(No Model.)

C. T. SHADBOLT.

WASHING MACHINE.

No. 255,340. Patented Mar. 21, 1882.

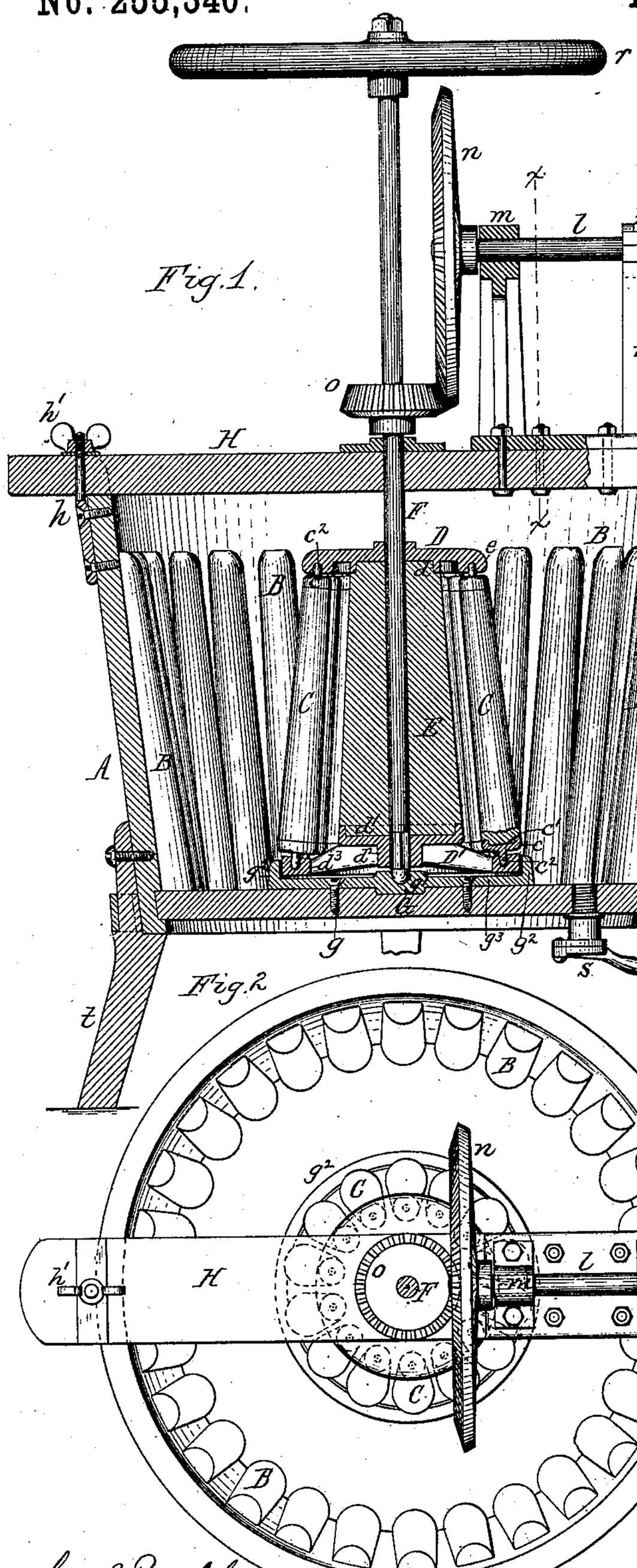

Fig. 1.

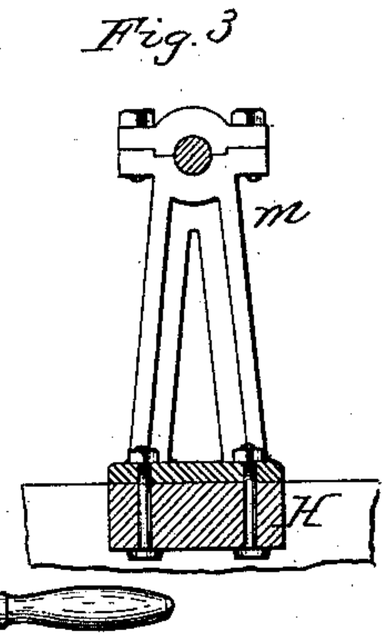

Fig. 4

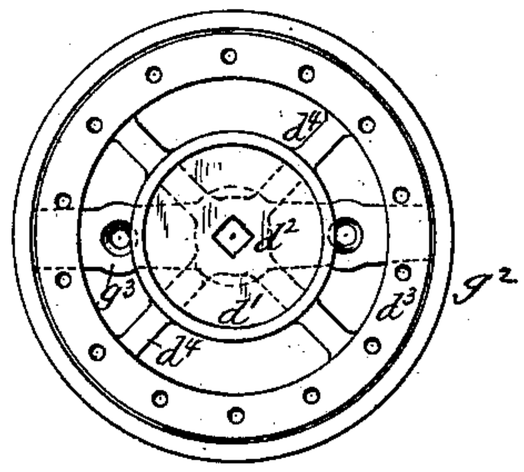

Fig. 3

Fig. 2

Chas. J. Buchheit.
Edw. J. Brady. Witnesses

Chas. T. Shadbolt Inventor.
By Wilhelm & Bonner
Attorneys.

