No. 696,562. Patented Apr. 1, 1902.

J. R. HARTMAN.

WASHING MACHINE.

(Application filed Apr. 17, 1901.)

(No Model.)

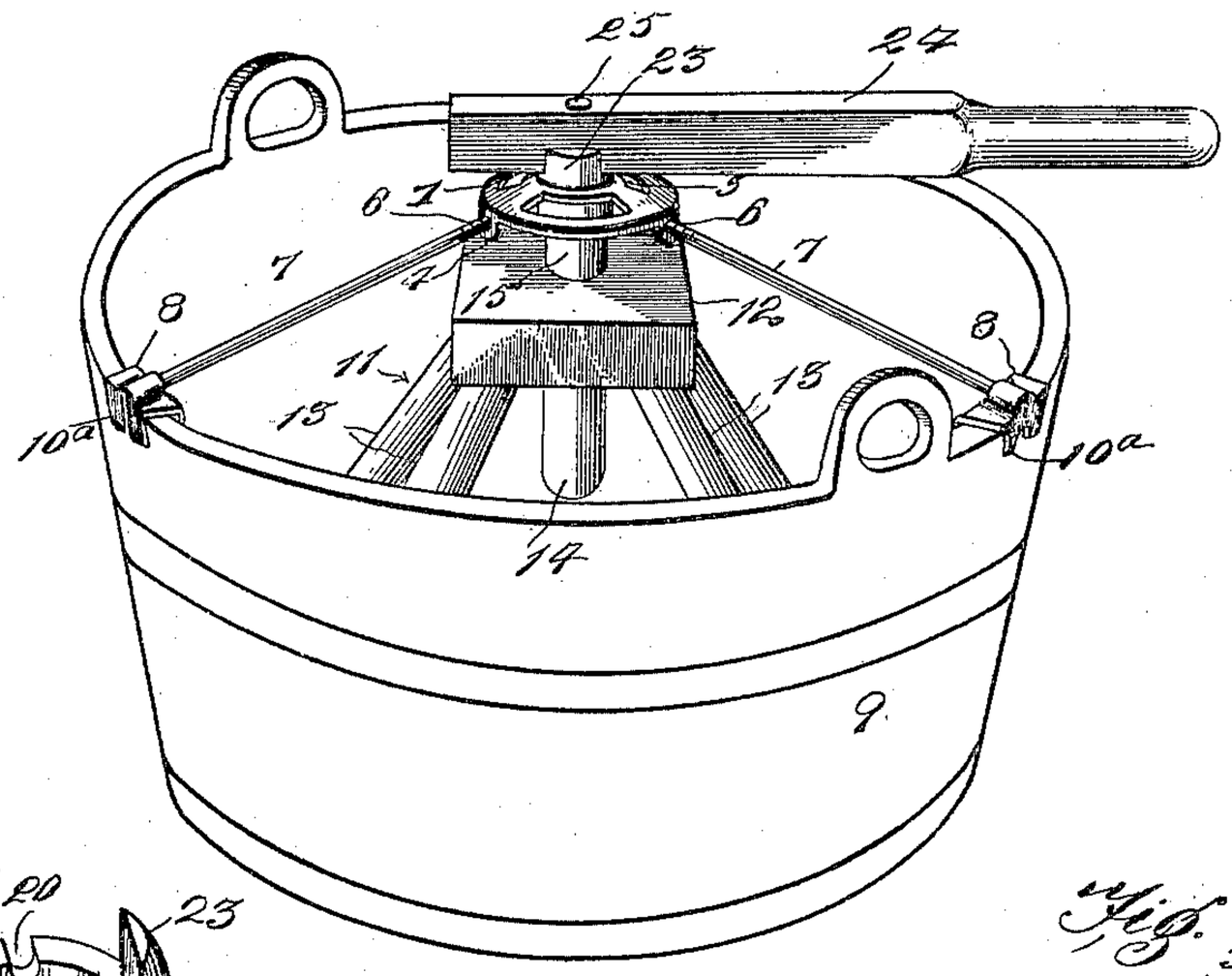


Fig. 1.

