrange a water-reservoir above the revoluble rubber, said reservoir consisting of a tank L, which rests upon and is secured to the upright standards C C, as clearly shown. An aperture l is produced in the bottom of the tank directly over the roller, said aperture being normally closed by a valve-disk l' , held upon the bottom of the tank by means of a leaf-spring l^2 , secured to the tank. The stem l^3 of the valve extends outwardly to the edge of the bottom, where it is engaged by the lower end of the operating-rod l^4 , said end working through the edge of the bottom of tank, the upper end of the rod working in a guide l^5 , attached to the upper part of the tank, the rod being formed with a shoulder l^6 , adapted to engage the guide l^5 , by means of which the rod can be locked when depressed and the valve opened, and to limit the upward movement of the said rod a stop-pin l^7 is attached to the rod, which also engages the guide l^5 . A bail l^8 is secured to the bottom of the tank around the valve-stem, which prevents it being thrown downward too great a distance.

A cross-beam M connects the upper ends of the uprights G G, and to said cross-beam is secured a vertical timber M' and connecting the vertical timber M' and the tank L is a horizontal shelf N, which is intended to hold a pail or other receptacle, from which the water can be added to the tank as needed.

Seats O O are pivoted to the forward end of the main frame, said seats extending outwardly in opposite directions, and upon which the operator or operators rest while operating the drive-wheels or reciprocating the carriage. A receptacle P is built beneath the main frame, said receptacle being adapted to receive the dirty clothes, soap, and utensils in general. Foot-rests Q Q are pivoted to the

under side of the receptacle P and extend outwardly in opposite directions, as clearly shown. Wheels R R are arranged at the rear end of the machine, by means of which it may be moved about from place to place.

In operation the tank is filled with water, and a pail filled with water is placed upon the shelf N. The receptacle k^6 is then filled with dirty clothes, one of which is selected and stretched upon the apron, the clamping-block being slid back as the article is drawn over the rear shoulder-block and is then moved forward clamping the article to the apron. The valve-operating rod is now depressed and locked in this position, thus opening the valve and permitting a steady stream of water to flow over the revoluble roller onto the article held upon the carriage. This article is then soaped, the roller revolved, and the carriage reciprocated, whereby the clothes will be given a thorough cleaning, and by means of the yielding apron no damage will be done the clothes. The water will pass down to the open end of the trough out through the spout, and into the tub arranged beneath the same. By this arrangement each article will be cleansed in separate water, a very desirable feature in washing-machines. When the article is cleaned the carriage is stopped, the clamping-block slid back, the article removed, another one arranged, and the operation repeated.

Having thus described my invention, what I claim as new is—

1. In a washing-machine, the combination, with an open-ended trough, of the spout, the water-reservoir, the revoluble rubber, the reciprocating carriage, and the track having a series of perforations and grooves upon its upper face and leading to the said perforations, substantially as and for the purpose described.

2. The combination, with the revoluble rubber, of the horizontal apron adapted to be reciprocated beneath the said rubber, said apron consisting of an open frame, a series of longitudinal slats and the front and rear shoulder-blocks, and the clamping-block, all arranged substantially as shown and described.

3. The combination, with a revoluble rubber, of a carriage arranged beneath the same and adapted to be reciprocated, said carriage carrying a yielding apron, upon which the clothes are held, and a receptacle adapted to carry the clothes to be washed, substantially as shown and described.

4. The combination, with a revoluble rubber, of a carriage consisting of the forward truck, the rear truck, the slatted apron yieldingly connected with the front and rear trucks, the shoulder-blocks, and the clamping-block, all arranged substantially as shown and described.

5. In a washing-machine, the combination, with a main frame having a receptacle arranged in the lower portion of the same, of the

slats pivoted to the top of main frame and the foot-rests pivoted to the bottom of the receptacle, all arranged substantially as shown and described.

5 6. The combination, with the trough, of the track, the carriage consisting of the front and rear trucks and yielding apron, the shoulder-blocks, and clamping-block, all arranged substantially as shown and described.

10 7. In a washing-machine, the combination, with a trough, of a water-reservoir arranged above the trough and provided with an aperture in its bottom, the spring-actuated valve-disk having a stem, an operating-rod adapted
15 to engage the said stem, the said rod having a notch near its upper end, and the guiding and locking device attached to the reservoir

and adapted to operate substantially as shown and described.

8. The combination, with the carriage consisting of the front and rear trucks, the slatted apron yieldingly supported between the trucks, the shoulder-blocks, and clamping-block, the revoluble roller arranged above the said carriage, and the water-reservoir arranged above the roller, substantially as and for the purpose described.

RANDISON ^{his} × NEWELL.
mark

Witnesses:

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T. W. JONES.