No. 805,596. PATENTED NOV. 28, 1905.

L. D. THORNBURGH.

WASHING MACHINE.

APPLICATION FILED JUNE 3, 1904.

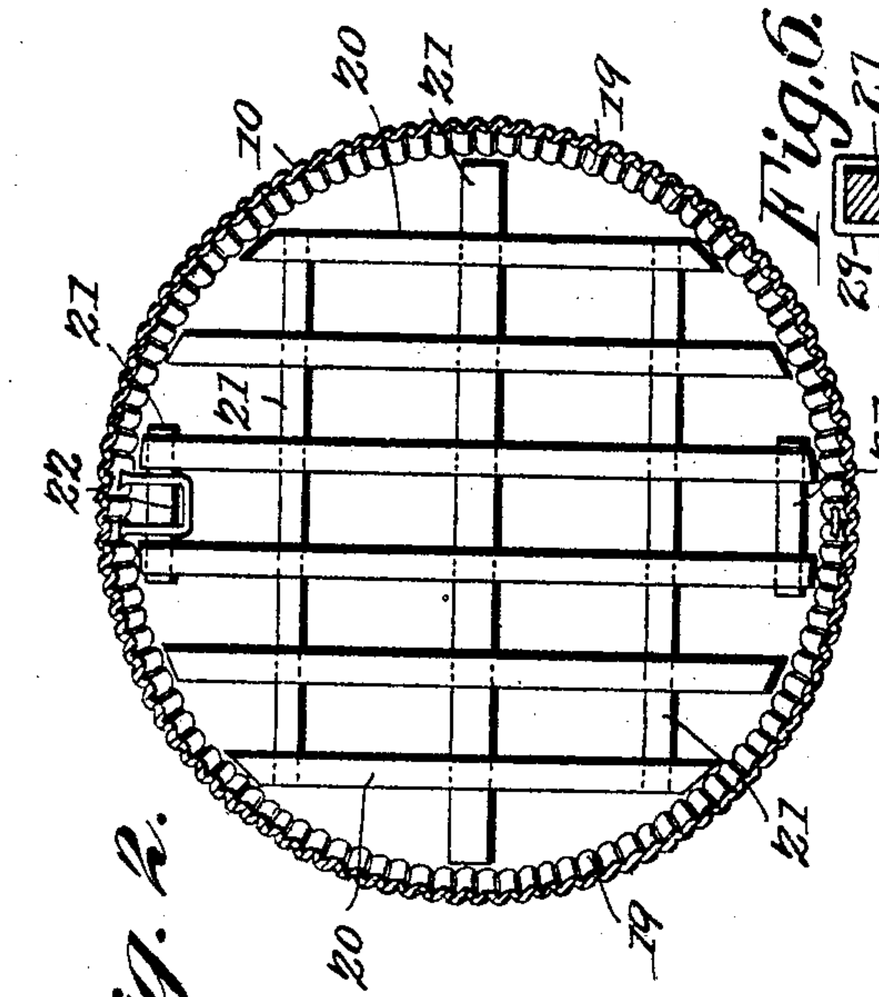

Fig. 2.

Fig. 6.

Fig. 4.

