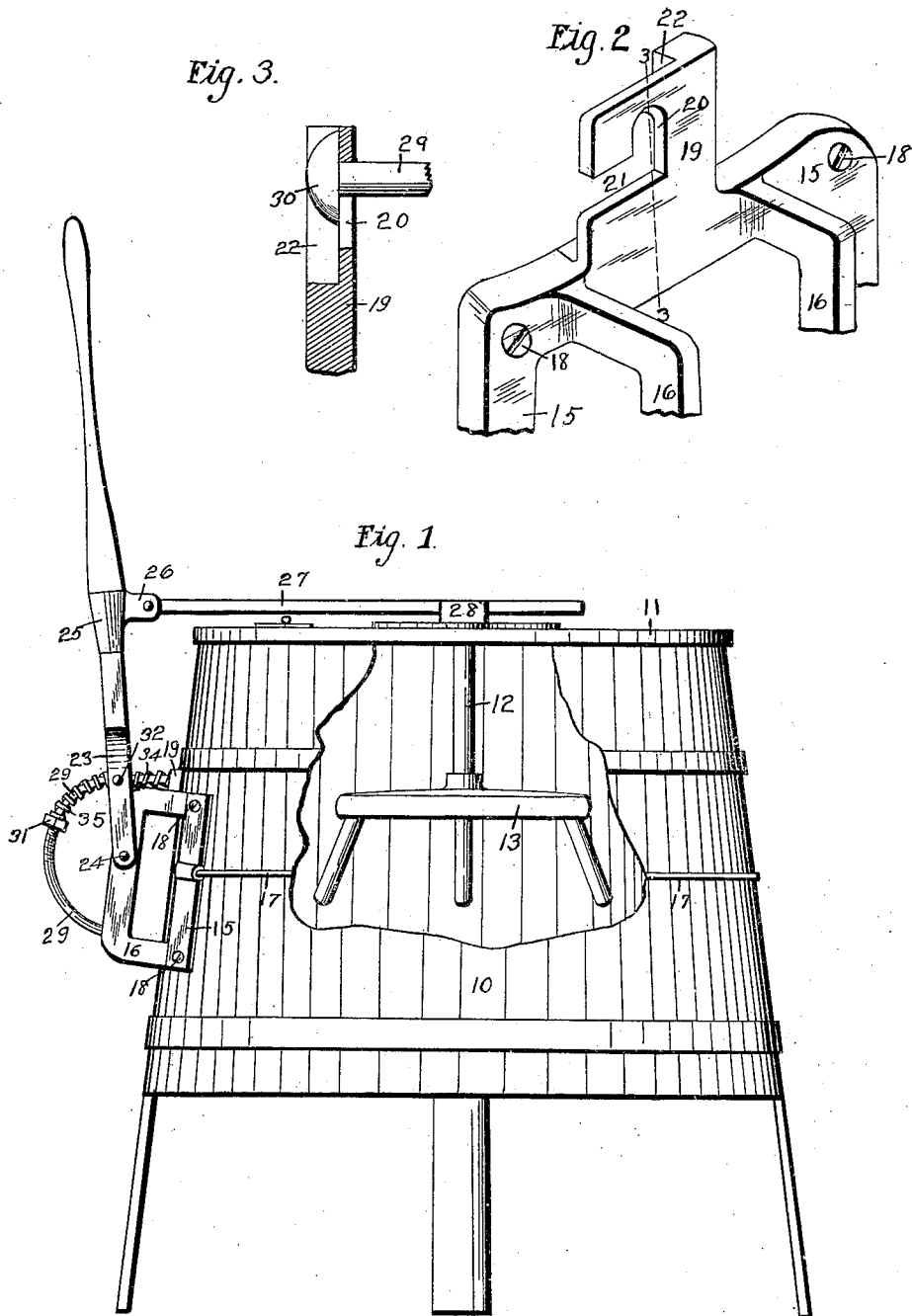


B. A. STOCKING & H. MENDENHALL.
GEARING FOR WASHING MACHINES.
APPLICATION FILED MAR. 18, 1907.

946,790.

Patented Jan. 18, 1910.

2 SHEETS—SHEET 1.



Witnesses.
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B. A. Stocking and H. Mendenhall.
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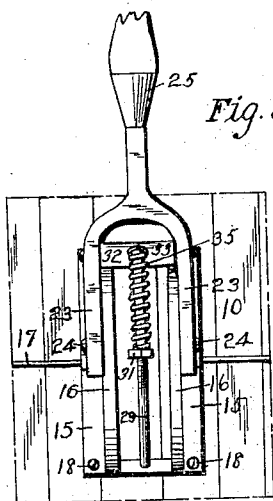


Fig. 5.

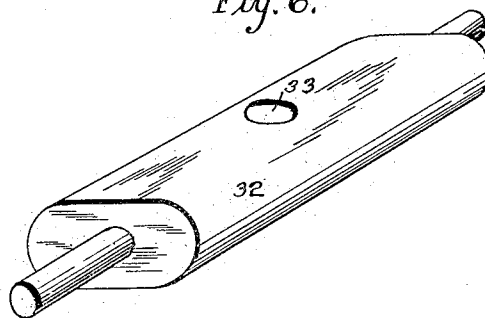


Fig. 6.

