(No Model.)

H. CALKINS.

WASHING MACHINE.

No. 273,346. Patented Mar. 6, 1883

Fig. 1

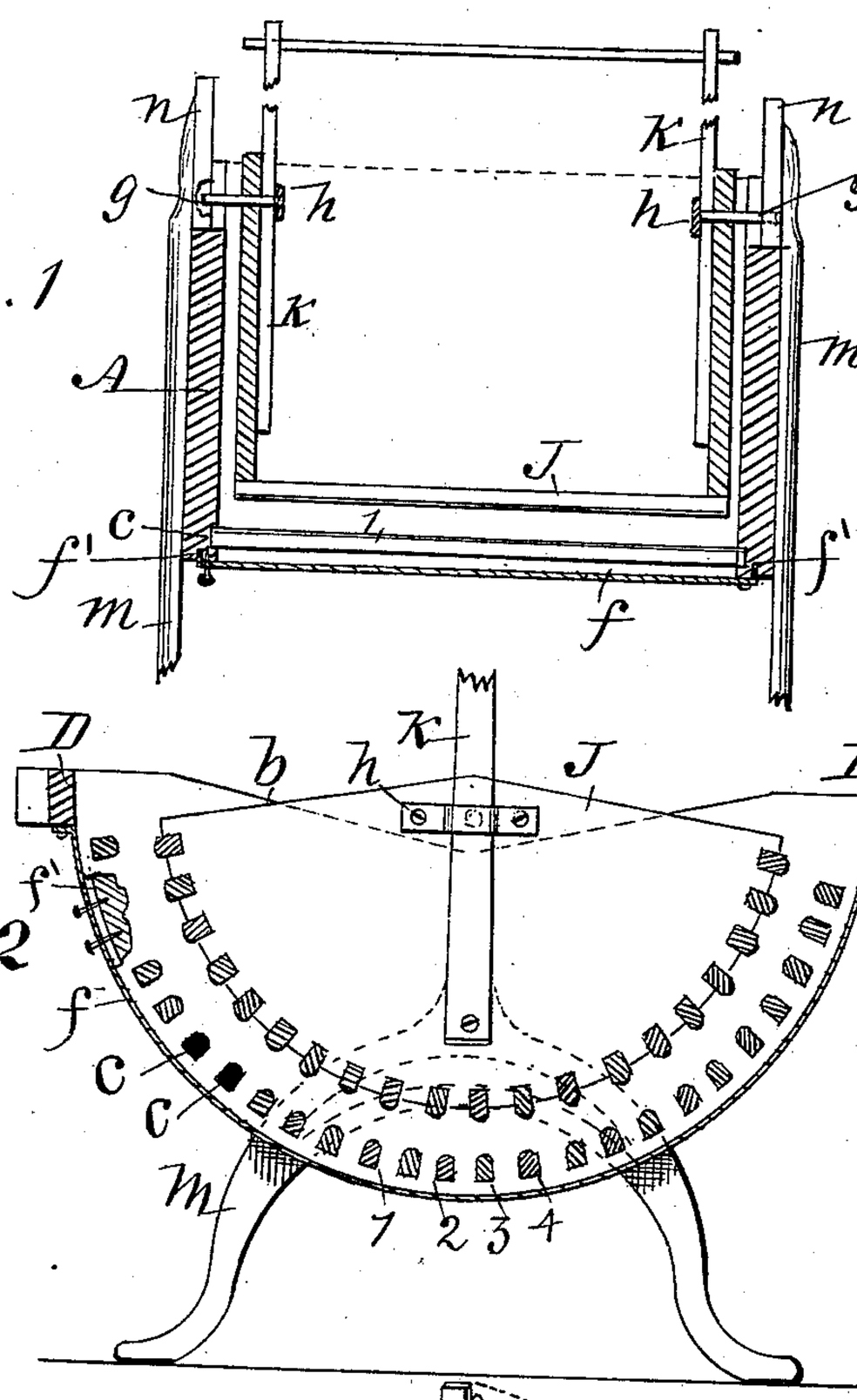


Fig. 2

Fig. 4