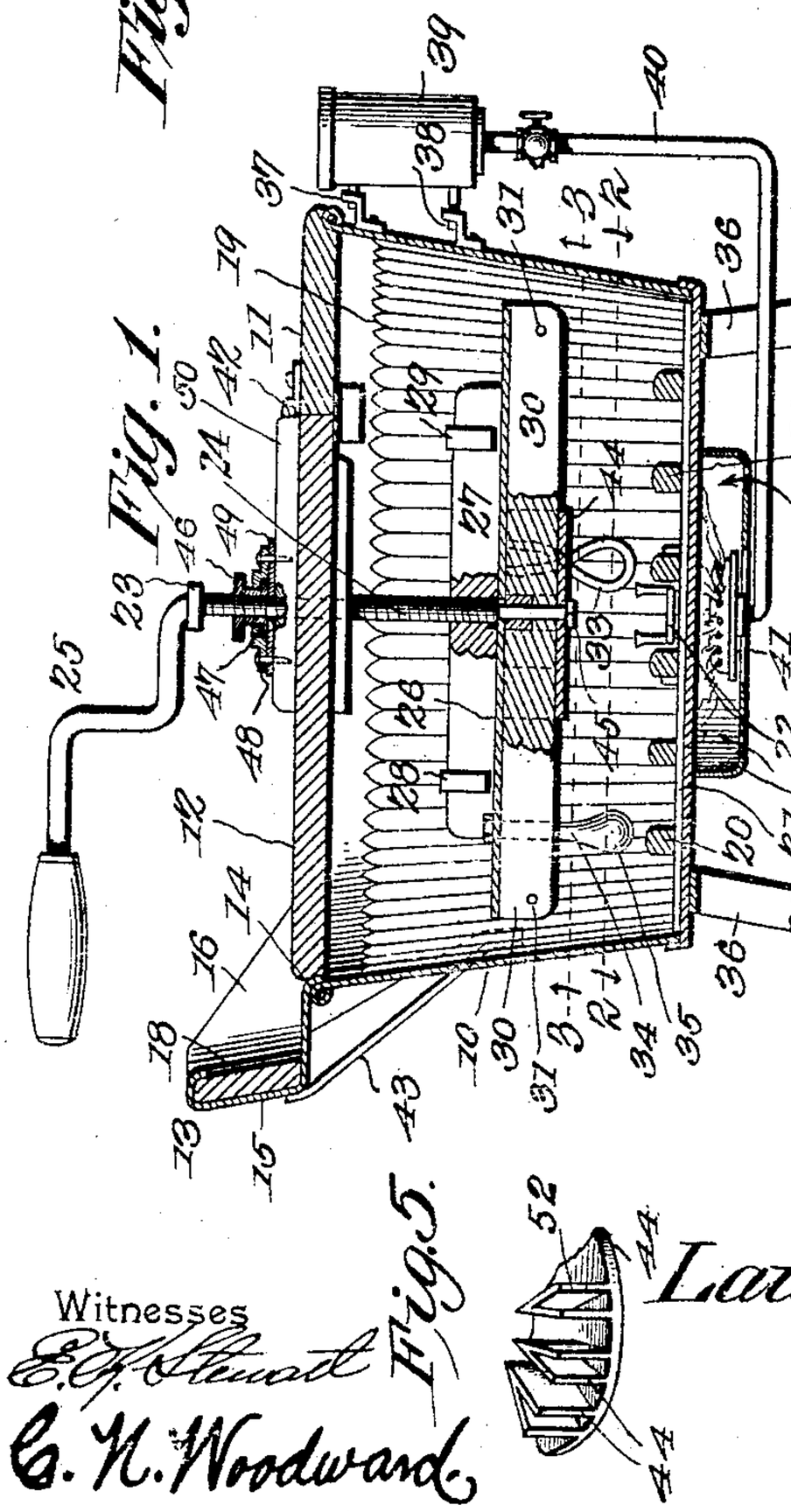

Fig. 1.

