

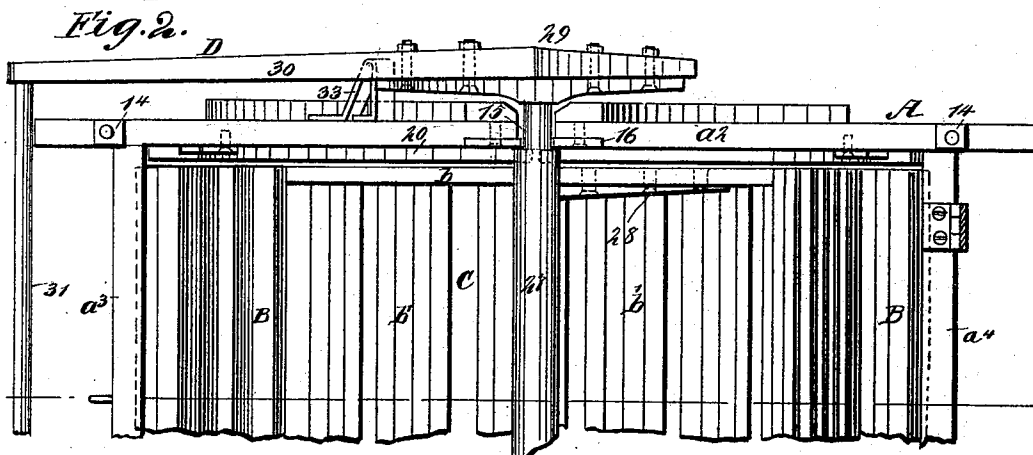
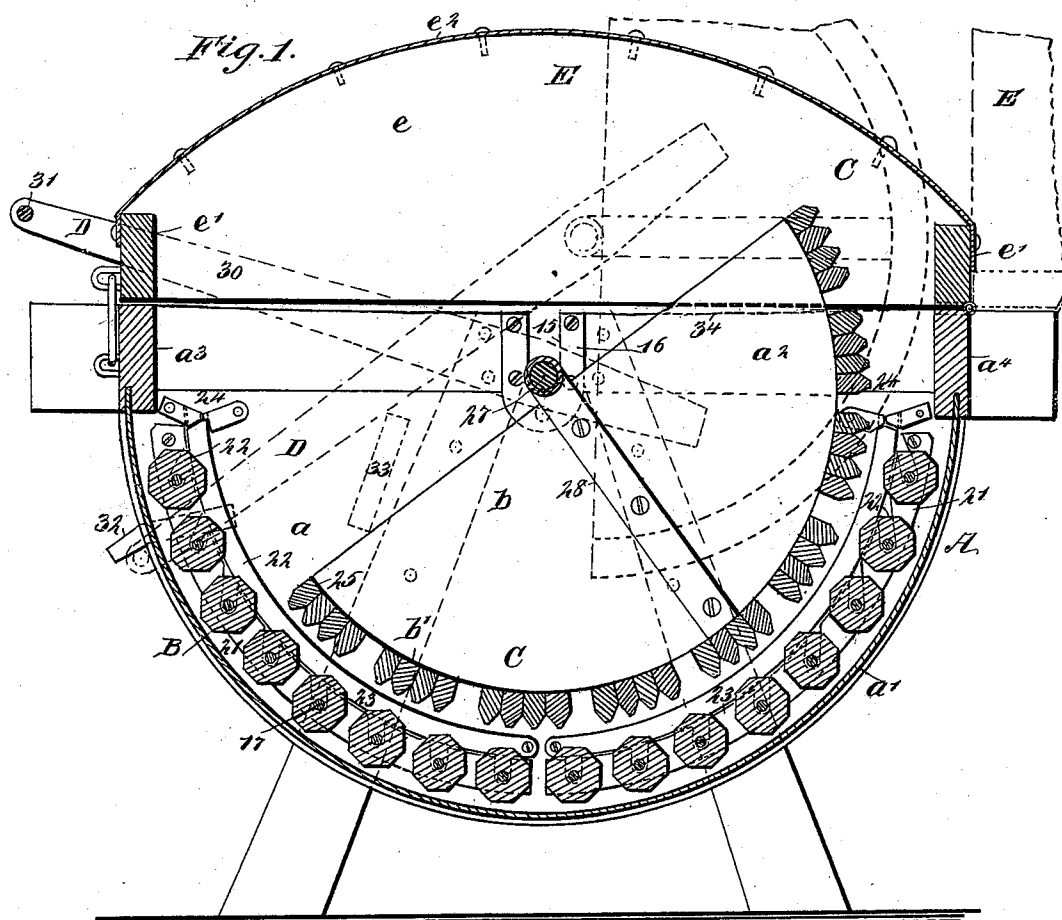
(No Model.)