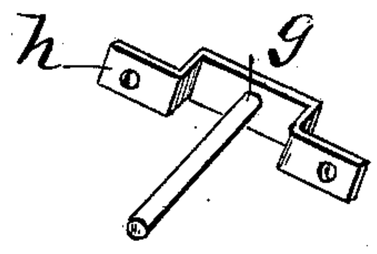
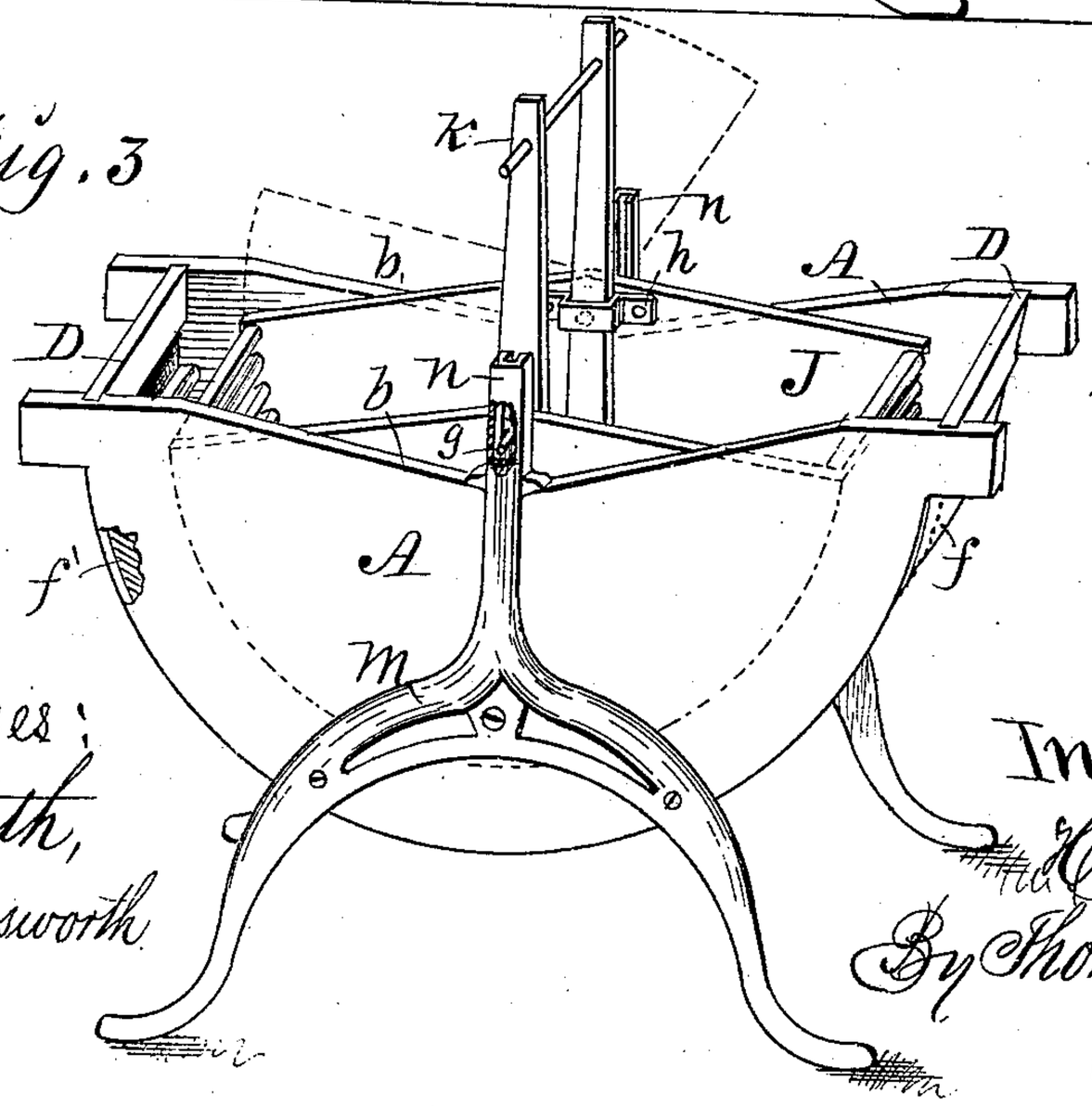


Fig. 3



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UNITED STATES PATENT OFFICE.

