

L. HOLDERMAN.
Washing-Machines.

No. 145,946.

Patented Dec. 30, 1873.

Fig. 1.

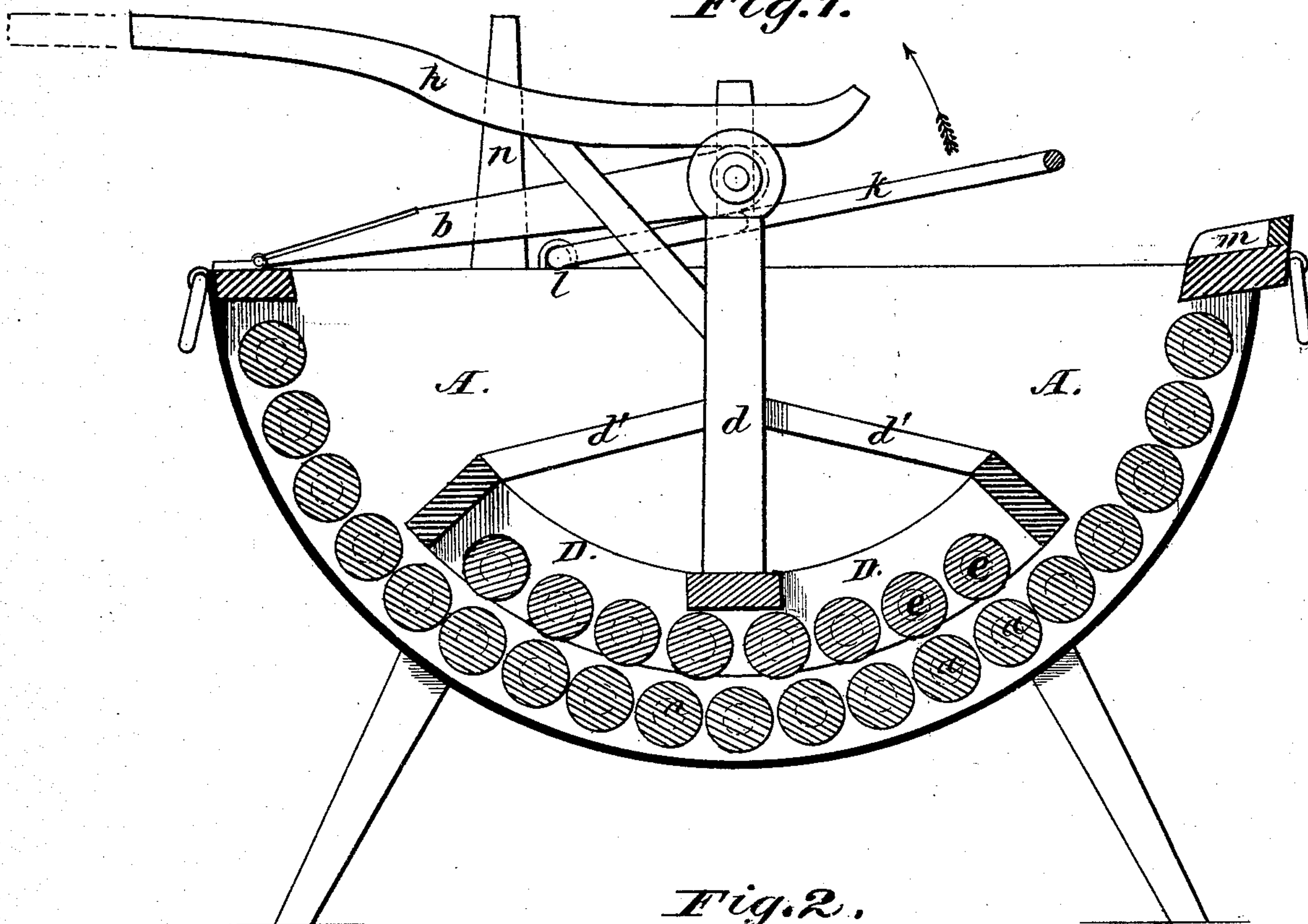
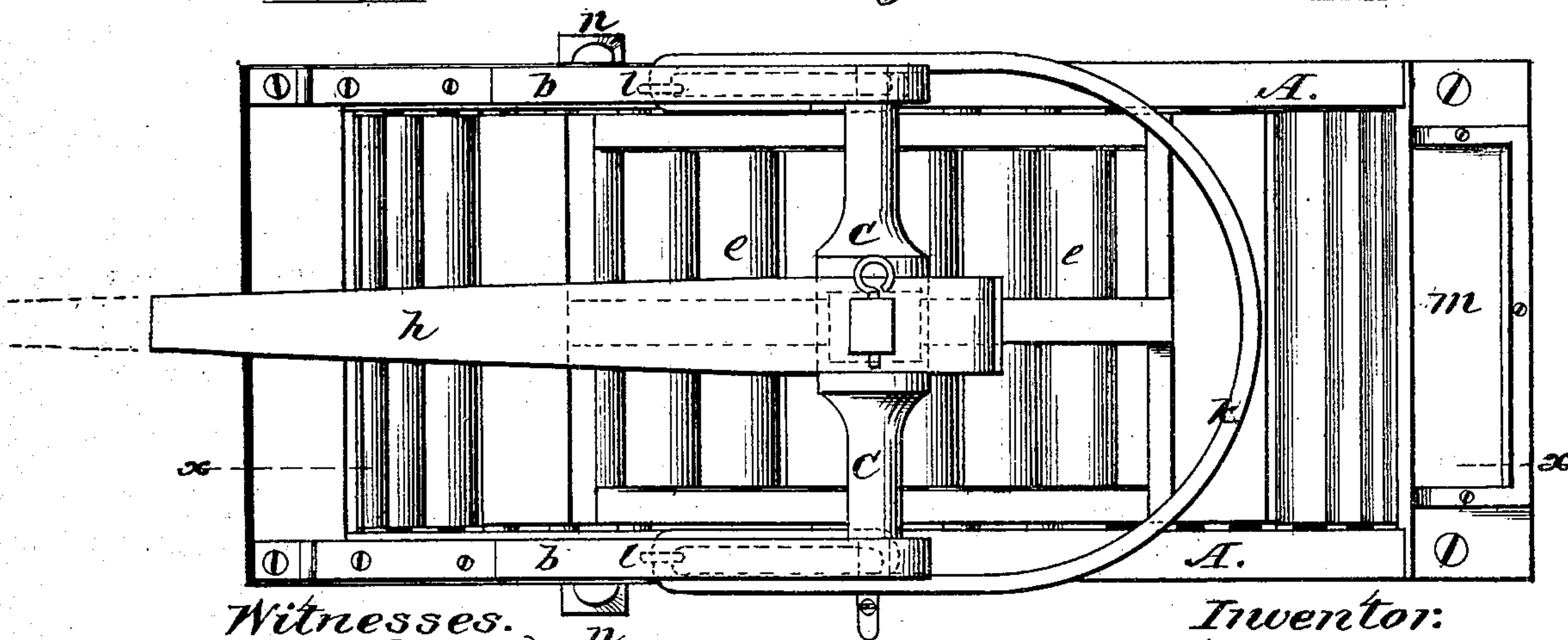