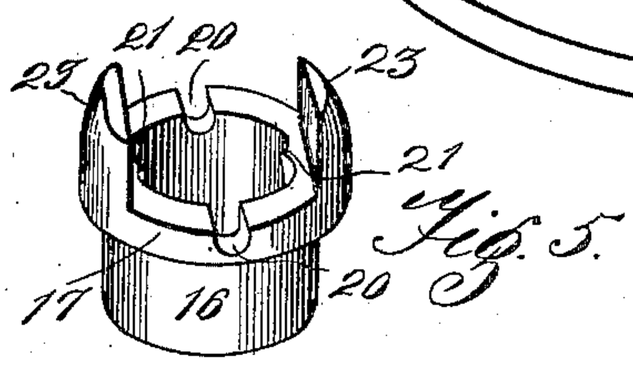
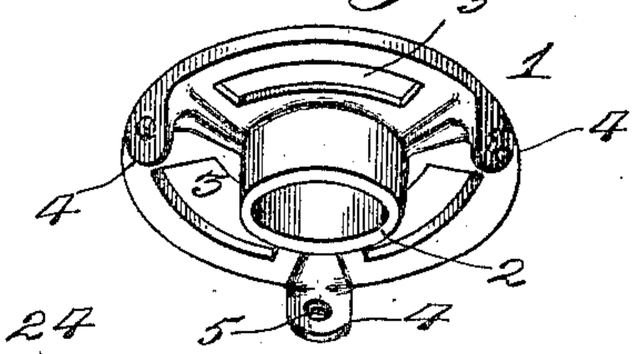


Fig. 5.

Fig. 4.