HENRY CALKINS, OF VINTON, IOWA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 273,346, dated March 6, 1883.

Application filed May 29, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY CALKINS, of Vinton, in the county of Benton and State of Iowa, have invented an Improved Washing-Machine, of which the following is a specification.

My invention relates to that class of machines in which a convex rubber is operated upon the concave bottom of a tub; and it consists in the combination of the parts, as will be hereinafter set forth, and pointed out in the claims.

Figure 1 of the accompanying drawings is a transverse section of my machine. Fig. 2 is a longitudinal section. Fig. 3 is a perspective view. Fig. 4 is a perspective view of my combined journal and handle-fastening clasp. Together these figures clearly illustrate the construction and operation of my complete invention.

A A are the semicircular sides of a box-form tub. Each has a depression or concave, *b*, formed in its top edge to adapt it to receive a metal journal-bearing that will extend upward and not down into the tub to be effected by water, or to come into contact with clothing, to mark and damage fabrics with rust, as frequently occurs in the use of metal journal-bearings.

1 2 3 4 represent a series of slats that extend into a corresponding series of gains, *c*, formed in the wooden sides A, about one-fourth of an inch from their semicircular edges. When the sides A are rigidly connected by means of wooden end pieces, D, and a sheet-metal bottom the series of slats, fitted into the gains *c*, will be immovably fixed without driving nails through into their ends and through the sides A to damage the wood, as often results from nailing slats fast; and a wash-board surface thus formed will not come in contact with the sheet-metal bottom to damage the bottom by imparting force that is frequently applied to the slats by pressing a rubbing device upon the clothing placed upon the slats. Sediment that gathers upon the sheet-metal bottom can also be readily washed off and prevented from lodging between the slats and the metal to become an annoyance in using the machine and damaging to the durability of the machine.

f is a sheet-metal bottom. It has flanges *f'*, formed on its parallel edges, and a row of perforations at the side of each flange in such a manner that the flanges can be readily pressed into the semicircular edges of the wooden sides A, and the complete sheet-metal bottom then nailed fast to make durable water-tight joints. The bending of the edges of the metal at right angles prevents warping, and embedding them in the wood prevents crevices and leaking—such as frequently results when the metal is nailed flat upon the flat edges of the wood.

g (shown clearly in Fig. 3) is one of my journals or gudgeons, having a loop, *h*, formed integral therewith, to adapt it to be combined with a detachable convex rubber, J, as shown in Figs. 1 and 2, in such a manner as to aid in securing the handle *k* firmly to the inside surfaces of the wooden sides of the rubber.

m m are metal castings, in the form of distended legs, adapted to be fixed flat against the outsides of the semicircular sides of the tub by means of common screws, to re-enforce the wooden sides to prevent them from warping and splitting, and to support the tub and complete machine in an upright and elevated position when in use.

n n are journal-bearings formed integral with the top ends of the legs *m* in such a manner that the laterally-extended lower ends of the bearings will form a shoulder adapted to fit flat upon the top edges of the wooden sides A. Open slots in the inside faces of the bearings thus formed, and connected with the legs and sides of the tub, admit the ends of the journals *g* to pass downward therein, and to rise and fall, as required, to make the rubber J self-adjusting relative to the clothing on the concave wash-board surface of the tub, so that it will be in concentric position thereto while operated by means of the handles, to rub and cleanse the clothing spread evenly over the elevated series of slats that compose the wash-board surface of the tub.

I claim as my invention—

1. In a washing machine, the combination of the wooden sides A, having concaves *b* in their top edges, the metal castings *m*, having journal-bearings *n*, and the rubber J, having gudgeons *g*, adapted to slide in the bearings *n* in the manner and for the purpose specified.

2. The loops *h*, having gudgeons *g* extending inward from their centers, in combination with the perforated handles *k* and the sides of the rubber J, substantially as shown and described, for the specific purpose stated.

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Witnesses:

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