

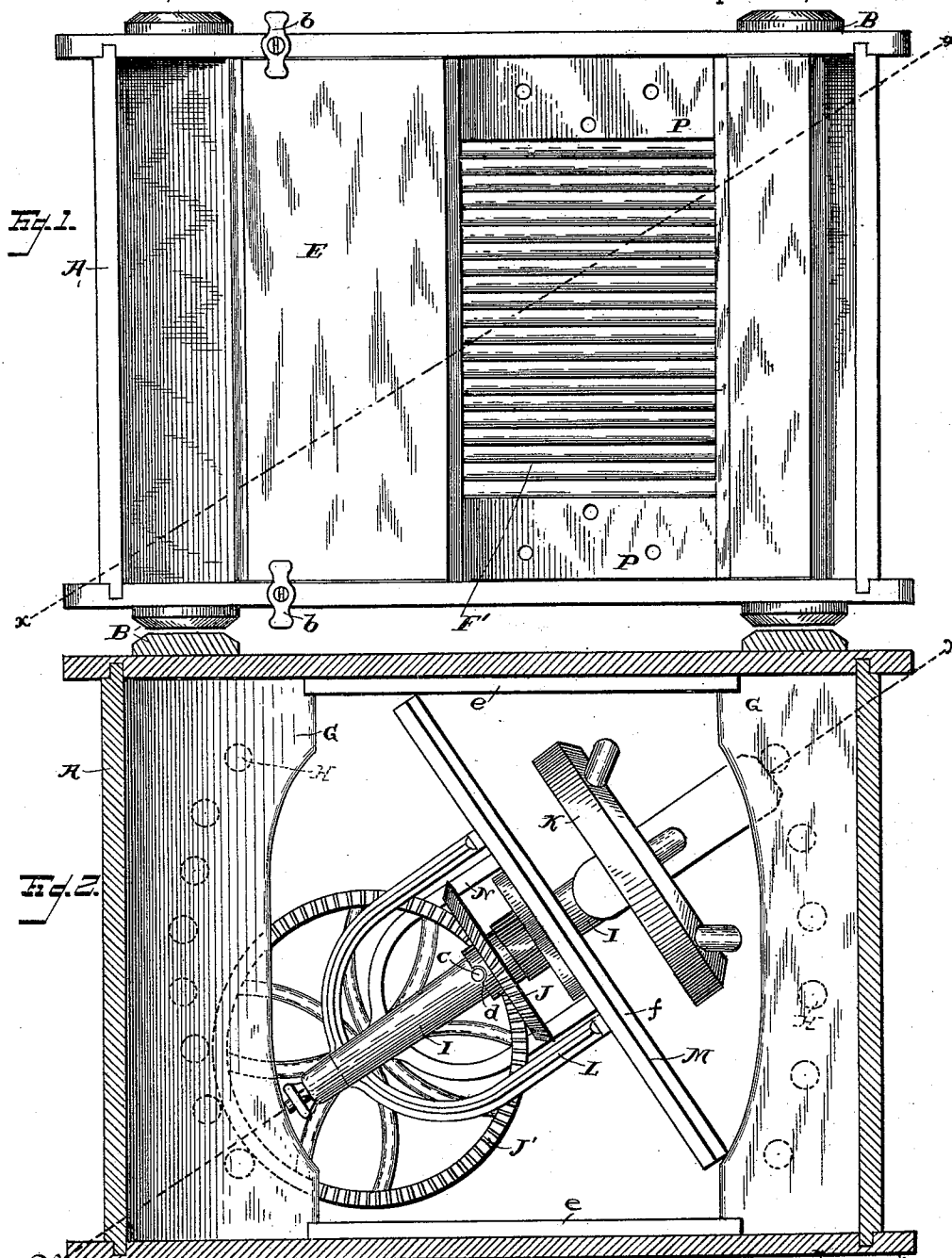
(No Model.)

2 Sheets—Sheet 1.

G. V. BLACKSTONE.
WASHING MACHINE.

No. 472,979.

Patented Apr. 19, 1892.



Witnesses
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Alfred V. Gage.

