J. J. STRAUB.
Washing-Machine.

No. 202,887. Patented April 23, 1878.

Fig. 1

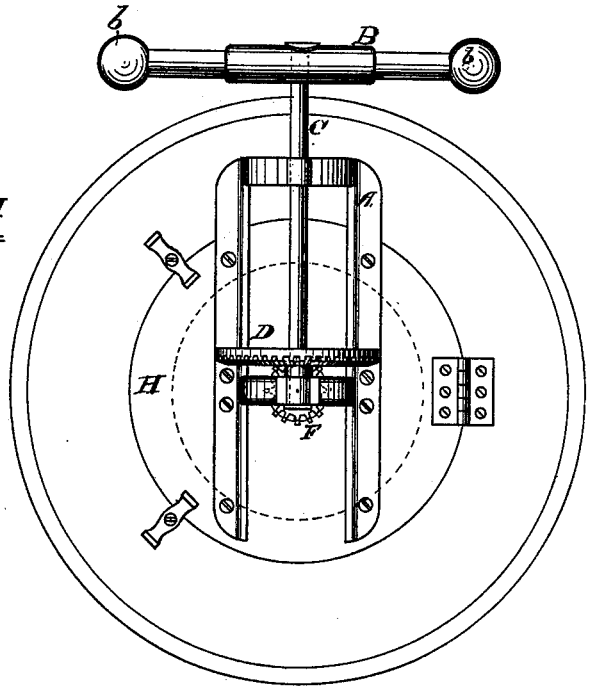


Fig. 2

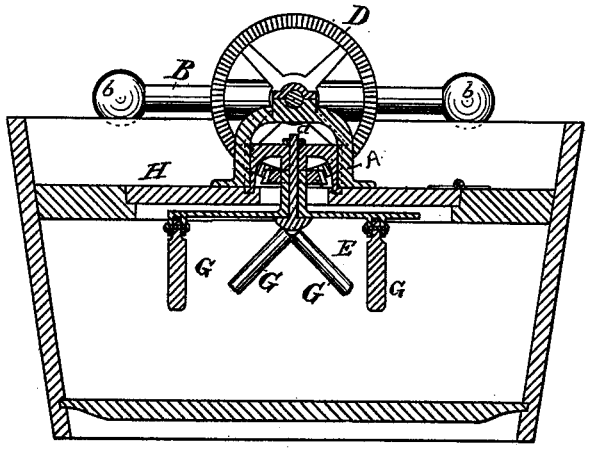
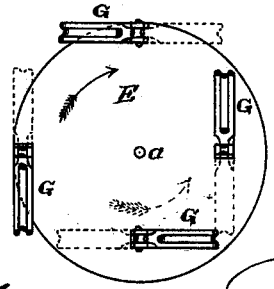


Fig. 3



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UNITED STATES PATENT OFFICE.

JACOB J. STRAUB, OF CEDARBURG, WISCONSIN.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **202,887**, dated April 23, 1878; application filed August 13, 1877.

To all whom it may concern:

Be it known that I, JACOB J. STRAUB, of Cedarburg, in the county of Ozaukee and State of Wisconsin, have invented certain new and useful Improvements in Clothes-Washing Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention consists in providing a wash-tub with a closely-fitting cover, having an opening about sixteen inches in diameter, to which is hinged another closely-fitting cover, below which is hung a disk of galvanized metal, attached, by means of a vertical spindle, to suitable gearing mounted on the top side of the cover, to revolve the disk back and forth alternately in opposite directions by means of the weighted brakes attached to the outer end of a horizontal shaft, to the opposite end of which shaft is keyed a beveled wheel of suitable proportion to the pinion to cause the disk to make one or more revolutions while the brake describes but part of a revolution. Thus, by means of the rectangular grooved arms, which are hinged to the bottom side of the metal disk, the water and clothes are kept in constant agitation, the clothes being turned over or whirled around each time the motion is reversed by means of the arms, which are hinged at different distances from the center, in order to produce the result above described.

In the accompanying drawings, Figure 1 is a plan of the machine embodying my invention. Fig. 2 is a vertical transverse section. Fig. 3 is a view of the lower side of the disk, showing the position of the rectangular grooved arms when the disk is being revolved in the direction indicated by the arrows. Thus the full lines indicate the position when the disk is being revolved in the direction indicated by the dark arrow, and the dotted lines show the position of the arms when the disk is revolved in the direction indicated by the light arrow.

A is the frame of the machine, which should be substantially constructed to resist the vibration of the operating parts. B is a brake, by which the machine is operated, and is hung on the horizontal shaft C, on the opposite end of which shaft is keyed the beveled wheel D, which imparts motion to the disk E by means of the pinion F and the vertical spindle *a*.

G G G G are rectangular grooved arms, hinged to the disk E eccentrically to each other, so that when the disk is turned around each arm will describe a circle having a different radius from all the others. By this arrangement the clothes will be turned over or wheeled around each time that the motion of the disk is reversed.

b b are metal balls attached to the ends of the brake B, which, by their momentum, add greatly to the ease with which the machine is operated. H is a closely-fitting cover, to which the frame A is attached.

To operate the machine, after the clothes, together with the water and cleansing material, are deposited in the tub, the operator may take hold of the opposite ends of the brake, near the weights *b b*, and by bearing down, first on one end, then on the other, the proper motion will be imparted to the disk, and the clothes will be washed in a very short time, and with but a small outlay of labor.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The disk E, in combination with the hinged rectangular grooved arms G G G G and vertical spindle *a*, substantially as and for the purpose specified.

2. In a washing-machine, the combination of the frame A, cover H, shaft C, provided with brake B, gear D, pinion F, disk E, hinged rectangular grooved arms G, and spindle *a*, all constructed, arranged, and operating in the manner and for the purpose substantially as herein specified.

In testimony whereof I have hereunto affixed my signature this 26th day of April, 1877, in presence of two witnesses.

JACOB J. STRAUB.

Witnesses:

WILLIAM VOGENITZ,

J. W. JOHANN.