R. G. BALDWIN & A. J. PARKHURST.

WASHING-MACHINE.

No. 190,804. Patented May 15, 1877.

Fig. 1.

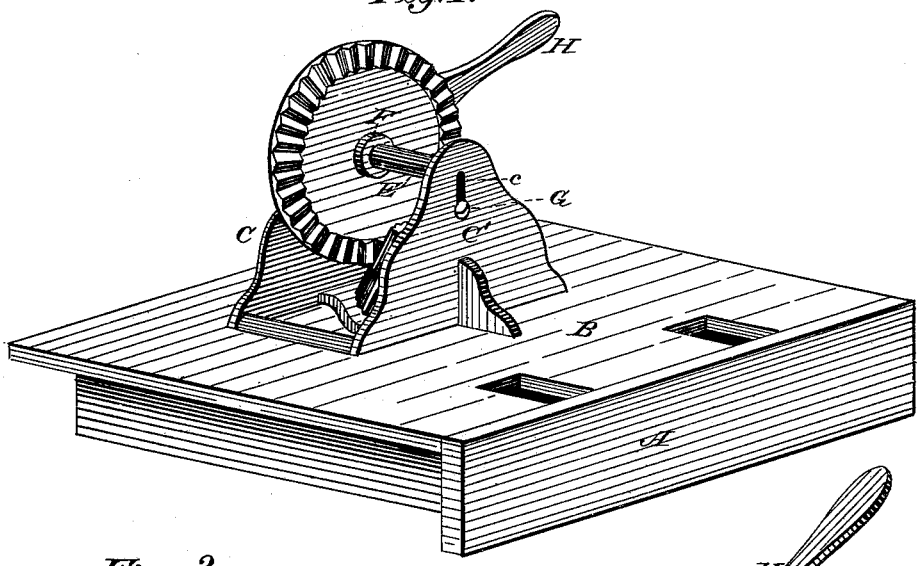
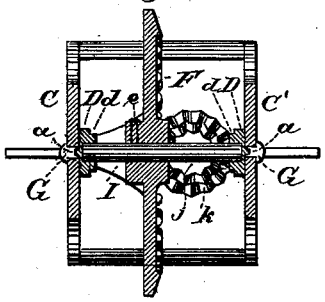


Fig. 3.



Fig's. 4.

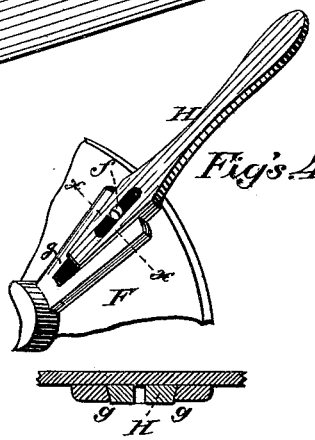


Fig. 2.

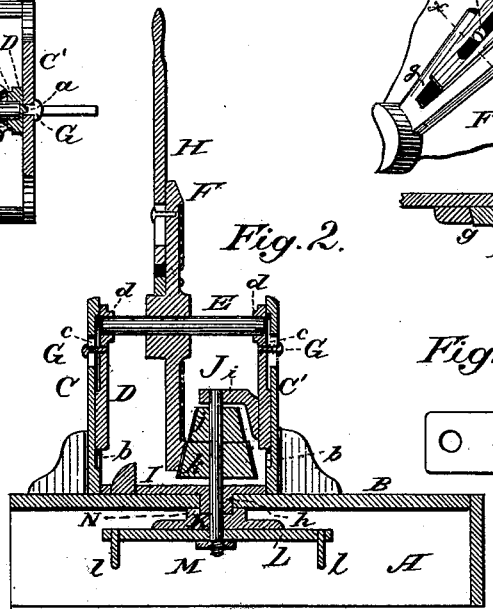


Fig. 5.

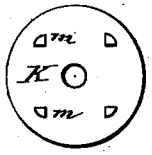
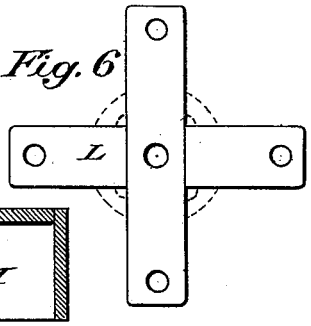


Fig. 6



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UNITED STATES PATENT OFFICE.

RANSON G. BALDWIN AND ANDREW J. PARKHURST, OF OSKALOOSA, IOWA; SAID BALDWIN ASSIGNOR TO SAID PARKHURST.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **190,804**, dated May 15, 1877; application filed March 17, 1877.

