M. WAGNER.

WASHING MACHINE.

APPLICATION FILED JULY 2, 1917.

1,274,641.

Patented Aug. 6, 1918.

Fig. 1.

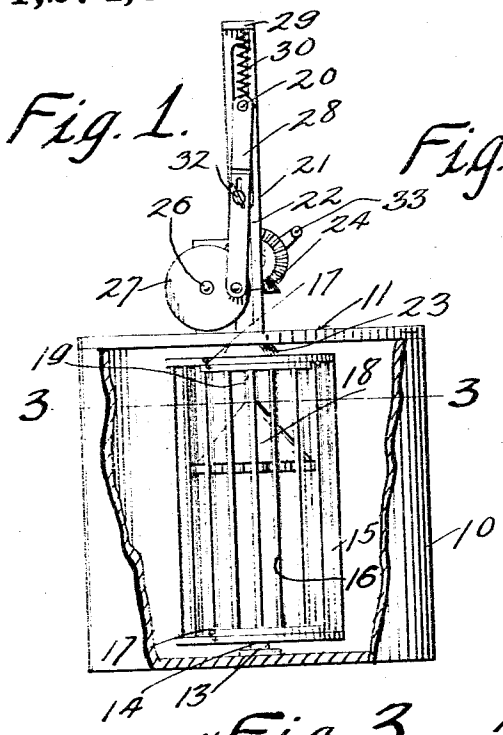


Fig. 2.

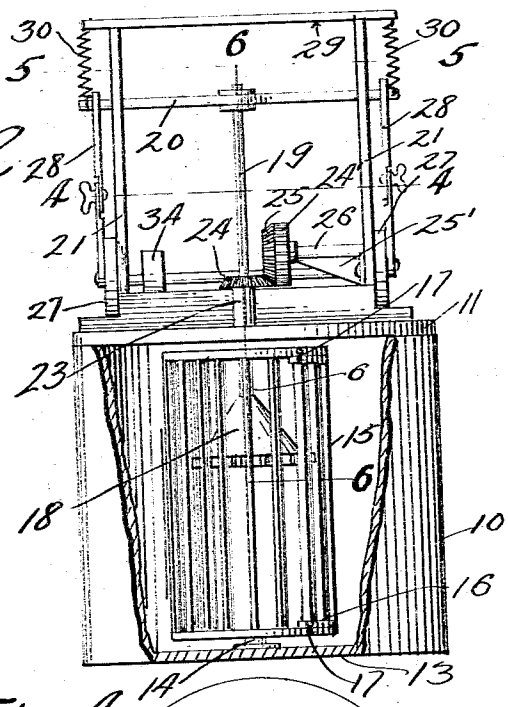


Fig. 3.

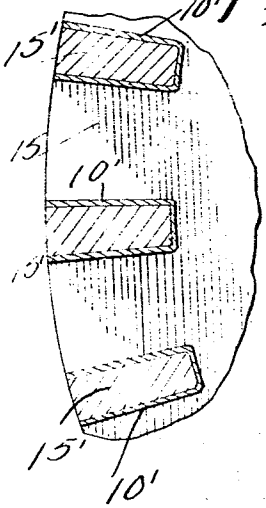


Fig. 4.

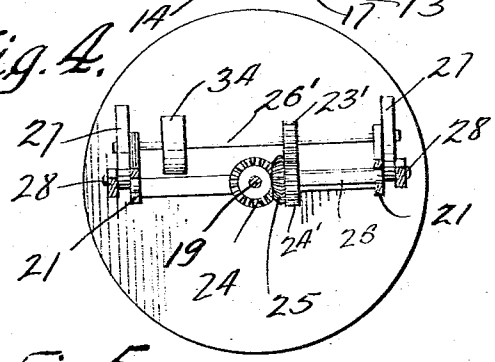


Fig. 6.

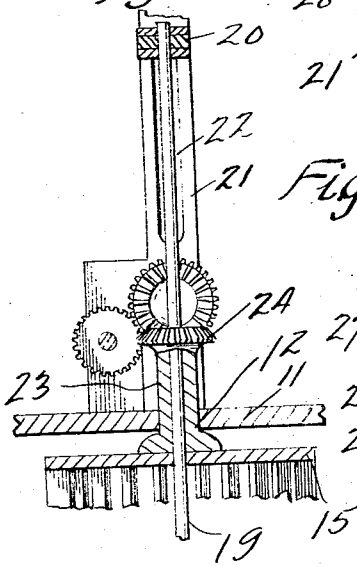
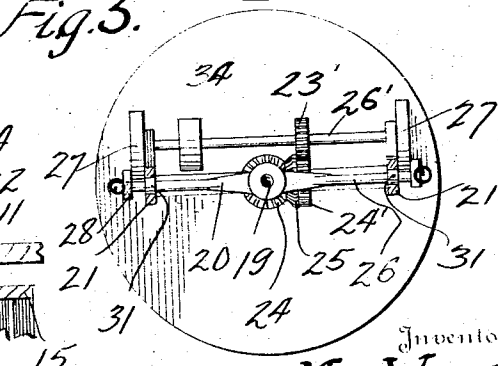


Fig. 5.