Inventor
George V. Blackstone
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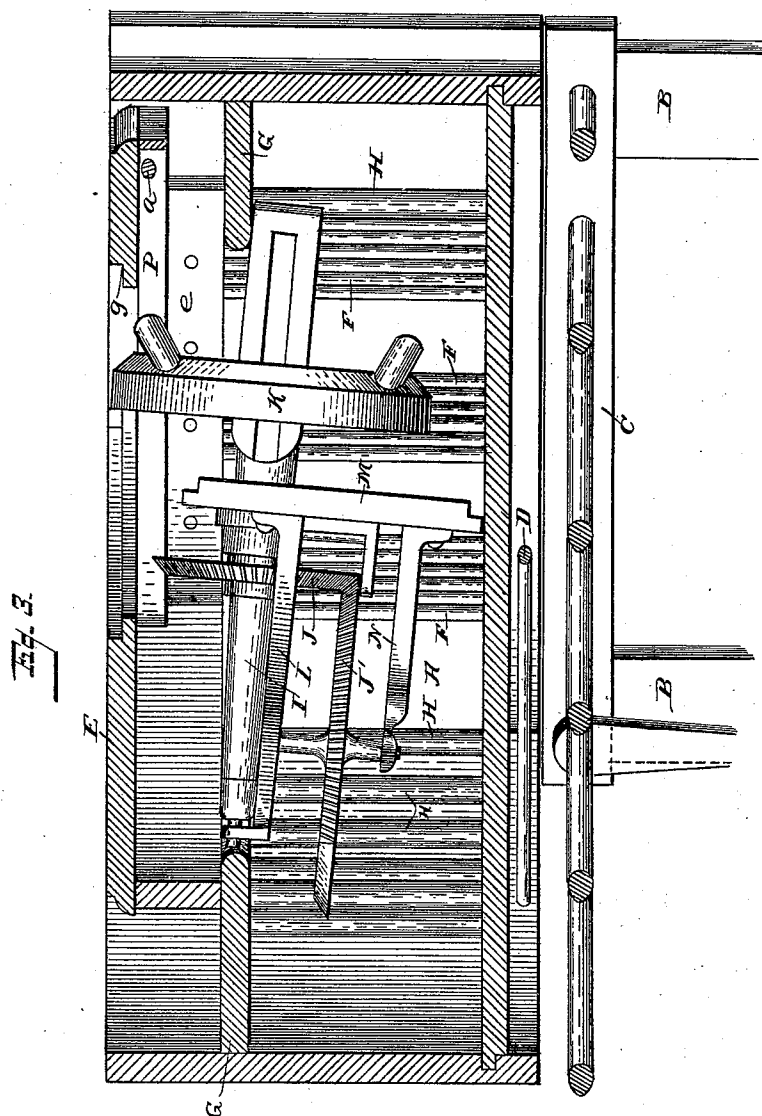
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WASHING MACHINE.

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Witnesses

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Alfred S. Gage.

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UNITED STATES PATENT OFFICE.

GEORGE V. BLACKSTONE, OF JAMESTOWN, NEW YORK.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 472,979, dated April 19, 1892.

Application filed March 14, 1891. Serial No. 385,068. (No model.)

To all whom it may concern:

Be it known that I, GEORGE V. BLACKSTONE, a citizen of the United States, residing at Jamestown, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Washing-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention has reference to washing-machines, and has for its object to construct the parts so that the operating-gear can all be inclosed within the box or body of the machine in operating condition without detaching any of its elements and so that it will be held within the box or body without movement therein. This enables the parts to be securely packed for transportation, so as to save space and at the same time guard against injury either from the parts slipping about in the box, or by reason of exposure outside of the box. Heretofore it has been most usual to attach the operating-gear to the top of the machine, especially in the class of washers to which this invention has most particular reference, in working order, and then to crate the operating-gear so as to protect the same from injury. This was found satisfactory and convenient; but the railroad companies now refuse to transport them at first-class rates, by reason whereof it has become the practice to dismember the operating parts and pack the separate castings with suitable packing material within the box or body. This, however, not only adds to the expense, but subjects the parts to possible injury and loss. A further difficulty thus incurred and one that results in serious injury to the merits of the machine is that most purchasers do not know how to put the parts together properly, and as a consequence the machine does not work satisfactorily, and then the operator charges that the machine is imperfect and unsatisfactory in its operation and results.

This invention seeks to enable the parts to be put together in operative condition at the factory and to be packed for transportation

within the box or body without liability to injury, or to injuriously move about while so packed, and in the condition to be placed in operative position on the top of the machine by the most unskillful person, whereby all the objections and difficulties hereinbefore noted are overcome.