To all whom it may concern:

Be it known that we, RANSON G. BALDWIN and ANDREW J. PARKHURST, of Oskaloosa, in the county of Mahaska and State of Iowa, have invented certain new and useful Improvements in Washing-Machines; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view. Fig. 2 is a vertical section. Fig. 3 is a cross-section; and Figs. 4, 5, and 6 are detail views of parts of the machine.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to that class of washing-machines in which a vertical shaft journaled in the lid or cover of the box or tub which forms the body of the machine is provided at its lower end with a horizontal disk or frame having downward-projecting pegs, which, when the shaft and disk are oscillated or rotated, carry the articles previously placed in tub around, rubbing them against each other, and thus performing the washing; and it consists, essentially, in an improved construction and combination of the operating parts, whereby the speed of the oscillating disk may be increased or diminished at will, all as hereinafter more fully shown and described.

In the drawing, A is the box or tub which forms the body of our machine. Upon the lid thereof, B, are secured two standards, C C′, having each a vertical slot, *c*. D D are two metal slides, having boxes *d d*, which form the journals or bearings for a horizontal shaft, E, which carries the cog drive-wheel F. The slides D have guide-strips *a*, which fit into corresponding grooves *b* in the inner sides of standards C C′. G G are set-screws passing through slots *c c*, and fitting into screw-threaded recesses in slides D, which may thus, together with the shaft E, for which they form the bearings, be readily adjusted at any height within the limits of the slots *c*. The cog-wheel F is adjustable laterally upon shaft E by a set-screw, *e*, which passes through the hub of the wheel, and secures it in position by pressing against the shaft; and it is operated by a lever, H, which is also adjustable by a set-screw, *f*, in contracted dovetailed grooves *g* in or upon the face of the cog-wheel, the advantage of this being, that when the lever becomes loose by wear or shrinkage, it may readily be fastened by simply loosening set-screw *f*, forcing the lever farther into the contracted grooves *g*, and refastening the set-screw.

I is a casting secured upon lid B between standards C C′, and having a downward-projecting perforated collar, *h*, which passes through the lid, and forms one of the bearings for the vertical shaft J, the other bearing for which is formed by a bracket, *i*, extending from the side of standard C′. This shaft J has above lid B two conical pinions, *j k*, of different size, one above the other, and both cut so as to gear with the cog-wheel F, which, by the means already described, may be adjusted so as to engage with either. Instead of only two, three or more pinions of different sizes may, of course, be employed, and the number of revolutions of shaft J to each revolution of cog-wheel F may in this manner be easily changed to suit the convenience of the operator. K is a circular disk, having an annular rim or collar, N, which fits around that part of collar *h* of casting I which projects below lid B. The disk itself is keyed to shaft J, with which it revolves. L is a cross-frame, having four or more downward-projecting pegs, *l l*. This frame fits between four downward-projecting lugs, *m m*, upon disk K, and a nut, M, prevents it from coming off shaft J. The nut M may be made of wood, or, if made of iron, it may be covered by a wooden or galvanized-metal cap, in order to protect the clothes from rust.

The operation of our improved washing-machine will be readily understood from the foregoing description, and by reference to the drawings hereto annexed. After placing the clothes in the box or tub, and placing the cover B, with its attachments, in position, the drive-wheel F is adjusted so as to cause the shaft J to rotate at any desired speed. The drive-wheel is then oscillated by the lever or handle H, thus giving a similar but faster mo-

tion to the disk K and cross-frame L, the downward-projecting pegs of which latter will catch the clothing in the tub and carry it round, rubbing the several articles against each other, and cleaning each thoroughly. The method herein described of connecting disk K and frame L to each other and to shaft J enables them to be easily and quickly taken apart for drying or other purposes. The collar M of disk K serves to prevent the clothing from being caught in the bearing of shaft J, where it would be torn to pieces. The general construction of our machine is economical and simple, and it is easily operated.

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

1. The combination of the standards C C′, having slots *c c*, slides D D, adjustable by thumb-screws G, shaft E, having its bearings in slides D D, drive-wheel F, adjustable upon shaft E, and vertical shaft J, having two or more conical pinions, *j k*, of different sizes, all combined and operating substantially in the manner and for the purpose herein shown and specified.

2. The improved washing-machine herein described, consisting, essentially, of the tub A, cover B, standards C C′, vertically-adjustable shaft E, having laterally-adjustable cog-wheel F, casting I, having collar *h*, shaft J, having two or more pinions, *j k*, disk K, having collar N and lugs *m m*, and cross-frame L, having pegs *l l*, all combined, arranged, and operating substantially in the manner and for the purpose herein shown and specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

RANSON G. BALDWIN.
ANDREW J. PARKHURST.

Witnesses to the signature of Baldwin:
J. L. DOWNING,
A. M. JOHNSON.

Witnesses to the signature of Parkhurst:
R. G. BALDWIN,
W. F. MARK.