J. H. KNOLL.

WASHING MACHINE.

APPLICATION FILED JUNE 15, 1908.

928,984. Patented July 27, 1909.

Fig. 1.

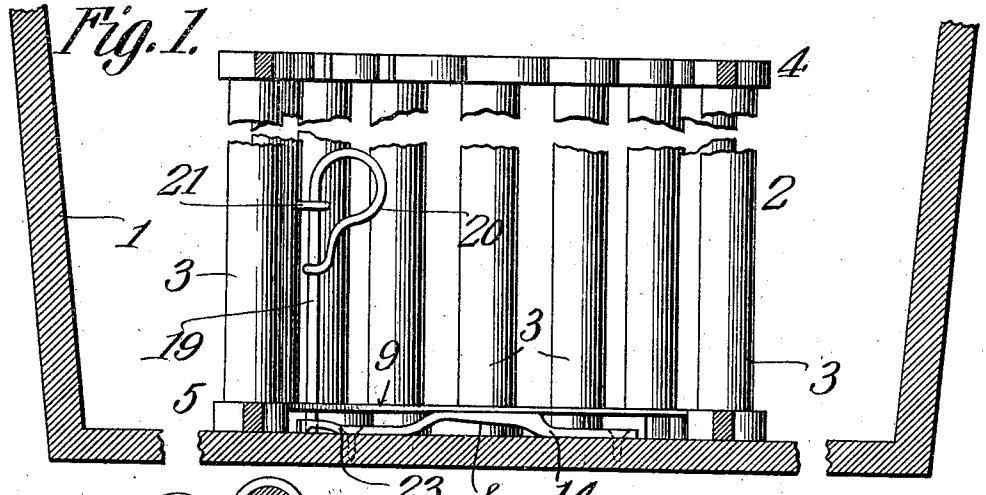


Fig. 2.

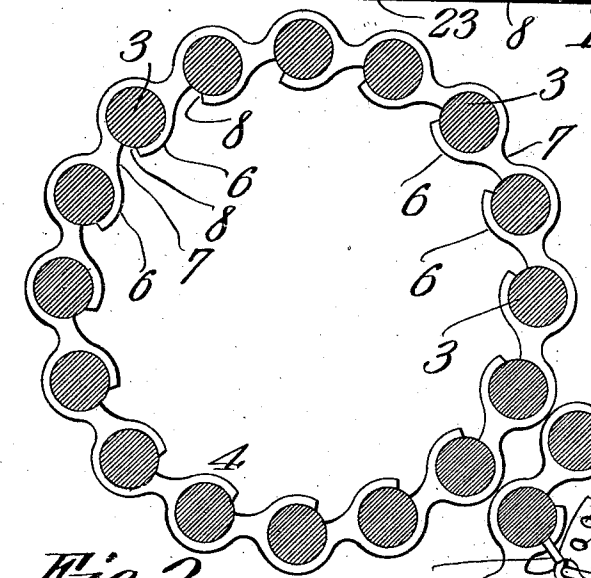


Fig. 4.

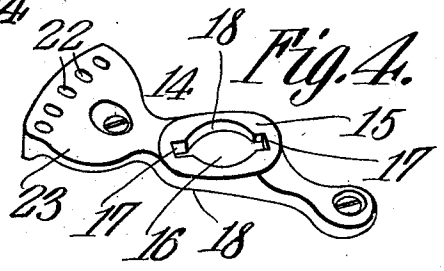


Fig. 3.

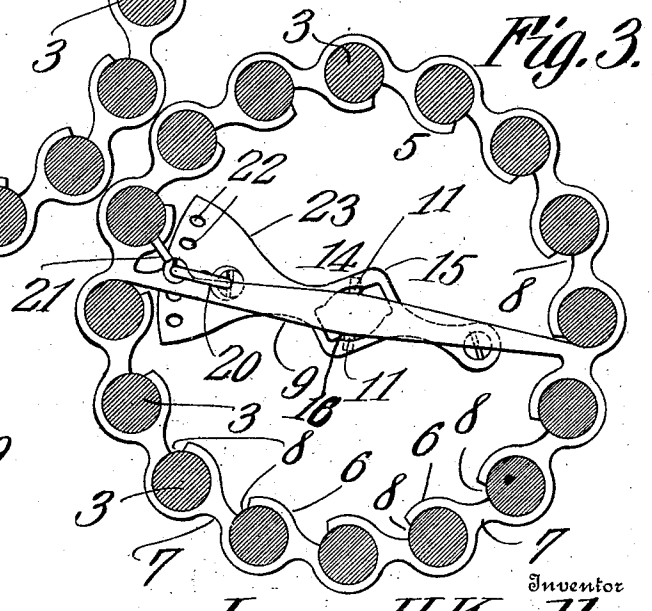
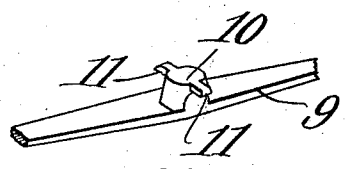


Fig. 5.