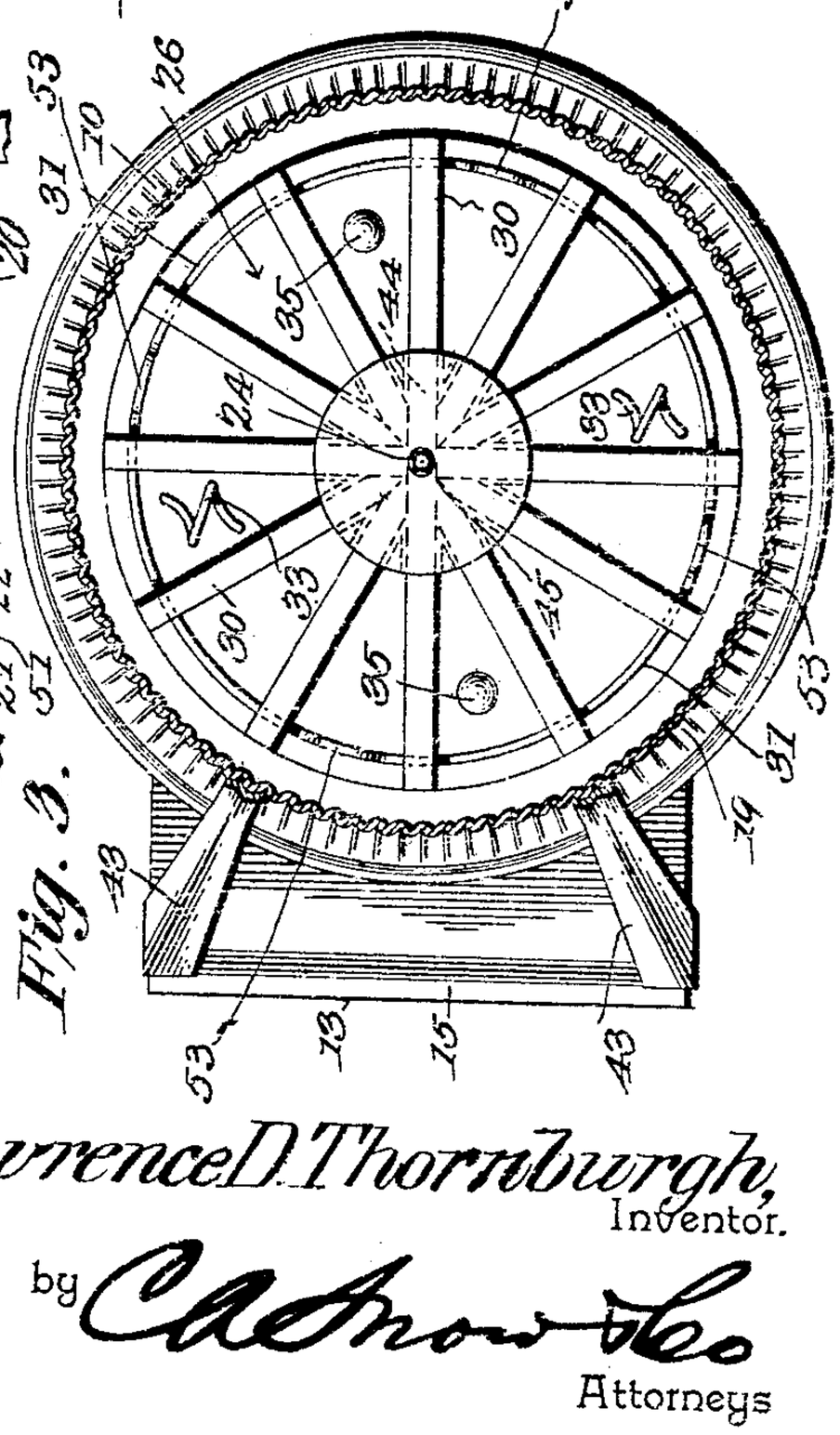

Fig. 3.

Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

LAWRENCE D. THORNBURGH, OF FORREST, OKLAHOMA TERRITORY.

WASHING-MACHINE.

No. 805,596. Specification of Letters Patent. Patented Nov. 28, 1905.

Application filed June 3, 1904. Serial No. 211,002.

To all whom it may concern:

Be it known that I, LAWRENCE D. THORNBURGH, a citizen of the United States, residing at Forrest, in the county of Woods, Oklahoma Territory, have invented a new and useful Washing-Machine, of which the following is a specification.

This invention relates to washing-machines, and has for its object to improve the construction and produce a device of this character efficient in action, easily operated, and by means of which larger garments or articles, such as bedclothing and the like, may be as thoroughly washed as the small garments.

Another object of the invention is to provide means whereby any of the garments requiring it may be disposed in the machine in position to receive additional rubbing or agitation.

Another object of the invention is to provide means whereby the water in the tub or receptacle may be maintained at a uniform temperature.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation, it being understood that the invention is not necessarily limited thereto, as various changes in the shape, proportions, and general assemblage of the parts may be resorted to without departing from the principle of the invention or sacrificing any of the advantages thereof.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of the washing-machine constructed in accordance with my invention. Fig. 2 is a transverse section on the line 2 2 of Fig. 1 looking downward. Fig. 3 is a transverse section on the line 3 3 of Fig. 1 looking upward. Fig. 4 is a plan view. Fig. 5 is a perspective view of a portion of the stay-plate detached. Fig. 6 is a detail transverse sectional view of a portion of the disk, showing one of the supporting-clips mounted thereon.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

The receptacle or tub 10 for the clothes is preferably formed of sheet metal, such as galvanized iron or steel, circular in shape and with sides inclined outwardly and upwardly. The tub will also be preferably mounted upon a support (indicated at 36.) A cover is provided for the tub formed in two parts 11 12, the part 11 being fastened to the tub and the part 12 hinged to the part 11, as at 42. A wringer-bracket 13 is also attached to the rim of the tub opposite the stationary cover portion 11 and formed with a flange 14 extending into the tub a short distance and providing a support for the bracket, the flange being soldered, riveted, or otherwise fastened to the tub. The bracket 13 is further supported by inclined braces 43 connecting it with the outer surface of the tub, and is also provided with an upwardly-extending outer side 15 and end members 16 17, these parts all being of galvanized iron or steel like the body of the tub. The outer side portion 15 is provided with a wooden core 18 to strengthen it and add rigidity to the bracket, and also provide the requisite thickness to receive the wringer-clamps.

The side wall of the tub is provided with spaced vertical inwardly-extending rubbing-ribs 19, preferably formed by pressing the metal inwardly. In the bottom of the tub is a rubbing-grating composed of spaced wooden slats or ribs 20, connected by spaced transverse sheet-metal strips 21, of galvanized iron or steel, said strips being spaced apart in parallel rows, as shown. Extending interiorly of the tub is a catch member 22 for engaging one of the metal strips 21, to prevent the grating being displaced accidentally.