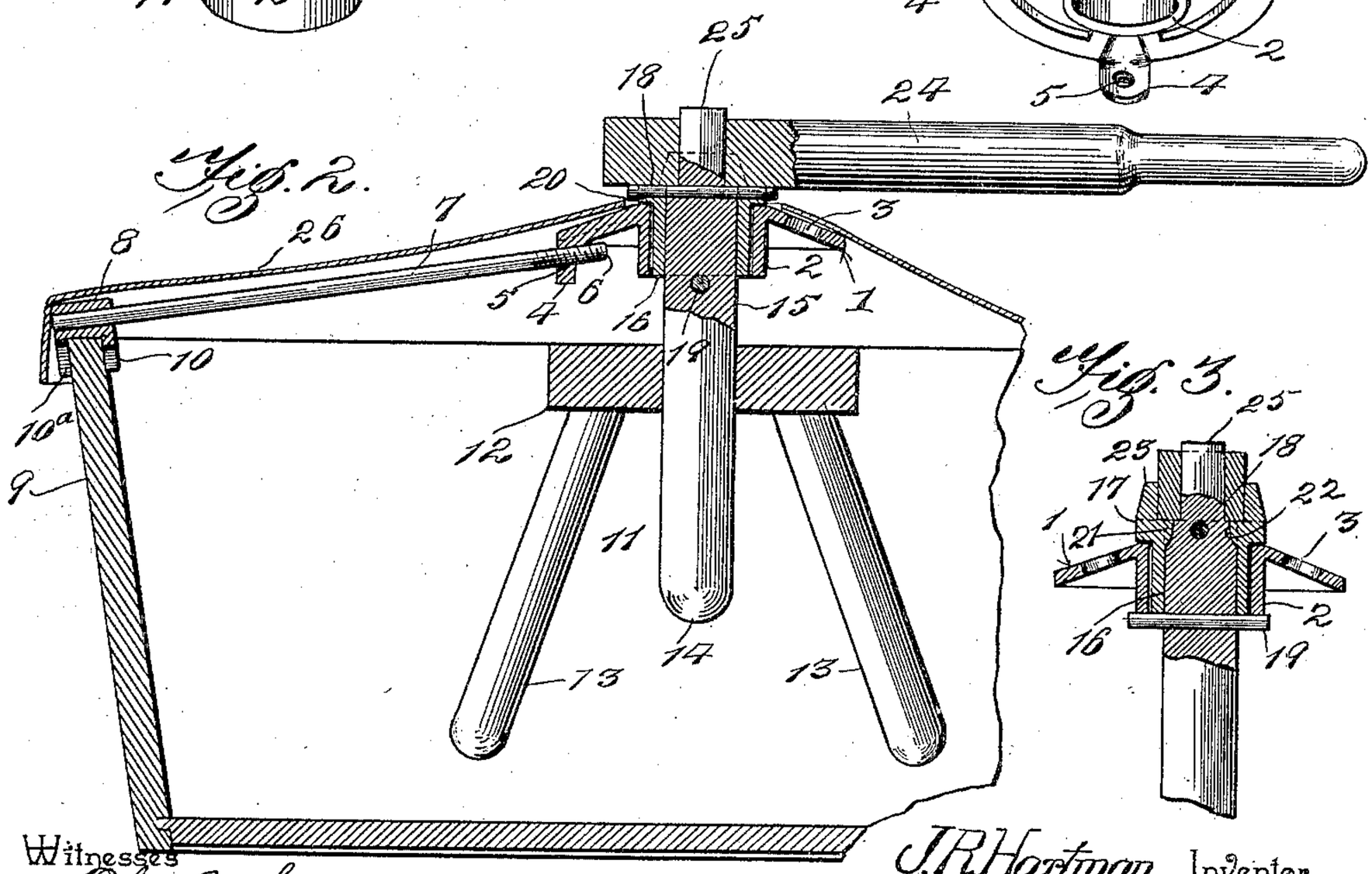


Fig. 2.

Fig. 3.

Witnesses
Olive M. Simpson
T. J. Piley

J. R. Hartman Inventor
By Church & Co.
Attorneys

UNITED STATES PATENT OFFICE.

JOHN R. HARTMAN, OF DAVENPORT, IOWA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 696,562, dated April 1, 1902.

Application filed April 17, 1901. Serial No. 56,291. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. HARTMAN, a citizen of the United States, residing at Davenport, in the county of Scott and State of Iowa, have invented a new and useful Washing-Machine, of which the following is a specification.

The invention relates to improvements in washing-machines.

The object of the present invention is to improve the construction of washing-machines and to provide a simple and inexpensive device adapted to be quickly mounted on an ordinary washtub without altering the construction thereof and capable of rapidly and thoroughly washing clothes at the expenditure of a minimum amount of labor and without injuring the fabrics.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a device constructed in accordance with this invention and shown applied to a washtub, the cover being removed. Fig. 2 is a vertical sectional view. Fig. 3 is a detail sectional view taken at right angles to Fig. 2. Fig. 4 is a detail perspective view of the central circular bearing-plate. Fig. 5 is a detail view of the sleeve.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a central circular bearing-plate provided with a central bearing-opening and having a depending annular flange 2 arranged at the said bearing-opening to form a continuation of the bearing-surface, and the said bearing-plate, which may be of any desired configuration, is preferably concavo-convex and is preferably provided with openings 3 to lighten the construction. The bearing-plate is provided with depending lugs 4, located at the periphery of the plate and provided with threaded openings 5 for the reception of inner threaded ends 6 of rods 7, which are provided at their outer ends with clamps 8 for engaging the upper edges of a washtub 9. The rods, which are radially arranged, are preferably three in number; but more may be employed, if desired, and they may be constructed of any suitable material, preferably metal. These rods, which are disposed at an inclination, are capable of adjustment by screwing them into and out of the threaded openings of the lugs 4, and the clamps 8, which are provided with rigid jaws or flanges 10 and 10^a, are adapted to bind against the inner and outer faces of the washtub, and they effectually prevent the bearing-plate and the washing mechanism, hereinafter explained, from becoming accidentally displaced during the operation of washing. The clamps, which are adapted to grip the washtub sufficiently to enable the latter to be lifted by grasping the bearing-plate, are provided at their plates or body portions with openings for the reception of the outer ends of the rods 7, and they may be welded or otherwise secured to the same. The clamps are also held against longitudinal movement; but they may be quickly disengaged from the tub by lifting them individually therefrom.