UNITED STATES PATENT OFFICE.

CHARLES T. SHADBOLT, OF ALEXANDER, NEW YORK.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 255,340, dated March 21, 1882.

Application filed December 1, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. SHADBOLT, of Alexander, in the county of Genesee and State of New York, have invented new and useful Improvements in Washing-Machines, of which the following is a specification.

This invention relates more especially to that class of washing-machines which consist of a circular tub provided on its inner surface with upright ribs, and a series of rollers arranged concentrically and rotating between two disks or bearings, which are arranged one above the other and supported so as to revolve around a vertical axis within the tub, as shown and described in Letters Patent of the United States No. 117,472, granted to me July 25, 1871.

The object of my invention is to render the machine more efficient and convenient in operation; and my invention consists of the particular construction of parts, as will be hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a vertical section, and Fig. 2 a top plan view, of my improved machine. Fig. 3 is a vertical section in line *x x*, Fig. 1. Fig. 4 is a top plan view of the step-bearing and lower disk-head.

Like letters of reference refer to like parts in the several figures.

A represents the tub, of any ordinary and suitable construction, with its sides preferably widening toward the top.

B are the upright ribs, formed on or secured to the inner sides of the tub A, as shown.

C represents rollers, preferably made of wood and arranged concentrically, so as to revolve between two circular heads or disks, D D′, placed one above the other and secured to a cylindrical block, E, which is arranged vertically within the circular arrangement of rollers. The block E is secured at its ends in sockets *d d′* in the disk-heads, and forms a support for the latter.

The upper head, D, is preferably made smaller than the lower one, so as to cause the rollers C to slightly converge toward the top, in order to widen the annular space between the rollers C and ribs B toward the top of the tub, which causes the clothes to partially wedge or fit more snugly in said annular space. The rollers C are provided at each end with cast tips *c*, composed of a socket, *c′*, in which the end of the wooden roller is inserted, and a pin or journal, c^2. The disk-head D is provided on its under side with a marginal rim, *e*, in which are formed sockets for the reception of the upper journals of the rollers C, while the lower journals turn in sockets formed in the rim of the lower disk, D′, as shown in Fig. 1. The block E and disk-heads D D′ are secured to a vertical shaft, F, which is supported at its lower end in a step-bearing, G, to be secured to the bottom of the tub A by screws *g*. This step G is composed of a circular disk, *g′*, having on its upper side a central socket, in which the lower end of the shaft F turns, and an upwardly-projecting annular flange, g^2, which surrounds the lower disk, D′, and which is connected with the disk *g′* by arms g^3.

The lower disk, D′, consists of a hub, d^2, which is secured to the shaft and provided on its upper side with the socket *d′*, in which the lower end of the tapering block E is seated, and of a ring or annular rim, d^3, which is connected to the hub d^2 by radial arms d^4, and provided with sockets, in which the lower journals of the rollers C turn. The flange g^2 forms a guard between the lower disk, D′, and the bottom of the tub, and prevents the garments from entering or wedging between the same. The upper end of the shaft F is supported in a bearing in the bridge-piece H, which extends across the top of the tub, with its ends fitted in notches in the edge thereof, in which it is secured by screw-bolts *h*, fastened to the outer sides of the tub, and projecting up through holes formed near the ends of the bridge-piece H, and held in place by thumb-nuts *h′*. The ends of the bridge-piece H extend beyond the edge of the tub on either side and form handles by means of which the tub can be conveniently moved about.

l represents a horizontal driving-shaft, mounted in bearings *m m*, secured to the bridge-piece H, and provided at its inner end with a bevel-wheel, *n*, which engages with a pinion, *o*, secured to the upright shaft F.

p is the crank, secured to the outer end of the driving-shaft *l*, by means of which the machine is operated.

The shaft F extends upward above the wheel *n*, and carries at its upper end a hand-wheel, *r*, by means of which the shaft can be rotated when from any cause the inner rollers should become clogged. *s* is a faucet tapped in the

bottom of the tub for draining off the water when desired. *t* represents the legs upon which the tub A is supported.

The garments or clothes to be washed are placed in the annular space between the rollers C and ribs B, in sufficient quantity to slightly wedge therein, when by turning the crank *p* the disk-heads D D′, and the rollers C arranged between them, are caused to revolve, and the clothes are rolled around in the space between the rollers C and the ribs B, and are subjected to a constant rubbing between these surfaces, whereby they are cleaned in an expeditious manner.

I claim as my invention—

1. In a washing-machine, the combination, with the tub A, provided with upright ribs B, of a series of upright rollers, C, horizontal disks D D′, provided with sockets in which the roller-journals turn, a vertical shaft, F, to which both disks are secured, and a step-bearing, G, secured to the bottom of the tub and provided with a marginal guard-flange, g^2, substantially as set forth.

2. The combination, with the series of rollers C, of the vertical shaft F, the upper head, D, provided with a recess, *d*, and sockets in which the roller-journals turn, and a lower head, D′, provided with a recess, *d′*, and sockets for the roller-journals, and a block, E, surrounding the shaft F and seated in the recesses *d d′* of the heads D D′, substantially as set forth.

CHARLES T. SHADBOLT.

Witnesses:

JNO. J. BONNER,

EDW. J. BRADY.