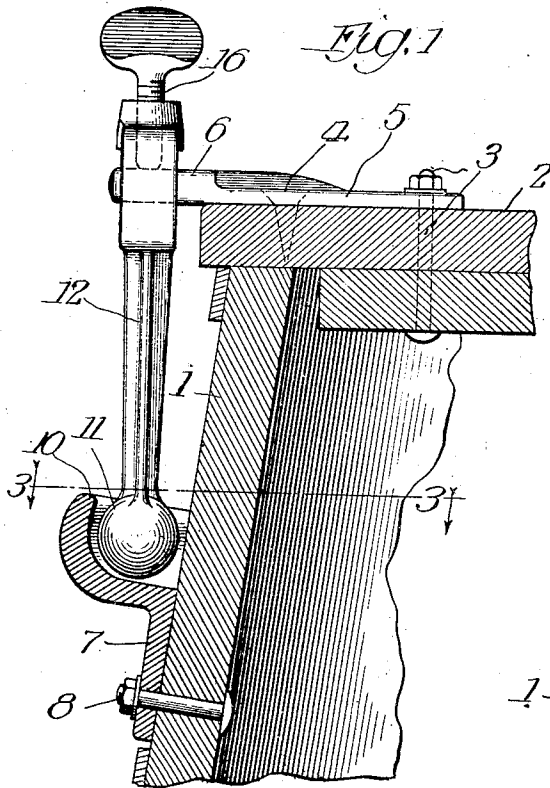
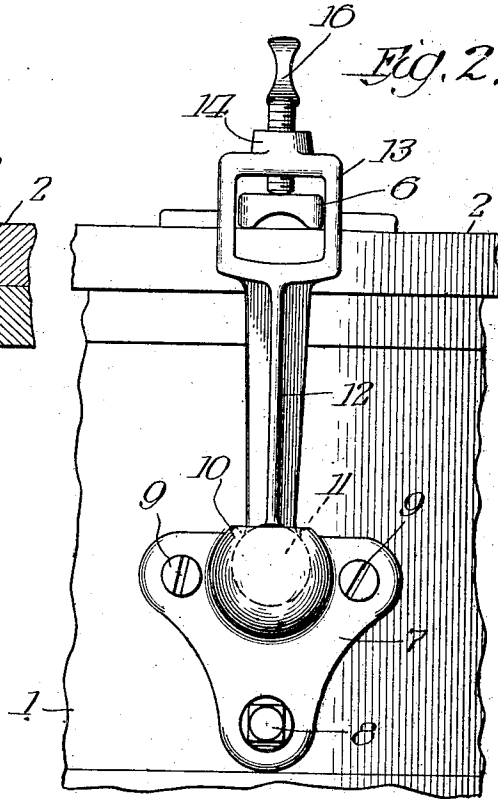
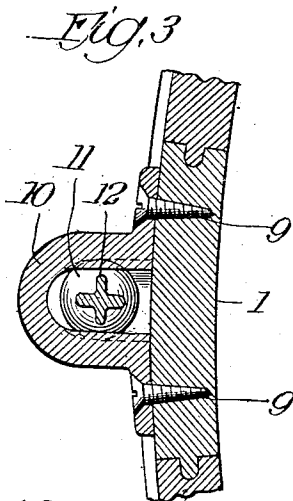
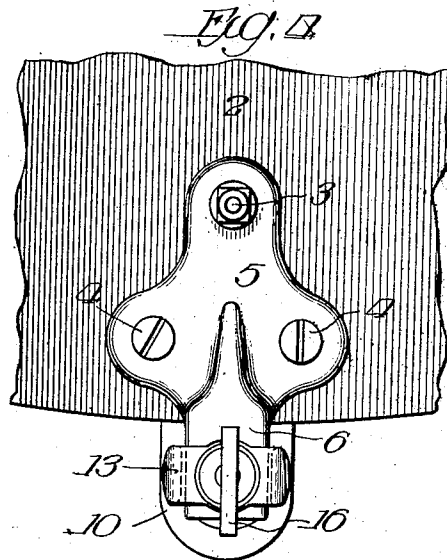


W. H. VOSS.
WASHING MACHINE.
APPLICATION FILED JAN. 24, 1914.

1,245,409.

Patented Nov. 6, 1917.



Witnesses:
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UNITED STATES PATENT OFFICE

WILLIAM H. VOSS, OF DAVENPORT, IOWA.

WASHING-MACHINE.

1,245,409.

Specification of Letters Patent.

Patented Nov. 6, 1917.

Application filed January 24, 1914. Serial No. 814,071.

To all whom it may concern:

Be it known that I, WILLIAM H. VOSS, a citizen of the United States, residing at Davenport, in the county of Scott and State of Iowa, have invented new and useful Improvements in Washing-Machines, (Case A), of which the following is a specification.

This invention relates to clamping devices and more specifically to clamping devices adapted to firmly bind one member upon another as regards movement in one direction, but at the same time to permit a creeping relatively between said members in another direction.

