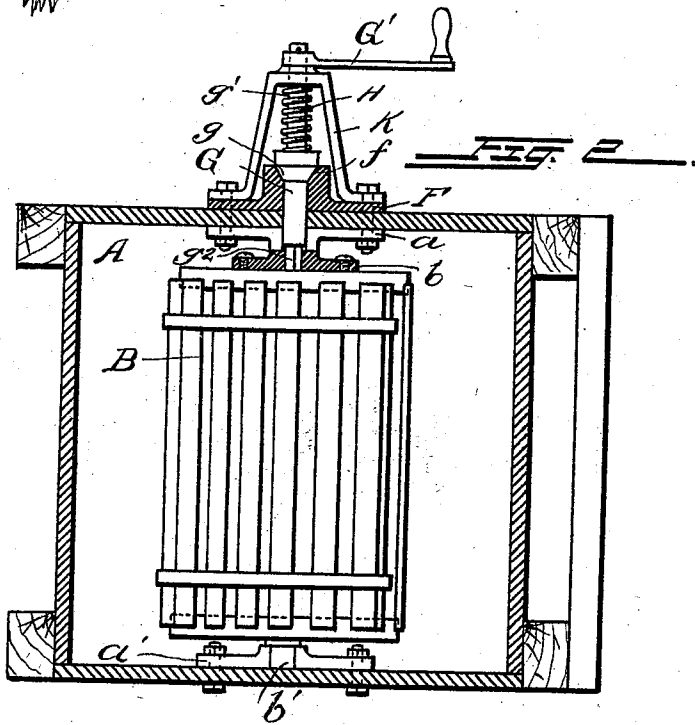
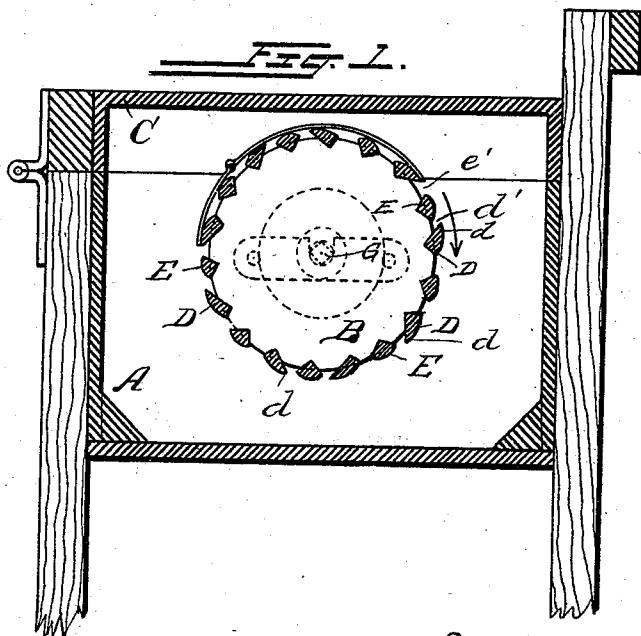


(No Model.)

F. P. BEISEL.
WASHING MACHINE.

No. 516,751.

Patented Mar. 20, 1894.



Witnesses

Edw. Kelly
David Levan

Franklin P. Beisel, Inventor

By

his

Attorney

J. H. H. H.

UNITED STATES PATENT OFFICE.

FRANKLIN P. BEISEL, OF MANAYUNK, ASSIGNOR OF ONE-HALF TO JAMES O. BENDER AND JOMAN BAVER, OF WISSAHICKON, PENNSYLVANIA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 516,751, dated March 20, 1894.

Application filed July 31, 1893. Serial No. 481,922. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN P. BEISEL, a citizen of the United States, residing at Manayunk, in the county of Philadelphia, State of Pennsylvania, have invented certain Improvements in Washing-Machines, of which the following is a specification.

My invention relates to certain improvements in rotary cylinder washing machines such for instance as is shown and described in Patent No. 379,357, issued to me March 13, 1888. These improvements are described in connection with the accompanying drawings and the novel features are particularly pointed out in the claims.

Figure 1 is a central vertical section of the machine. Fig. 2 is a plan view showing a cross-section of the body and bearing, and a full top view of the cylinder and of the movable-gudgeon mechanism.

A represents the tub or casing which is supported on suitable legs and provided with the usual means for attaching the wringer, &c., and also with a cover C which closes over the rotary washing cylinder B mounted within the tub. The cylinder B is formed of two circular heads connected by longitudinal slats or bars D and E, arranged alternately, with their opposite ends fixed to the periphery of the circular heads; except that a number of them are strapped together and hinged to the main portion of the cylinder so as to form a swinging lid to permit of the introduction and removal of clothing to and from the cylinder. The slats or bars D and E are substantially triangular in cross-section and are arranged with one angle projecting inwardly toward the center of the cylinder. The slats E are symmetrical in shape but the slats D are irregular, having one acute projecting angle *d*. These are arranged to point toward each other with one of the slats E between them. The effect of this arrangement is that when the cylinder is rotated in one direction, for instance that indicated by the arrow in Fig. 1, the water contained in the tub or casing will not readily enter at the space *d'* which is covered by the overhanging portion of the slat D, but will be compelled to enter at *e'* by the same projection on the next slat D. In this way the admission and circulation

through the cylinder is greatly varied and the clothes more effectually cleaned while at the same time the agitation is less violent permitting the free use of soap without danger of clogging the machine with suds. The cylinder B is mounted at one end on a fixed gudgeon *b'* in a bearing *a'* on the inside of the casing. The opposite end is mounted on a movable gudgeon G which is capable of sliding in and out in the bearings F and *a* on the casing, so as to permit the angular end *g*² to engage or disengage the socket piece *b* on the cylinder. This gudgeon is formed with a conical shoulder *g* adapted to fit a seat *f* formed in the bearing F and thus to form a valve to prevent the escape of water through the bearing. The outside extension *g'* of the gudgeon is supported by a yoke K and provided with a crank G' for rotating the cylinder. A coiled spring H is provided to normally press the gudgeon inward to engage the cylinder and against the valve seat. If it be desired to remove the cylinder it is only necessary to pull the gudgeon G out sufficiently to disengage it from the socketed piece *b* and the cylinder can be readily lifted out.

What I claim is—

1. In a washing machine the combination with the tub or casing and the rotary washing cylinder therein, of the longitudinally movable gudgeon G forming a valve *g*, and a spring H arranged to press said gudgeon normally into engagement with the cylinder and against the valve seat, substantially as set forth.

2. In a washing machine the combination with the tub or casing of the rotary washing cylinder therein, the longitudinally movable gudgeon G forming a valve *g* and having an angular end *g*², the head *b* on the cylinder socketed to receive said angular end, the bearing F on the casing forming a seat for the valve *g*, a yoke K forming a bearing for the outer end of the gudgeon, and spring H, all arranged substantially as set forth.

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

FRANKLIN P. BEISEL.

Witnesses:

OLIVER S. KEELY,
GEORGE A. HARDMAN.