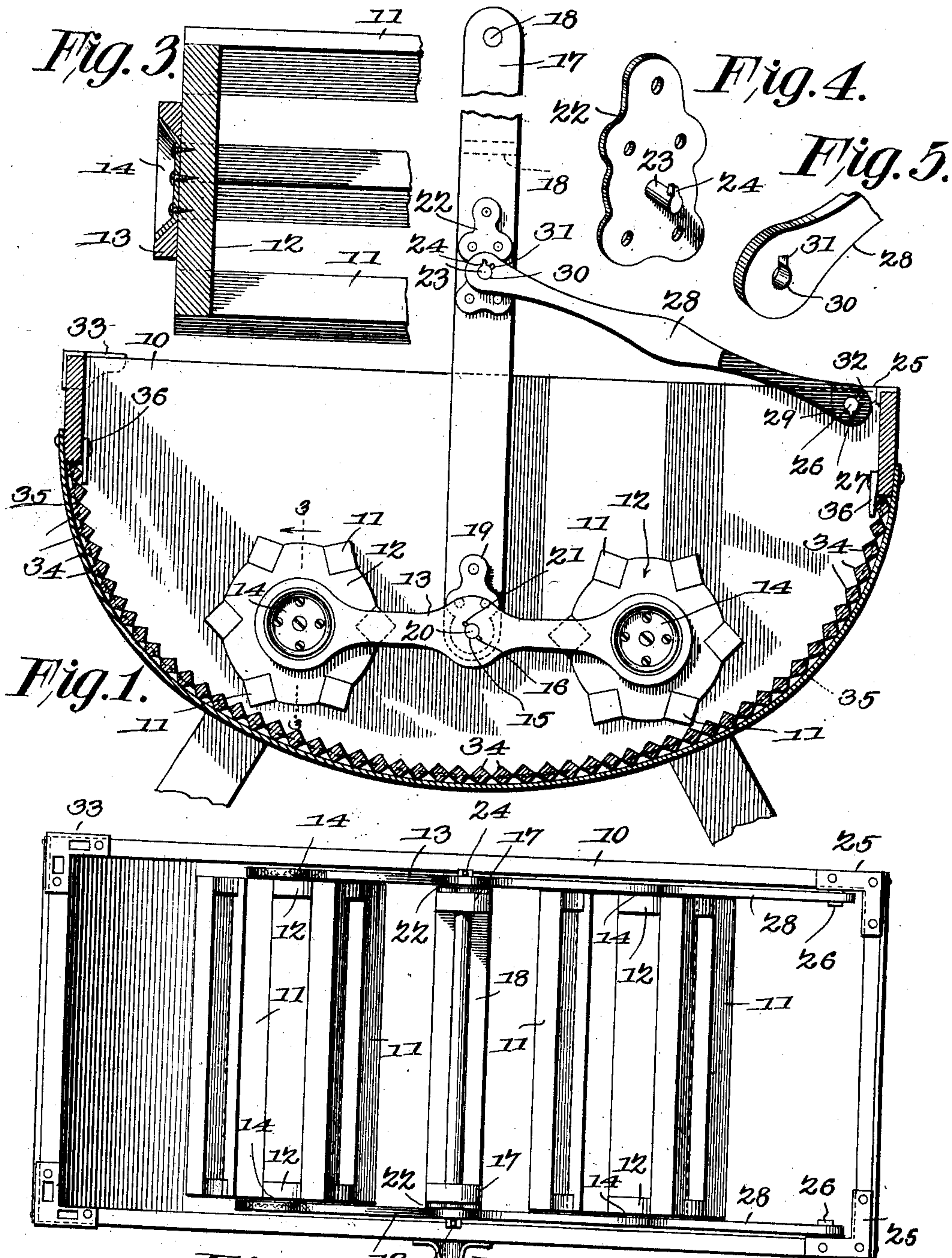


No. 827,052.

PATENTED JULY 24, 1906.

F. J. BARRICKMAN.  
WASHING MACHINE.  
APPLICATION FILED NOV. 30, 1904.



Witnesses

*E. J. Stewart*  
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*Fig. 2.*

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# UNITED STATES PATENT OFFICE.

FRED JEFFERIES BARRICKMAN, OF OTTAWA, KANSAS.

## WASHING-MACHINE.

No. 827,052.

Specification of Letters Patent.

Issued July 24, 1906.

Application filed November 30, 1904. Serial No. 234,914.

*To all whom it may concern:*

Be it known that I, FRED JEFFERIES BARRICKMAN, a citizen of the United States, residing at Ottawa, in the county of Franklin and State of Kansas, have invented a new and useful Washing-Machine, of which the following is a specification.

This invention relates to washing-machines, and has for its object to improve the construction and increase the efficiency of devices of this character.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation, it being understood that the invention is not necessarily limited thereto, as various changes in the shape, proportions, and general assemblage of the parts may be resorted to without departing from the principle of the invention or sacrificing any of the advantages of this invention within the scope of the appended claims.

In the drawings, Figure 1 is a sectional side elevation of the improved apparatus, and Fig. 2 is a plan view of the same. Fig. 3 is an enlarged sectional detail, on the line 3-3 of Fig. 1, of a portion of one of the rubbing rollers or drums, together with one of the joints by which the rotation is produced. Fig. 4 is a perspective view, enlarged, of one of the radius-bar swivel-plates; and Fig. 5 is a perspective, enlarged, of one end of one of the radius-bars.

The improved device comprises a receptacle 10 for the garments to be washed, preferably with spaced sides and an elliptical bottom.