The central plate forms a bearing for an agitator 11, consisting of a head 12 and pins 13 and 14, extending downward from the head and adapted to engage the clothes or other fabrics to be washed. The head is preferably rectangular, and the pins 13 extend downward at an inclination from the corners thereof. The centrally-arranged pin 14 extends through a central perforation of the head and is suitably secured to the same and is formed integral with a vertical stem 15, as clearly shown in Fig. 2 of the accompanying drawings. The vertical stem 15 is provided with a metal bearing-sleeve 16, arranged within the bearing-opening of the plate 1 and provided at its top with an enlargement 17, forming a shoulder, which rests upon the upper face of the bearing-plate. The stem is secured to the sleeve 16 by means of upper and lower transverse pins or keys 18 and 19. The lower pin or key 19 extends through the stem at a point below the annular flange 2, and it is arranged at the lower edge of the sleeve 16, as clearly shown in Fig. 3. The upper pin or key 18 passes through the stem at the top of the sleeve 16, which is provided with opposite recesses 20, arranged to receive the said pin or key 18. The sleeve is also provided on its interior with inwardly-project-

ing lugs 21, which are tapered and which engage corresponding notches 22 of the stem. The sleeve 16 is also provided with upwardly-extending flanges 23, forming a recess or seat between them for the reception of a handle 24, which is provided with a perforation for the reception of a reduced portion 25 of the stem 15. The handle is detachably mounted on the stem and is rigidly connected with the same by means of the said sleeve 16, and it is adapted to be oscillated to partially rotate the agitator.

The lever is readily removable and is adapted to be detached without taking the rest of the mechanism from the washtub to permit a flexible cover 26, of oil-cloth or other suitable material, to be arranged on the tub for the purpose of retaining the heat and steam in the same during the operation of washing. The flexible covering is provided with a central aperture to receive the upper portion of the stem and the top of the sleeve.

It will be seen that the apparatus is exceedingly simple and inexpensive in construction, that it is adapted to be readily mounted on any ordinary washtub, and that it is capable of being readily adjusted to move the clamps inward and outward to arrange them in proper position for engaging a tub. It will also be apparent that the clamps are capable of firmly gripping a tub, that after they have been once adjusted to the size of the tub they may be readily engaged therewith and disengaged therefrom without manipulating clamping-screws or analogous fastening devices, and that they will be firmly held against movement in any direction during the operation of the washing-machine.

What I claim is—

1. A device of the class described comprising a central bearing, washing mechanism mounted thereon, and the rods extending radially from and adjustably connected with the central bearing and provided at their outer ends with rigid clamps arranged to engage the upper edges of a washtub, substantially as described.

2. A device of the class described comprising a central bearing having threaded apertures, washing mechanism mounted on the central bearing, and the rods provided at their outer ends with clamps having fixed inner and outer jaws, said rods being threaded at their inner ends to engage the apertures of the central bearing, substantially as described.

3. A device of the class described comprising a tub, a central bearing, rods connected with the central bearing and with the tub, an agitator having a stem extending through the bearing, a handle arranged at the upper end of the stem and located above the central bearing, and a flexible cover having a central opening to receive the stem, said cover being supported by the rods and being located between the same and the handle, substantially as described.

4. A device of the class described comprising a central bearing, rods extending from the central bearing and provided with means for engaging the upper edges of a washtub, a sleeve arranged within the bearing and supported by the same and provided at its top with a recess or seat, an agitator having a stem secured to the sleeve and extending upward therefrom, and a handle detachably fitted on the stem and arranged in the seat of the sleeve, substantially as described.

5. A device of the class described comprising a central bearing, means for supporting the same, a sleeve arranged in the bearing and provided with a head resting on the bearing and having upwardly-extending flanges to form a seat, said sleeve being also provided with inwardly-extending lugs, an agitator having a stem secured to the sleeve and provided with recesses to receive the lugs thereof and extending upward from the top of the sleeve, and a handle arranged between the flanges of the sleeve and having an opening to receive the extension of the stem, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN R. HARTMAN.

Witnesses:
H. C. RYAN,
W. A. MCGARVEY.