Witnesses

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WASHING-MACHINE.

No. 928,984. Specification of Letters Patent. Patented July 27, 1909.

Application filed June 15, 1908. Serial No. 438,656.

To all whom it may concern:

Be it known that I, JAMES H. KNOLL, a citizen of the United States, residing at 1315 Good street, Reading, in the county of Berks and State of Pennsylvania, have invented a new and useful Washing-Machine, of which the following is a specification.

This invention relates to washing machines of the class in which there is a central fixed rubbing cylinder, and a rotary rubbing frame or spider.

The invention has especial reference to the central fixed rubbing cylinder, and has for its object to provide an improved central rubbing cylinder, and improved means for detachably locking said cylinder in a tub.

The invention consists of an improved central rubbing cylinder, and in details thereof, constructed and arranged as hereinafter set forth and claimed.

Referring to the drawing—Figure 1 is a sectional elevation partly broken away of a portion of a washing machine, illustrating the invention. Fig. 2 is a plan view of the top ring of the central rubbing cylinder illustrating its connection with the uprights. Fig. 3 is a plan view of the central rubbing cylinder showing the connection of the bottom ring with the uprights. Fig. 4 is a perspective view of a portion of the means for detachably locking the central rubbing cylinder in place. Fig. 5 is a perspective view of another portion of the device for locking the central rubbing cylinder in place.

In the accompanying drawing, 1 indicates a portion of a tub on the bottom of which is located the central rubbing cylinder 2, the rubber frame or spider and operating mechanism being omitted. The rubbing cylinder 2 consists of a circular series of vertical wooden rods 3, having their ends mounted in and connected together by a top ring 4, and a bottom ring 5, the rings 4 and 5 being of metal, and formed with a series of small rings 6 connected by necks 7, and each having an opening 8. By reason of this construction expansion and contraction of the wooden rods when wet or dry is provided for, the wooden rods 3 having their ends mounted in the rings 6, and the openings 8 in the rings 6 permitting of the same. The openings 8 are preferably located in opposite or reverse positions in the rings 6 in top ring 4 from those in the rings 6 in bottom ring 5, thereby holding the rods 3 steadily in the rings 6, as the rods 3 expand or contract.

In order to conveniently and securely detachably fasten the central rubbing cylinder to the bottom of the tub a locking device is provided as follows. The bottom piece 5 is formed with a metallic cross bar 9, having centrally between its ends on its under side a depending projection 10 with lateral lugs 11. To the bottom of the tub 1, is secured by screws or bolts 12 a metallic plate 14, having its central portion 15 formed with an opening 16 having opposing slots 17 in its edge. The under side of the plate 14 is formed with oppositely inclined surfaces 18 located on either side of the opening 16. The central rubbing cylinder 2 is locked to the bottom of the tub by passing the projection 10, and lugs 11 through the opening 16 and slots 17, and then turning the cylinder 2, which brings the lugs beneath inclined surfaces 18 of plate 14, and causes them to ride upon said inclined surfaces and bind the bar 9 to plate 14, thereby locking the cylinder 2 to the bottom of the tub. To aid in holding the parts in locked position, a suitable locking device is provided such as rod 19 with a handle 20, mounted in a guide 21 at one side of the cylinder 2, and movable vertically to adjustably engage one of a series of holes 22 in the head 23 of the plate 14. When the cylinder 2 is turned to lock it in place the rod 19 will be held out of engagement with the holes 22, and when the cylinder has been fastened, the rod 19 is moved into the hole 22 in line with it.

Having described the invention, I claim—

1. In a washing machine, a tub, an apertured plate secured upon the bottom of the tub, a rubbing cylinder comprised of a pair of heads each in the form of an annular series of integrally connected open rings, and rods seated at their ends in the said rings, an integral bar extending diametrically across the lower head, and means carried by one of the rods and engaging through the said bar and with the apertured plate for locking the cylinder against rotation.

2. In a washing machine of the class described, a plate provided with an opening, the said plate being secured to the bottom of the tub, a central rubbing cylinder, provided

with a transverse bar and an extending projection arranged to interlock with the said plate, the said plate being formed with a plurality of openings, and means carried by the cylinder and engageable with the openings interchangeably for holding the transverse bar in locked relation with the plate.

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

JAMES H. KNOLL.

Witnesses:
W. M. ZECHMAN,
E. R. KEMMERER.