2 Sheets—Sheet 1.

P. M. THOMPSON.
WASHING MACHINE.

No. 510,726.

Patented Dec. 12, 1893.



WITNESSES:

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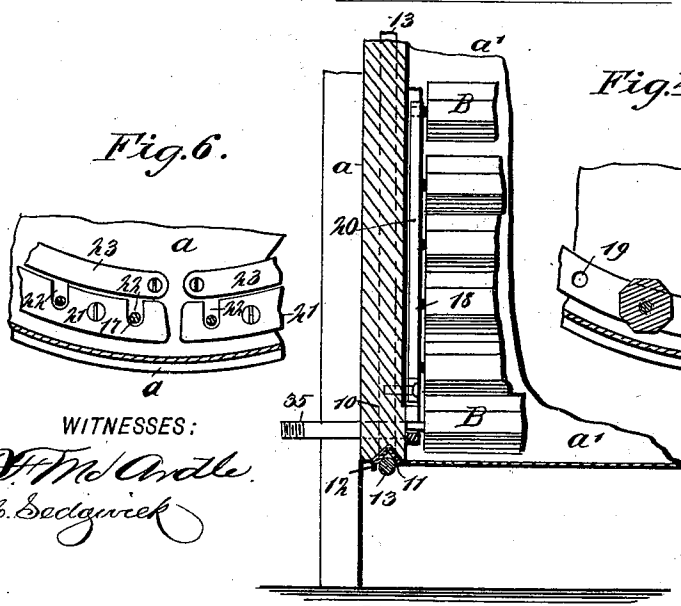
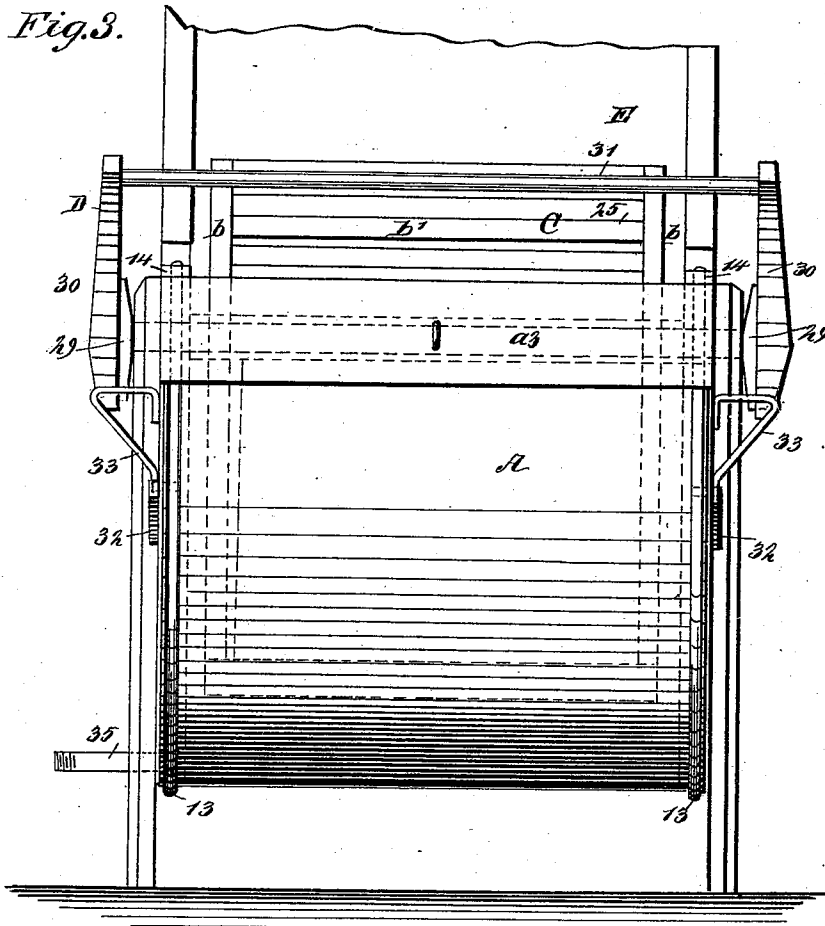
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

PETER M. THOMPSON, OF ANACONDA, MONTANA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 510,726, dated December 12, 1893.

Application filed April 25, 1893. Serial No. 471,810. (No model.)

To all whom it may concern:

Be it known that I, PETER M. THOMPSON, of Anaconda, in the county of Deer Lodge and State of Montana, have invented a new and
5 Improved Washing-Machine, of which the following is a full, clear, and exact description.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the
15 views.