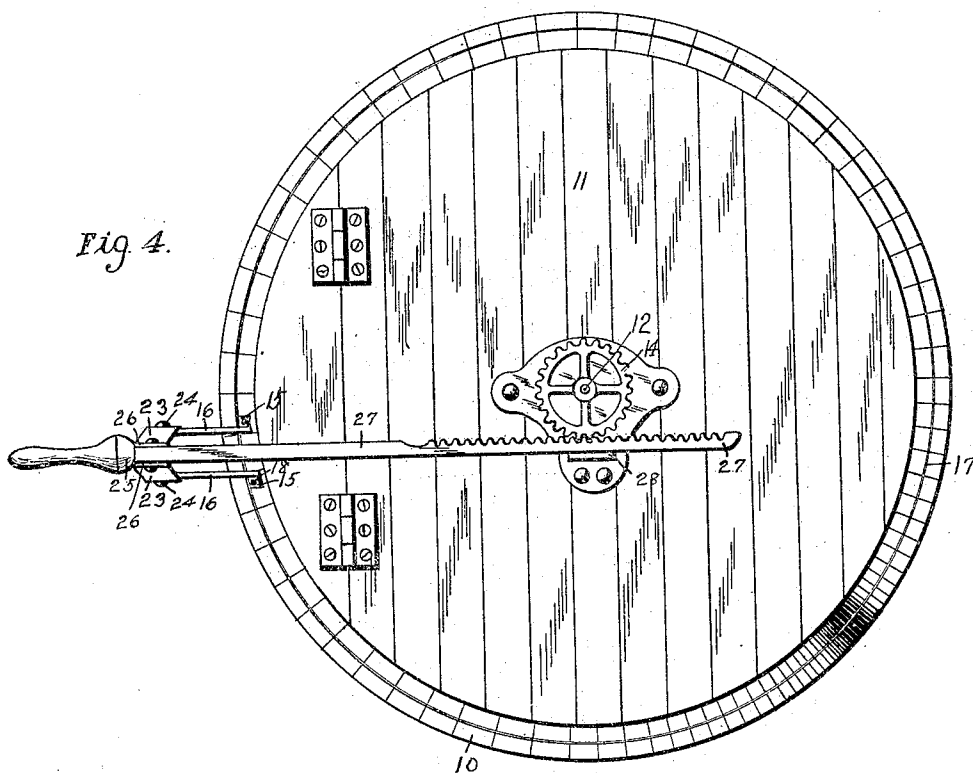


Fig. 4.

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UNITED STATES PATENT OFFICE.

BERT ARVENE STOCKING AND HIRAM MENDENHALL, OF AUDUBON, IOWA.

GEARING FOR WASHING-MACHINES.

946,790.

Specification of Letters Patent.

Patented Jan. 18, 1910.

Application filed March 18, 1907. Serial No. 382,965.

To all whom it may concern:

Be it known that we, BERT A. STOCKING and HIRAM MENDENHALL, citizens of the United States, residing at Audubon, in the county of Audubon and State of Iowa, have invented certain new and useful Gearing for Washing-Machines, of which the following is a specification.

The object of our invention is to provide a washing machine of simple, durable and inexpensive construction in which the operating handle is yieldingly held by springs at the center of its movement and when pushed by the operator to either side of the center, the springs will tend to return it and in this way balance the movement so that the operator may, if desired, exert all of his power in moving the operating lever in one direction and permit it to return by spring pressure or he may exert all of his power in the opposite direction and have the operating lever returned.

A further object is to provide means for yieldingly supporting the operating lever in such position that it will serve as a rest for the hinged cover when open.

Our invention consists in the construction of the operating device and in its arrangement and combination with the other parts of the machine, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in our claims and illustrated in the accompanying drawings, in which—

Figure 1 shows a side elevation of a washing machine provided with our improved operating device. Fig. 2 shows a detail, perspective view of the upper part of the lever supporting bracket. Fig. 3 shows a sectional view on the line 3—3 of Fig. 2. Fig. 4 shows a top or plan view of the complete machine embodying our invention. Fig. 5 shows a detail side view of a portion of the washing machine body with our improved operating device connected therewith, and Fig. 6 shows a perspective view of the sliding block for supporting the operating springs.

Referring to the accompanying drawings, we have used the reference numeral 10 to indicate the washing machine body, 11 the hinged cover thereof, 12 the agitator shaft, and 13 the agitator. On top of the agitator shaft is a pinion 14 and all of these parts are of the ordinary construction. Mounted upon one side of the machine adjacent to the

hinged edge of the cover is a bracket 15 having parallel arms 16 projecting outwardly from it and extended vertically. This bracket is held in place by means of a rod 17 passed around the machine body and fixed to the bracket. It is also supported by screws 18 passed through the bracket into the machine body. At the top of the bracket is an extension 19 having a vertical slot therein provided with a lateral extension 21 and the rear of the extension is formed with a recess 22 to receive the end of a bolt which may be passed through the slot portion 21 and then upwardly in the top of the slot with the head of the bolt resting in the recess 22.