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

LEVI HOLDERMAN, OF NEW PARIS, INDIANA.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **145,946**, dated December 30, 1873; application filed July 11, 1873.

To all whom it may concern:

Be it known that I, LEVI HOLDERMAN, of New Paris, in the county of Elkhart and State of Indiana, have invented an Improved Washing-Machine, of which the following is a specification:

This invention consists in the machine and various parts hereinafter described and claimed.

In the drawings, Figure 1 is a vertical section of this improved machine through line *x x* of Fig. 2. Fig. 2 is a top-plan view of the same.

The tub or vessel *A* is constructed with its two sides parallel and its bottom curved and extended upward, so as to reach to the rim. The line of the curve of the bottom is that of an arc of a circle. In close proximity to the bottom a series of rollers, *a a*, are arranged closely together, whose axes turn in journals formed in the sides in a line whose curve is parallel to that of the bottom. To the rim of each side, and near one of its extremities, an arm, *b*, is hinged, which extends midway of the side, and is arranged with proper journals to receive the horizontal rocking shaft *c*. To shaft *c* a shaft, *d*, is rigidly attached, in such wise that it hangs and swings within the tub. It carries and forms part of a dasher, *D*, which is securely attached and braced to it. This dasher or washer *D* is composed of a frame arranged to move easily back and forth within the tub *A*. Its two ends are formed of solid pieces of wood, and its sides, of similar material, are formed so that their lower faces shall be convex and correspond with the curvature of the line of rollers *a a*. Rollers *e e e* are arranged in a series within this washer or dasher *D*, so that when brought into contact with rollers *a a* the lines of their curves will correspond, and when in that position, which is the one shown in Fig. 1, the common center of the circle of the two curves will be that of the rock-shaft *c*. They project slightly below their containing-frame, and when the dasher is swung back and forth in the position shown in Fig. 1, they will roll upon the series *a a* through the entire extent of movement. To the shafts *c* and *d* a lever, *h*, is secured, by the aid of

which the machine can be operated with little exertion. *k* is a gage, hinged at *l l'* to the sides of the tub. (Shown more clearly in Fig. 2.) It is made of wire or rod-iron, with its ends so bent up as to form shoulders, which, when the gage is elevated, act upon the under faces of the arms *b b*, for the purpose of elevating the dasher and adjusting it to any desired height above the lower series of rollers *a a*. The loop shape of this gage allows the dasher to be swung back through and clear of it, when it is elevated to allow the articles to be washed to be placed within the tub. When swung back it follows the direction of the arrow in Fig. 1. *m* is a compartment for soap, &c. *n n* are guides for the arms *b b*. A spigot is placed at the lowest part of the vessel to draw off the water.

When it is desired to make use of the machine, the dasher can be thrown back, as above indicated, when the washing material and articles to be washed can be placed within the recess *A* without obstruction. If a few articles only are to be washed, or if it is desired to scrub the articles thoroughly, the dasher is allowed to descend to its farthest extent, and the lever *h* is given an up-and-down movement and the machine thus operated, the dasher swinging back and forth over the articles, and causing them to be rubbed between the two series of rollers. The rotary movement of these rollers will prevent wear and tear to the articles undergoing washing. If such close contact is not desired, the dasher can be adjusted to the proper height by means of the gage *k*.

I claim as my invention—

In a washing-machine having a circular bottom and radial dasher, the combination of the hinged arms *b b* with rock-shaft *c* and gage-lever *k*, for the purpose specified.

To the above specification of my invention I have signed my name this 7th day of July, A. D. 1873.

LEVI HOLDERMAN.

Witnesses:

ELI HOLDERMAN,
GEORGE HOLDERMAN.