Mounted for rotation through the movable portion 12 of the cover is a shaft 24, having at its outer end an operating crank or handle 25, and connected at its inner end to a disk 26, preferably of galvanized iron or steel. The shaft 24 is threaded longitudinally and is provided with a nut 46, having an annular rib 47 engaged by a clip 48, attached to a plate 49, fast on a cleat 50 on the cover member 12, the shaft being also provided with a stop-collar 23 to limit its downward movement. By this means the shaft 24 is free to reciprocate through the cover member 12, carrying the nut 46 around with it, while at the same time by simply rotating the nut the rubbing member may be adjusted nearer to or farther from the bottom ribs 20, as required. By this means any degree of pressure may be imparted to the clothes in the tub and the severity of the rubbing action controlled. This is a very important feature of the invention and

adds materially to the value and efficiency of the machine. The disk 26 is provided on its upper side with a cleat 27, through which the shaft 24 passes, said cleat being supported at its ends by slips 28 29, connected to the disk 26. The cleat thus performs the twofold function of an additional bearing for the shaft where it is attached to the disk and also strengthens and stiffens the disk.

Attached to the under side of the disk 26 are radiating rubbing-ribs 30, preferably of wood. Attached to the under side of the radiating ribs 30 at their meeting-points is a stay-plate 44, having ribs 52 extending between the rubbing-ribs, as indicated by dotted lines, and provided with a central aperture to receive the lower end of the shaft 24, the latter having a nut 45 to secure the whole together. By this means the disk 26, radiating ribs 30, and stay-plate 14 are all firmly united and supported.

Disposed through transverse apertures in the ribs 30 near their outer ends is a wire ring 31, spaced from the disk and provided with one or more depending loops 53, formed in the wire at intervals between said ribs for supporting garments when their condition requires an extra amount of rubbing, as by this means garments can be attached to the disk by hanging them in the loops 53, and thus partake of its rotative or oscillating motion and be violently rubbed upon the grating in the bottom of the tub and also against the fluted sides of the same. This feature will be found of great advantage in washing clothes having deep-seated stains or soiled to a greater extent than usual.

Depending from the disk 26 at suitable intervals are wire loops 33, between and through which larger articles, such as bedquilts and the like, may be passed to cause them to be carried around with the disk, and thus more thoroughly agitate and rub them. Depending from the disk also, preferably alternately with the loops 33, are rods 34, terminating in knobs 35, which serve to carry the garments around over the rubbing-surfaces and increase the rubbing action.

The disk 26 and its attachments, it will be obvious, folds back with the cover member 12 when the clothes are to be inserted or removed.

Detachably connected, as by spaced hooks 37 38, to the side of the receptacle 10 is a gasolene-tank 39, from which a conductor-pipe 40 leads to a burner 41 beneath the receptacle, by means of which the water in the receptacle may be maintained at a uniform temperature. The tank and attached burner and feed-tube being detachable can be removed when not required. The burner 41 will preferably be inclosed in a casing 51, having suitable vent-apertures, to confine the heat and increase its intensity, and thus economize in the amount of fuel required to produce a given degree of heat.

By this arrangement it will be obvious that a very simply-constructed and efficient washing-machine is provided, which will operate with equal facility upon small or large garments and in which provision is made for so disposing garments which require it that they shall receive increased rubbing action.

Having fully described the invention, what is claimed is—

1. In a washing-machine, a disk mounted for rotation and provided with radiating rubbing-ribs, and an annular rod passing through said ribs near their free ends and formed with a plurality of depending garment-supporting loops.

2. In a washing-machine, a disk mounted for rotation and provided with radiating rubbing-ribs, an annular rod passing through said ribs near their free ends and formed with a plurality of depending garment-supporting loops, an operating-shaft passing transversely through said disk and said rubbing-ribs at their meeting-points, a stay-plate engaging said rubbing-ribs and having V-shaped dividing-lugs extending between the rubbing-ribs, and a clamp-nut on the free end of said shaft bearing against said stay-plate.

3. In a washing-machine, a receptacle for the clothes having spaced rubbing-ribs in the side walls of the same, a vertically-adjustable disk provided with radiating rubbing-ribs mounted for rotation within the receptacle, an annular rod passing through said ribs and provided with a series of depending garment-supporting loops, and a rubbing member detachably supported within said receptacle and formed of spaced rubbing-ribs connected transversely by spaced sheet-metal straps.

4. In a washing-machine, a receptacle for the clothes, a disk having radiating rubbing-ribs, an annular rod passing through said ribs and provided with a series of depending garment-supporting loops, a threaded shaft extending through the cover portion of the machine, a nut engaging said shaft and held from movement toward and away from said cover member but free to turn thereon, and means for rotating said shaft and the rubbing member attached thereto.

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

LAWRENCE D. THORNBURGH.

Witnesses:
JOHN F. RUSH,
M. R. MANNING.