To the accomplishment of the foregoing the invention consists in the construction and combination of parts hereinafter particularly described and claimed, reference being had to the accompanying drawings, forming part hereof, in which—

Figure 1 is a plan of the machine with the operating-gear removed. Fig. 2 is a horizontal section of the machine with the top removed, showing the operating gear or mechanism as it lies within the box during transportation. Fig. 3 is a vertical cross-section through the box or body on the lines *xx*, Figs. 1 and 2, with the top in place and showing in full lines a side view of the operating gear or mechanism in its locked position within the box or body.

In the drawings, the letter A designates the box or body of the machine, B the legs, C a sliding rack, and D a rod along which it slides under the box or body, which said several parts are not claimed in this application and therefore not shown in detail.

The top of the box or body is provided with a cover or lid E, hinged, as shown, at *a*, and when closed held so by the buttons *b*. Within the box or body are the flutes or corrugated side boards F and the corrugated bottom F' and also the horizontal end boards G, from which extend down to the bottom of the box the rounds H. Beads or strips *e* are preferably used and placed along the inside faces of the sides of the box or body near its upper edge, as illustrated.

The operating gear or mechanism, as illustrated, consists of the rotatable shaft I, carrying the beveled gear J, held to the shaft by the pin *c*, fitting in the recess *d* in the collar of the gear, as shown in Fig. 2, and also carrying at its lower end the rubber K, which is free to slide up and down on the shaft in a manner well known in the art and forming no part of this invention. The upper end of the rotatable shaft bears in the upper end of a standard L, secured to the panel or board M,

and a second bevel-gear J' meshes with the bevel J and is journaled at right angles to the gear J at one end in the standard L and at the other end in the standard N, also secured to the panel M.

I provide the top or lid E with the removable board or panel M, whose longitudinal edges are preferably rabbeted or undercut, as illustrated at *f* in Fig. 2, so as to fit to corresponding rabbets in the parts of the lid or cover adjacent to such panel, as illustrated at *g* in Fig. 3. The ends of this panel rest upon the side pieces P of the cover, and the panel is removably secured by suitable means—for instance, by means of screws—to the side pieces P of the cover. This panel is made of such dimensions that when placed within the box or body upon its longitudinal edge, as illustrated in Figs. 2 and 3, its ends will bear against interior portions of the box or body, so that when the lid or cover is closed down the panel and several parts connected therewith will be held securely in place. The width of this panel, also, is such that the rubber attached to the panel can be inserted in operative position within the box or body and removed therefrom through the opening made in the top or lid by the removal of the panel M. This panel carries the operating-gear and its rubber, as illustrated, so that as the panel is removed or put in place the operating-gear and its rubber are carried along with it. It will be observed that the rotatable shaft I passes through the panel M at a point that brings the rubber K in position central to the interior of the body of the machine when the gear is in operating position.

In packing for transportation the lower end of the rubber shaft is inserted under the board G at the end next to where the lid or cover is hinged, while the large gear J' bears against the rounds under the corresponding board at the other end of the body, preferably in the position clearly seen in Fig. 3. This, it will be observed, brings the rubber in the

opening in the lid or cover, so that the lid may be closed down, as illustrated in Fig. 3, the parts at the same time being held against movement by bearing against the points mentioned and illustrated. The parts so constructed and applied are thus securely held in place within the body against movement, and being inclosed are protected against injury of every sort. Less space is also occupied than when they are crated on the outside of the box, and the operating-gear being retained in all its operative connections the parts are set up ready for actual use by even the most unskillful.

I have illustrated and described what I consider to be the best arrangement of parts to accomplish the objects in view, but without any intention of restricting the invention to particular details of construction in the several parts, and will now endeavor to indicate the scope of the invention to be protected by the following claim.

Having described my invention and set forth its merits, what I claim is—

In a washing-machine, the combination, with the box or body thereof, of a cover or lid therefor formed with an opening therein, a removable panel to close said opening and adapted when removed to fit inside of said box, and a rubber and operating-gear carried by said panel, said rubber and gear being of such proportions that they, together with the panel, may be inclosed within the box or body without disconnecting the gear and rubber from the panel, and the rubber being of such proportions that it may be passed through the opening in the lid, substantially as and for the purposes set forth.

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

GEORGE V. BLACKSTONE.

Witnesses:

JAMES I. FOWLER,
JAMES L. WEEKS.