In the illustrated embodiment of the invention disclosed in the drawings, I have shown it as applied in the form of a clamp for washing machine and used therein to secure the lid to the tub.

Washing machines usually comprise a fixed tub and a removable or hinged lid thereon. Inasmuch as a considerable portion of the washing machinery is usually mounted on the lid, it is necessary to have the lid firmly clamped to the tub in order to avoid the otherwise inevitable vibration generated from the machinery carried on the lid, which would soon rack and strain and otherwise wear the machine. Inasmuch as the lid in the operation of washing must very frequently be raised to inspect the clothes, replace the water, add the clothes or take out the clothes, etc., a clamping device for the lid, to be practicable must be not only firm in its clamping operation, but susceptible of an easy and instantaneous release.

Both tubs and lids in washing machines are usually constructed of wood, the tub being bound by iron hoops. This means that in use the parts are apt to have a considerable and indeterminable swell and the lid is particularly adapted thus to swell, expanding in diameter when it is wet and contracting when it is dry. Not much variation in size is possible with the tub because the iron hoops prevent any substantial enlargement thereof. A satisfactory clamp for a washing machine, in addition to its other functions, should also accommodate this expansion of the lid, otherwise either the clamp will break or the entire machine will be racked and strained.

The objects of my invention are to attain the results briefly enumerated above, that is

to say; to provide a clamp, simple and inexpensive to construct, and capable of firmly binding the lid to the machine, but at the same time capable of instantaneous release, and moreover capable of readily accommodating the swell or expansion in the lid or tub or both, without releasing its clamping grip.

Other objects and advantages of my invention will appear as the description to follow proceeds.

In the drawings,

Figure 1 is a detail sectional view of a washing machine having my invention attached.

Fig. 2 is an elevation of Fig. 1.

Fig. 3 is a section on line 3—3 of Fig. 1.

Fig. 4 is a top plan view.

1 represents a washing machine tub and 2 its lid which in common practice carries the agitator mechanism. Mounted upon the lid 2 by means of the bolt 3 and the screws 4 is a plate 5 having a radially projecting lug 6 thereon of heavier material than the plate 5. Rigidly mounted upon the side of the tub 1 is bracket 7 secured to the tub by bolts 8 and screws 9 and having therein a ball socket 10 and seated in the ball socket, is a ball 11 integral with the ribbed rod 12 which ends in a loop 13 of a size to accommodate the projection 6 and having at its top a reinforcing boss 14 through which is threaded the single screw 16.

As many of these clamps as are necessary may be applied about the circumference of the lid. In operation the lid is first put on the loops 13 then swung over projections 6 and the screws 16 turned to firmly clamp the lid to the tub the point of the screw pivotally engaging the projecting portion 6 of the plate 5. It is obvious that by means of the ball and socket joint 10, 11, any creeping or expansion of the lid either peripherally or radially, will only serve to tighten the juncture between the lid and the tub, since by reason of the ball and socket joint 10, 11, the rod 12 will swing to follow the projection 6 without straining or racking any of the parts of the machine.

I claim:—

1. In a washing machine, a tub, a removable lid thereon, said lid resting upon the upper rim of said tub and capable of sliding thereon, a bracket on the tub, a link having such connection at one end with said bracket

to permit a universal swinging movement of the link, a plate projecting laterally from said lid, said link at its opposite end having an adjustable pivot engagement with said plate, whereby to permit movement of the lid in all directions at right angles to the vertical axis of the tub due to expansion and contraction of said lid, and at the same time to hold said lid firmly against any vertical displacement.

2. In a washing machine, a wooden tub, a removable lid on said tub, said lid resting upon the upper rim of the tub, a plate projecting laterally from the lid, a bracket secured to the side of the tub and having a ball socket formed in its upper edge, a link having a ball at one end and a loop at the other, said ball fitting in said socket and said loop fitting over said plate, and adjustable means in said loop having a pivoted engagement with said plate, whereby said lid may be clamped on said tub in such manner as to prevent vertical displacement of the lid, but permit lateral movement of said lid in any direction at right angles to the

vertical axis of the tub due to expansion or contraction.

3. In a washing machine, a wooden tub having hoops, a removable lid resting upon the upper rim of said tub and capable of sliding movement thereon, a plate projecting laterally from said lid, a bracket on the tub, a link having at its lower end universal swinging connection with said bracket, adjusting means on the other end of said link, said means pivotally engaging said plate, whereby said lid will be firmly clamped against vertical displacement but yet permitted to have movement in all directions at right angles to the vertical axis of the tub to prevent racking of the tub or loosening of the lid due to expansion or contraction of said lid.

In witness whereof, I hereunto subscribe my name to this specification in the presence of two witnesses.

WILLIAM H. VOSS.

Witnesses:

WILLIAM E. PULS,
GEORGE W. CARDINAL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."