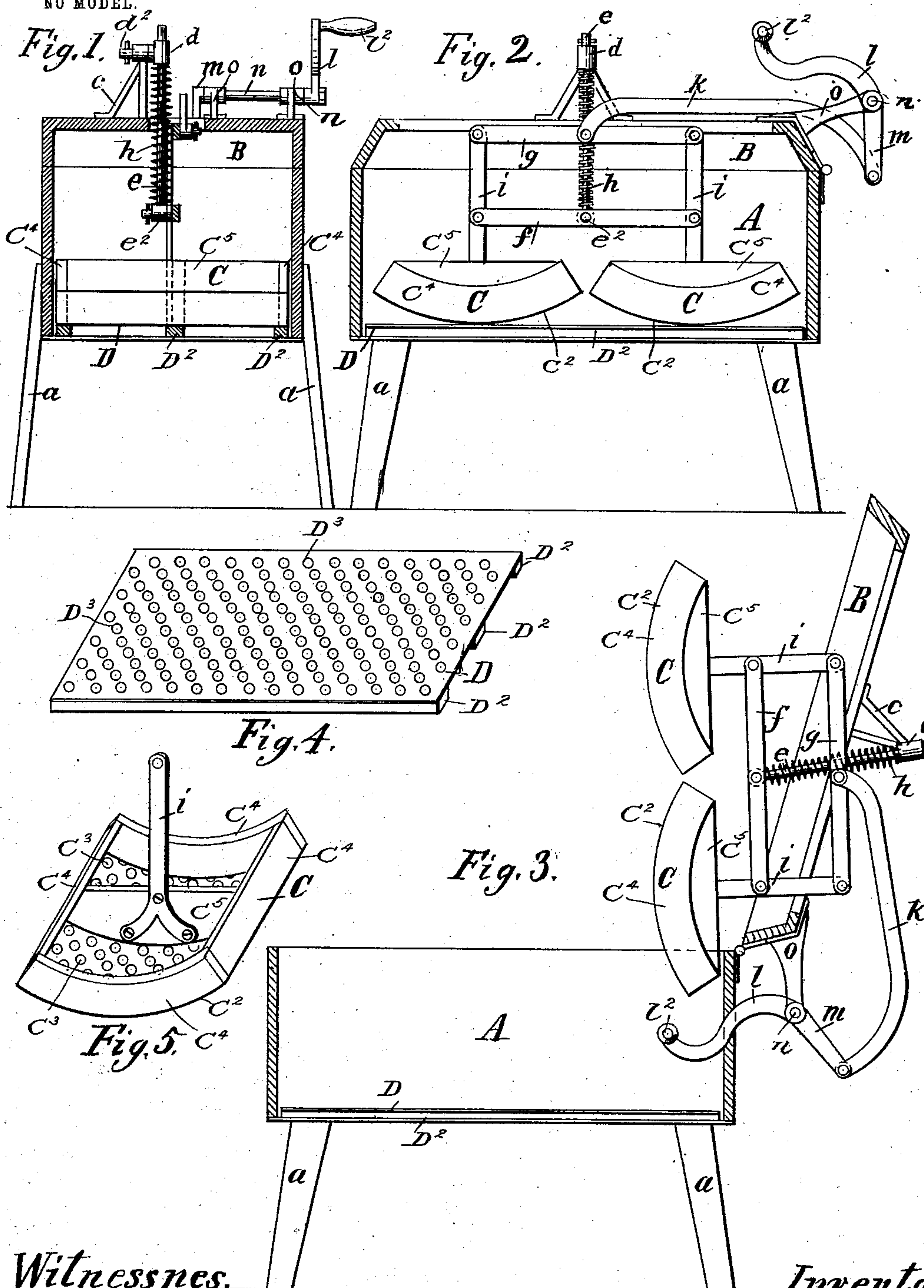


No. 721,110.

PATENTED FEB. 17, 1903.

A. N. VERDIN.  
WASHING MACHINE.  
APPLICATION FILED AUG. 9, 1900.

NO MODEL.



Witnesses.  
Walter E. Bassett  
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Inventor  
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# UNITED STATES PATENT OFFICE.

ALOIS N. VERDIN, OF GLENDALE, OHIO, ASSIGNOR OF TWO-THIRDS  
TO WALTER E. BASSETT AND WILLIAM C. PEALE, OF CINCINNATI,  
OHIO.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 721,110, dated February 17, 1903.

Application filed August 9, 1900. Serial No. 26,416. (No model.)

*To all whom it may concern:*

Be it known that I, ALOIS N. VERDIN, a citizen of the United States, residing at Glendale, in the county of Hamilton and State of Ohio, have invented a new and useful Washing-Machine, of which the following is a specification.

My invention relates to improvements in washing-machines in which the dirt is removed from the clothes by pressure, inducing a rubbing or frictional operation between the threads of the textile fabric which is being cleansed in connection with an induced flow of the washing liquid under, over, and through this textile fabric.

The invention consists generally in the construction and arrangement of parts whereby, first, a rolling motion is secured and the hurtful rubbing arising from the drawing of the dasher or rolls upon the cloth is reduced to a minimum; secondly, the loading, unloading, and cleansing of the machine is made easy and convenient; thirdly, the pressure upon the textile fabric is maintained in planes nearly vertical—namely, at substantially right angles to the horizontal plane of the bottom of the tub—and is automatically increased or diminished, according as the quantity of clothes in the machine is increased or diminished.