The operating lever comprises a forked lower end 23 connected by the fulcrum pin 24 with the bracket members 16. Above the forked lower end is a handle socket 25 to which a lug 26 is connected. This lug is designed to support the rack bar 27 which is held in mesh with the pinion 14 by the guide 28.

The spring supporting bolt is indicated by the numeral 29 and is provided with a head 30. Its body portion is curved in the form of a segment and the head is placed in the recess 22 and the body portion of the bolt extends outwardly through the lower portion of the bolt of the operating lever and extends downwardly and terminates at a point between the part 16 of the brackets. In this way the free end of said bolt is protected. The lower portion of this bolt is screw-threaded and a spring adjusting nut 31 is placed thereon.

32 indicates a pivoted cross piece mounted between the forked lower end of the operating lever and provided with an opening 33 through which the rod 29 is extended. An extensible coil spring 34 is placed on the rod 29 between one side of the block 32 and the extension 19 of the bracket and a similar spring 35 is placed on the rod 29 to engage the opposite side of the block 32 and the nut 31. In practical use, these springs, by opposing each other, normally hold the operating lever in about the position shown in Fig. 1, and when the cover is opened it will rest upon and be supported by said operating lever. Assuming that the cover is in its closed position and that it is desired to operate the agitator, the operator grasps the handle and reciprocates it, thus imparting a rotary reciprocating motion to the agitator.

When the operating lever moves toward the tub, the spring 34 will be compressed and power will be stored in it to return the operating lever and when the operating lever moves away from the tub, power will be stored away in the spring 35. The curvature of the rod 29 is substantially concentric with the fulcrum point of the lever, therefore, the block 32 will slide on the rod 29 and the springs will be alternately compressed by the operating lever. By this means the operator may, if desired, push the lever in either direction and allow it to return by spring power and an even and regular movement will be imparted to the agitator substantially equivalent to the motion that would be imparted by the use of a balance-wheel. The operator may adjust the tension of both springs in equal amounts by manipulation of the nut 31.

Having thus described our invention, what we claim and desire to secure by Letters Patent of the United States therefor is:—

1. A gearing for washing machines, comprising a lever, a rod slidingly connected with the lever, extensible coil springs mounted on the rod on opposite sides of the lever to engage the lever and yieldingly hold it toward the center of its movement, a driven shaft and means connected with the lever for operating the driven shaft.

2. A gearing for washing machines, comprising a lever, a curved rod fixed in position substantially concentric with the fulcrum of the lever, two extensible coil springs on the rod on opposite sides of the lever and in engagement with the lever for yieldingly holding the lever to its center of movement, a driven shaft, and means connected with the lever for imparting an alternating, rotary motion to the driven shaft.

3. A gearing for washing machines, comprising a lever, a curved rod fixed in position substantially concentric with the fulcrum of the lever, two extensible coil springs on the rod on opposite sides of the lever and in engagement with the lever for yieldingly holding the lever to its center of movement, a driven shaft, and means connected with the lever for imparting an alternating, rotary motion to the driven shaft, and a nut adjustably mounted on the rod to regulate the tension of the springs.

4. In a device of the class described, the combination of a support, a bracket fixed to the support, a curved rod detachably fixed to the bracket, a lever fulcrumed to the

bracket, a cross piece pivoted to the lever and having said rod passed through it, two extensible coil springs mounted on the rod on opposite sides of the cross piece, and an adjusting nut mounted on the rod to engage the outer end of the outer spring.

5. A gearing for washing machines and the like, comprising a lever, a driven shaft, means for connecting them to impart an alternating, rotary motion to the driven shaft, and a spring device operatively connected with the lever for normally returning it to the central portion of its path of movement when released.

6. A gearing for washing machines comprising a bracket having two parallel arms projecting outwardly from it, an extension on the top of the bracket formed with an L-shaped slot and a recess in the rear of the slot, a curved rod in said slot having a bolt head thereon in said recess, a forked lever fulcrumed to the said bracket, a cross piece pivoted to the forked lever and having an opening therein through which the said rod is passed, two extensible coil springs mounted on the rod, their adjacent ends being in engagement with the cross piece, the inner end of the inner spring being in engagement with the extension on the bracket and an adjusting nut on the rod to engage the outer end of the outer spring.

7. In a device of the class described, an upright shaft, a lever, means interposed between the shaft and lever for imparting an alternating rotary motion to the shaft by means of a reciprocating motion as applied to the lever, and opposed springs operatively connected with the lever, said springs tending to return the lever to normal position when moved to either limit of its stroke.

8. In a device of the class described, an upright shaft, a lever, means interposed between the shaft and lever for imparting an alternating rotary motion to the shaft by means of a reciprocating motion as applied to the lever, and opposed springs operatively connected with the lever, said springs tending to return the lever to normal position when moved to either limit of its stroke, and means for adjusting the tension of said springs.

Des Moines, Iowa, February 23, 1907.

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