Figure 1 is a central vertical section through the body and cover of the machine. Fig. 2 is a partial plan view of the machine with the cover removed. Fig. 3 is a front elevation of the machine with the cover open and the rubber slightly raised. Fig. 4 is a vertical section taken through one of the sides of the machine, illustrating in side elevation one end of the rubbing rollers and their connection with the
25 side. Fig. 5 is a vertical section through the bottom of the body, illustrating a portion of one side in elevation and the rubbing rollers in cross section; and Fig. 6 is a detail view, illustrating the manner in which one of the trunnions of the rubbing rollers is removably located in the bottom.

The body A of the machine is practically of semi-circular shape, and comprises opposing semi-circular sides a , which are preferably made of wood, and a plate a' , preferably of thin material, which plate serves to connect the sides and form the front, back and bottom of the body. A coping is made to extend around the upper edge of the body, comprising two side sections a^2 and a front and rear section, designated respectively as a^3 and a^4 , the side sections of the coping being made to extend beyond the front and rear sections. A channel 10, is produced in the cylindrical
35 edge of each of the sides a , which channel is preferably made V or U-shape in cross section, and the side edges of the plate a' are provided upon the inner face of the plate with ribs 11, corresponding in cross sectional shape to that of the channels 10. The ribs 11, are usually formed by striking up the metal; thus a depression or gutter 12, is formed upon the

outer face of the plate at the ribbed portion thereof. The ribs 11, are made to enter the channels in the sides of the body, and a rod 13, is then placed in each channel of the plate, and the extremities of the rods, which are threaded, are passed up through the side coping section of the body and nuts 14, are screwed thereon until the rods have entered the plate
60 channels 12 and have forced the ribs 11 into the channels in the sides. By this means an inexpensive water-tight joint is made, which joint is likewise exceedingly economic.

A vertical recess 15, is made in the upper edge of each side section of the coping, preferably at the center thereof, and the recesses are surrounded at their side and bottom portions preferably by means of essentially U-shaped washers 16, which washers are embedded in and secured to the inner faces of the side coping sections, and likewise to the inner faces of the main side sections of the body, as shown in Fig. 1. The recesses 15, are practically U-shaped in general contour, as their lower walls are intended to serve as bearings for the axle of a rubber to be hereinafter described. It may here be mentioned that the upper edges of the plate a' , constituting the front, bottom and rear of the body, are entered in suitable
80 grooves produced in the under surface of the front and rear coping sections, as shown in Fig. 1.

In the bottom portion of the body a series of rubbing rollers B, are semi-circularly arranged, the rollers being placed quite close to the bottom plate a' , and the said rollers are made polygonal in cross section, preferably octagonal. Each roller is provided with a trunnion at its ends, the trunnions being designated respectively as 17 and 18, the designations being made since the trunnions are adapted to enter different forms of bearings. The trunnions 18, are made to enter apertures 19, produced in a semi-circular plate 20, which plate, as is shown in Figs. 4 and 5, is securely fastened to one of the sides a of the body, and the said bearing plates 20, follow the contour of the bottom of the plate a' , and are therefore semi-circular.

The bearings 21, adapted to receive the trunnions 17, are preferably made in two sections, as shown in Figs. 1 and 6, each section extending from a point at one side of the

bottom of the body to a point near its upper edge, following the contour of the plate *a'*; and the sections of the bearing plate 21, are provided in their inner faces with a series of recesses 22, and these recesses are adapted to receive the trunnions 17 of the rubbing rollers. The upper sets of recesses are more or less diagonally produced in the bearing plates, while the lower recesses are practically perpendicular, as is likewise best shown in Fig. 1. Thus it will be observed that the rollers B, may be readily lifted from their bearings in the body, and the entire body portion may therefore be conveniently and thoroughly cleaned. It is necessary, however, that the trunnions of the rubbing rollers shall not leave their bearing plates during the operation of washing, and this is prevented by locating over the recessed surface of each of the bearing plates 20 a latch bar 23, the latch bar conforming to or being concentric with the said bearing plates, as is shown in Figs. 1 and 6. The latch bars are pivoted at their lower ends, and are held practically in engagement with the inner or recessed faces of the bearing blocks 21, by means of buttons 24, engaging with the upper ends of the bearing plates, as is also shown in Fig. 1. It is evident that while the latch bars are held in engagement with the bearing plates 21 the rubbing rollers can not leave their bearings; but when the buttons 24, are removed from engagement with the latch bars the latter may be moved upon their pivots in direction of the center of the machine, and any one or all of the rubbing rollers may be expeditiously removed from the machine.