The several features of my invention and the various advantages resulting from their use conjointly or otherwise will be apparent from the following description and claim. I attain these objects by mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a vertical section of the machine when closed. Fig. 2 represents a longitudinal section of the machine when closed. Fig. 3 represents a longitudinal section of the machine when open. Fig. 4 represents a supplementary bottom for the tub. Fig. 5 represents either one of the rockers employed in the machine.

In the views similar letters of reference indicate corresponding parts.

The body of the machine is preferably a rectangular box forming a tub A, supported on legs *a a*, one at each corner of the tub.

The tub is provided with a closely-fitting lid or cover B, preferably hinged, as shown, at one end to the tub A. Within the tub A there is preferably present a supplementary bottom D, having on its under side at intervals projections *D*<sup>2</sup>, substantially as shown. This bottom proper, D, is provided with many perforations *D*<sup>3</sup>, permitting the washing fluid to pass through them from the space under them to the clothes laid upon this bottom to be washed and also to pass from the clothes back through them to the space beneath for the purpose of facilitating the process of cleansing the clothes.

For directly operating upon the clothes I employ two rockers C C, whose outwardly-curved bottom faces *C*<sup>2</sup> are arranged, as shown, to bear upon the goods. The bottom is duly provided with many perforations *C*<sup>3</sup>. The rockers are preferably made as follows: To the edges of the ends and sides of the curved bottom plate are fixed pieces *C*<sup>4</sup>, which do not extend below the bottom plate, but extend upwardly, and together form a receptacle in which the washing liquid may come as it is squeezed from the clothes as the rocker compresses them and from which the liquid may pass to the clothes as the rocker (in that part) leaves the clothes.

The primary purpose of the side and end pieces *C*<sup>4</sup> is to strengthen and hold in place the rocker-bottom and also afford a hold through the agency of the central brace *C*<sup>5</sup>, fixed to opposite pieces *C*<sup>4</sup> of the rocker; for the arm *i*, which latter is duly secured, substantially as shown, to the said brace *C*<sup>5</sup>. When the rockers are in their central position, the arms *i i* thereof will be vertical. They (the arms) are duly interconnected by a lower connecting-rod *f* and an upper connecting-rod *g*. Both of these rods are duly connected pivotally at their ends respectively to the adjacent upright arm *i*.

I provide means for causing the rockers to resiliently press down upon the clothes, to wit: Upon the cover I erect a stand *c*, which carries a pin *d*<sup>2</sup>, capable of rotation in an alternating manner and carrying a sleeve *d*. In the latter is present the upper part of a rod *e*, free to move through said sleeve. The



purpose of this rod is to be a guide for holding a spring which shall communicate a continued pressure to the rockers and cause them to exert a resilient pressure upon the clothes which are placed beneath them. To this end the lower end of this rod is duly connected to a connecting-rod—as, for instance, rod *f*—to give greater length to spring *h*, whose preferred form is spiral. This spring *h* encircles the rod *e* between the sleeve *d* and that end of pivotal connection or hinge *e*<sup>2</sup> of the rod *e*. This spring is preferably always under compression, so that the rockers will always press down upon the supplemental bottom or upon the clothes thereon.

Means for oscillating the rockers *C* are to be employed, and I have invented therefor the following, viz: To the connecting-rod *g* I pivotally connect one end of a pitman *K*, which for obvious reasons I have curved, as shown. The other end of the pitman *K* is pivotally connected to a crank *m*, fixed on a crank-shaft *n*. To the latter is fixed a handle-arm *l*, provided with handle *l*<sup>2</sup>. This crank-shaft *n* is journaled in bearings of arms *o*. These arms *o o* are fixed to the lid *B* of the tub, substantially as shown.

In opening the machine to put clothes in the tub or to remove therefrom those already washed the entire operating mechanism being supported and carried by the lid or cover *B* assumes the position shown in Fig. 3, leaving the inside of the tub *A* empty of mechanism, excepting the supplemental bottom *D*, which remains therein.

The mode in which my machine is operated is as follows: The lid is thrown back, as heretofore specified, and the clothes to be washed are placed within the tub on the bottom *D*. Washing liquid has been previously placed in the tub or is now placed therein. The lid is now returned to cover the tub and is duly

secured in the position shown in Figs. 1 and 2. The rockers press yieldingly upon the clothes. The handle *l*<sup>2</sup> is now moved back and forth and in turn moves the upper ends of the arms *i i* back and forth, and thus the rockers are rocked first one way and then the other. These rockers thus roll over and on the clothes, and the pressure upon the clothes is changed so as first to squeeze them and then to release pressure upon them. The washing liquid is thereby caused to pass back and forth through the goods, thereby removing the dirt.

The object of providing the rockers and supplemental bottom with perforations instead of making the supplemental bottom and the bottom of slots or with slot-holes is to prevent the goods while being washed from weaving into the rockers or supplemental bottom.

By this mechanism thus constructed and arranged I am enabled to accomplish the objects and attain the advantages mentioned in the opening portion of this specification.

What I claim as new and of my invention, and desire to secure by Letters Patent, is—

In a washing-machine, the combination of a suds-box provided with a cover, a bracket *c* mounted on said cover and provided with a bearing, an oscillating pin *d* mounted in said bearing and provided with a socket, of the rockers provided with uprights *i*, the connecting-rods *f g*, the ends of which are pivoted to said uprights, the rod *e* pivotally attached to one of said connecting-rods and sliding in said socket, the spring *h* interposed between said last-named connecting-rod and said pin, and means for actuating the rockers, substantially as described.

ALOIS N. VERDIN.

Witnesses:

WALTER E. BASSETT,  
CHAS. E. EVERETT.