Disposed in the bottom of the receptacle 11 and transversely of the same is a rubbing-surface composed of a plurality of square bars 34, united by flexible wires or cables extending through transverse apertures in the bars, so that the "belt" or "web" formed by the connected slats or bars conforms to the curved bottom of the receptacle and bears thereon. At the ends the web of slats is retained in position by movable buttons 36, attached to the end members of the receptacle.

The web member is thus readily detachable when required.

Mounted for oscillation in the receptacle is a rubber member comprising two spaced rollers formed of spaced angular ribs 11, connected at their ends to plates 12 and the plates in turn connected for rotation to the ends of parallel bars 13.

Attached centrally to the end plates 12 are disks 14, having undercut or "dovetailed" rims, and the parallel bars 13 are provided with apertures correspondingly dovetailed or inclined to rotatively engage the disks. By this means it is obvious that while the rollers are free to rotate upon the parallel bars the latter will be connected to the rollers and prevented from being disengaged therefrom when the rollers are operated. Formed centrally through each of the parallel bars 13 is an aperture 15, having a radial recess 16 extending therefrom on one side.

An operating-frame is provided for connection to the rubber member and formed with spaced side members 17 and transverse connecting members 18 near the upper ends, the free ends of the side members having plates 19 attached thereto and provided with studs 20 for passing through the aperture 15 in the parallel bars 13 and with lugs 21 extending radially from their outer ends for passing through the radial recesses 16. The bars 13 are of relatively thin metal, and the portions of the side members 17 below the cross-bars 18 are relatively long, so that bars and side members will yield sufficiently to enable the studs 20 to be withdrawn from the apertures 15. The transverse connecting members 18 being disposed at the upper portion of the side members 17 firmly support the same, while at the same time leaving the lower portions disconnected and free to be moved to a limited extent within the range of the resiliency of the material, generally wood, of which they are composed. The lateral studs 16 serve to effectually prevent accidental displacement of the parts when the device is in operation, but do not prevent the ready removal of the bars 13 and their associated rubber rollers when required.

Attached to the side members 17 of the operating-frame are plates 22, having lateral studs 23 with radial lugs 24 at their outer ends.

Attached to the receptacle 10 at two of its end corners are plates 25, likewise with lateral



studs 26 and radial lugs 27 of substantially the same size and form as the remaining studs and lugs above mentioned.

Connecting the side members 17 to the receptacle 10 are radius-bars 28, having apertures 29 30 in their ends, provided with radial recesses 31 32 for respectively engaging the studs 23 26 and their lugs 24 27. By this arrangement the rubber member is supported to swing upon the lower end of the operating-frame and the operating-frame supported to swing from the receptacle by means of the swinging radius-bars.

To more clearly illustrate the construction of the device, the rubber mechanism comprising the rollers 11 12, connecting-bars 13, and frame 17 18 is shown in side elevation, and one of the bars 28, the one nearest the observer, is shown with the lower end broken away to show the position of the other radius-bar.

The parts may be readily connected and disconnected by so adjusting them that the various radial lugs come in alinement with their corresponding radial recesses and cannot be connected or disconnected unless they are so alined, as will be obvious. If, therefore, the various recesses be so disposed that they will come in alinement with the various lugs only when the connected members are turned into an unusual or inoperative position, it is obvious that the parts will not become accidentally disconnected while in use, no matter how severely they may be agitated or moved about. The rubber member may thus be adjusted to any elevation required and will adapt itself readily to the quantity of the garments in the receptacle.

When drawn back and forth over the garments, the roller members by their open construction cause the water to freely run over and between the ribs, and thereby effectually increase the rubbing action and cause the water to be more forcibly driven through the clothes. The hollow rollers also effectually prevent the rapid agitation from causing the water to be splashed over the ends of the receptacle.

The rubber member swinging freely upon the operating member automatically adapts itself to the clothes in the receptacle and remains in contact therewith and with a uni-

form pressure throughout the whole length of the stroke, thus very materially increasing the extent of the rubbing action and correspondingly decreasing the time required to complete the cleansing of the clothes. The plates 25 extend over both the end and side members of the receptacle 10, and thus serve to strengthen the joint between the parts and serve as "corner-plates" thereto in addition to their use as supporting means for the studs 26. The remaining corners of the receptacle are also provided with stay-plates 33 to increase the strength of the receptacle. The side walls and portions of the end walls of the receptacle will preferably be of wood and the bottom of galvanized iron or zinc; but any other suitable material may be employed, if required. The rubbing-slats 11 and 34 will generally be of wood, but may also be of metal, if preferred, and the remaining parts may be of any suitable material and of any required size.

Having thus described the invention, what is claimed is—

1. In a washing-machine, a supporting-frame comprising spaced side bars connected near one end by transverse members and with projecting studs at the free ends, tie-bars having transverse apertures engaging said studs, and rubbing-rollers rotatively connected between the free ends of said tie-bars, whereby the tie-bars and associated rollers may be coupled to and uncoupled from the side bars by compressing the same.

2. In a washing-machine, a receptacle, a supporting-frame operating in said receptacle and comprising spaced side bars connected near one end by transverse members and with projecting studs at the free ends, tie-bars having transverse apertures engaging said studs, rubbing-rollers rotatively connected between the free ends of said tie-bars, radius-bars coupled at the ends to said receptacle and to said side bars and compressible therewith.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FRED JEFFERIES BARRICKMAN.

Witnesses:

W. H. MERKLE,  
CHAS. D. SWIFT.