I will now describe the construction of what I denominate and have referred to as the rubber C. The body of the rubber is of semi-circular construction and is made of such size that it may be rocked or rotated within the body. The rubber comprises two side pieces *b*, the said side pieces being connected by ribs 25, as shown best in Fig. 1, which ribs are secured to the cylindrical edges of the side pieces in any suitable or approved manner. The ribs are arranged in groups, the groups being designated in the drawings as *b'*. The under surface of each rib is beveled at its sides in opposite directions, rendering the said under surface of the ribs more or less pointed, as is likewise shown in Fig. 1. The pointing of the ribs, however, is not sufficiently sharp to injure the clothes with which the ribs are to come in contact, as the central portions of the pointed faces of the ribs are more or less flat. The groups of ribs *b'*, are arranged at predetermined intervals apart from the top or upper portions of the cylindrical edges of the sides entirely around said edges. The body of the rubber is made of such size that when it is placed in the body of the machine its ribbed surface will be spaced somewhat from the bed of rubbing rollers B, yet the ribbed surface of the rubber will conform to the arrangement of the rollers. An axle 27, is

secured upon the upper central surface of the rubber, extending from side to side and beyond said sides, the outer or projecting end of the axle being somewhat reduced in diameter, as these outer or reduced portions are adapted to enter the bearing recesses 15 in the body. The axle is provided with two arms 28 which extend downward within the rubber, and are secured one to the central portion of the inner face of each side of the rubber. Thus the rubber is rendered exceedingly strong, being braced by the arms 28; and each outer extremity of the axle, is provided with a T-head 29, each of said heads being secured to a side bar 30 of a handle D, by means of which the rubber is manipulated, the said side bars of the handle being connected by a rod 31 at their outer ends, and this rod is preferably made to extend beyond the outer faces of the sides. The handle stands at somewhat of an acute angle to the rubber, and as has heretofore been explained, is readily attached thereto. Thus in operation, when the axle of the rubber is placed in the bearings 15 in the body, the rubber may be rocked or laterally reciprocated so as to rub the clothes placed between its ribbed surface and the bed of rollers in the body, in such manner that the position of the clothes will be constantly shifted; and as the ribs of the rubber are arranged at intervals apart, the water or washing fluid contained in the body will be in constant and shifting engagement with the clothes being operated upon; again, the polygonal cross sectional shape of the rubbing rollers serves to successfully remove the dirt from the clothes, without presenting to them edges sufficiently sharp to cut or injure said clothes, and by placing the handle at an obtuse angle to the rubber the handle may be manipulated without necessitating the operator stooping to any great extent.

When it is desired to remove the clothes from the washing machine, to wring them for example, the wringer may be placed upon the front end of the body. The handle of the rubber is carried downward to the position shown in dotted lines, which is across the lower portion of the body, and the rod 31 of the handle is made to engage with brackets 32, which project outward and downward from the sides of the body, as shown in Fig. 1. The axle of the rubber will by this means be removed from the bearings in the body, and the rubber itself will be held in a vertical position with its straight upper surface facing the front. This position is likewise shown in dotted lines in Fig. 1. When it is desired to resume washing or rinsing of the clothes, the handle is released from the brackets 32 and drawn forward until the axle of the rubber enters the bearings in the body. Brackets 33, are located upon the outer surfaces of the sides of the body, which limit the downward movement of the handle and serve likewise as fulcrums for the handle when the rubber is to be raised to its elevated position.

The body of the machine is provided with a top E, which top is of practically semi-circular construction and is preferably hinged to the rear section a^4 of the body coping; and the said cover preferably consists of segmental sides e , straight front and rear bars e' , and an arched cover plate e^2 , which is secured to the sides and to the front and rear bars by nails, screws or other fastening devices. The cover is usually held in a locked position upon the body by means of a hook and staple, as shown in Fig. 1.

It may here be remarked that the side sections a^2 of the body coping have their upper edges normally inclined from their ends in direction of the center, the line 34 in Fig. 1 representing the normal inclination of these edges. By this construction, when the cover is in closed position upon the body, and the wooden sides of the body swell by reason of the liquid contents of the body, the side sections of the coping will expand at their central upper portions, or on the line 34, and will therefore meet the under side surfaces of the cover and form practically a water-tight connection. If the inclination were not thus given to the upper side surfaces of the body the swelling of the sides would tend to force the cover up, leaving an opening more or less around its entire margin.

The body of the washer is provided with a pipe 35, at one side next its bottom surface, to permit the wash water to be removed.

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

1. The combination with the tub or body having the central vertical slots 15 and the rubber provided with an axle resting in said slots and provided with arms 30 at its ends, and a hand bar 31 connecting said arms beyond the tub, of brackets 33 on the outer sides of the tub in the downward path of the arms 30 to form the fulcrum therefor in removing the rubber, and the forwardly extending brackets 32 at the front edges of the sides of the tub to cross the hand bar 31 and hold the rubber in its elevated position, substantially as set forth.

2. The combination with the axle having T ends 29 and provided between its ends with arms 28, of the rubber carried by the said arms, the bars 30 bolted longitudinally at their inner ends upon the said T ends and a hand bar 31 connecting the bars 30, substantially as set forth.

PETER M. THOMPSON.

Witnesses:

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JNO. MARSHALL, Jr.