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UNITED STATES PATENT OFFICE.

MARTIN WAGNER, OF LARSON, NORTH DAKOTA.

WASHING-MACHINE.

1,274,641. Specification of Letters Patent. Patented Aug. 6, 1918.

Application filed July 2, 1917. Serial No. 178,188.

To all whom it may concern:

Be it known that I, MARTIN WAGNER, a citizen of the United States, residing at Larson, in the county of Burke, State of North Dakota, 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.

This invention relates to new and useful improvements in washing machines, and particularly to washing machines used for washing clothes.

One object of the present invention is to provide a novel and efficient device of this character which can be easily operated and which will act on the clothes in the combined manner of the rotary agitator and the reciprocating pounder.

Another object is to improve the construction of devices whereby the clothes will be effectively cleansed without injury thereto.

Other objects and advantages will be apparent from the following description when taken in connection with the accompanying drawing.

In the drawing:

Figure 1 is an elevation of my improved washing machine.

Fig. 2 is a front elevation of the same.

Fig. 3 is a horizontal sectional view taken on the line 3—3 of Fig. 1.

Fig. 4 is a horizontal sectional view taken on the line 4—4 of Fig. 2.

Fig. 5 is a horizontal sectional view taken on the line 5—5 of Fig. 2.

Fig. 6 is a vertical sectional view taken on the line 6—6 of Fig. 2.

Referring particularly to the accompanying drawings 10 represents a suitable tub which is provided with a removable cover 11 having a central aperture 12 therein. In the bottom of the tub there is secured a socketed boss 13 for the reception of the trunnion 14 carried by the bottom of the rotatable cage 15 which is disposed in the tub. A hinged door 16 is provided in one side of the cage to permit the introduction of or removal of clothes. Suitable latches 17 are provided for holding the door in closed position.

Movable vertically in the said cage is a plunger 18 and connected to this plunger is a vertical rod 19 which extends upwardly through the opening 12 of the cover of the tub where it is connected to the central portion of a transverse bar 20. Mounted on the sides of the tub are the vertical members 21 in each of which there is formed a longitudinal slot 22 receiving slidably therein the ends of the said transverse bar 20.

Secured on the upper end of the cage, and centrally thereof, is a vertical tubular shaft 23, and through this shaft the before-mentioned rod 19 extends. On the upper end of the rod 19, which projects above the cover of the tub, is a bevel pinion 24, which meshes with a similar pinion 25 mounted on a horizontal transverse shaft 26 supported in a bracket 25′ on the lower portion of one of the members 21. This pinion is provided with an integral pinion portion 24′ which meshes with a pinion 23′ carried by a shaft 26′ which is journaled in the lower portions of the uprights 21. On each end of the shaft 26′, outwardly of the members 21, is a disk wheel 27, and pivotally connected to said wheel is a link or pitman 28, the other end of said link being operatively connected with one end of the bar 20 which protrudes through the slot of the member 21. A transverse member 29 connects the upper ends of the members 21, and connected at one end to one end of the bar 20 is a coil spring 30, the other end of which is connected to one end of the said member 29. The spring 30 is duplicated at the upper end of the other member 21, and the action of these springs is to urge the transverse bar 20 in an upward position, whereby the plunger head within the cage will be lifted to the upper end thereof. Suitable anti-friction rollers 31 are mounted on the ends of the bar 20, so that the said bar will slide easily within the slots of said upright members 21.

The links or pitman rods 28 are formed of two telescoping sections which are adjustable by means of the screws 32, whereby the said pitmen are capable of being lengthened and shortened for the purpose of changing the tension of the springs 30 and thereby the force of the upward portion of the stroke of the plunger head in the cage, and pressure and suction exerted thereby on the clothes.

The cage includes the vertical slats 15′

which are covered with metal such as zinc, as clearly shown in the horizontal sectional view Fig. 3, at 10'.

The motive power applied to the mechanism hereinbefore described may be by means of a crank handle 33 carried on one end of the shaft 26, as seen in Fig. 1, or a belt wheel 34, as seen in Fig. 2, may be carried by one end of said shaft for the engagement of a drive belt from a suitable engine, not shown.

It will thus be seen that as the gears and shafts are set in motion, the cage will be rotated, while at the same time the plunger head will be reciprocated within the cage so that the clothes will be compactly compressed on the down-stroke of the head, and the water squeezed out of the clothes, while a suction will be created through the clothes to draw the water upwardly through the clothes, on the up-stroke of the head. Thus the passage of the water back and forth through the clothes will effectively remove the dirt therefrom.

What is claimed is:

A washing machine including a tub, a rotary cage mounted in the tub, a reciprocating pounder movable within the cage, a support on the top of the tub, a transverse member slidably carried by the support and arranged to move vertically thereon, a vertical rod connected to the transverse member and to the pounder, a hollow shaft carried by the upper end of the cage and carrying a pinion, a shaft having a pinion meshing with the first pinion for rotating the cage, and means operable by the shaft for reciprocating the pounder.

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

MARTIN WAGNER.

Witnesses:
C. B. VOGEN,
F. A. KEMP.