No. 725,443. PATENTED APR. 14, 1903.

DE WITT HAWLEY.

WASHING MACHINE.

APPLICATION FILED JUNE 26, 1902.

NO MODEL. 2 SHEETS--SHEET 1.

Fig. 1.

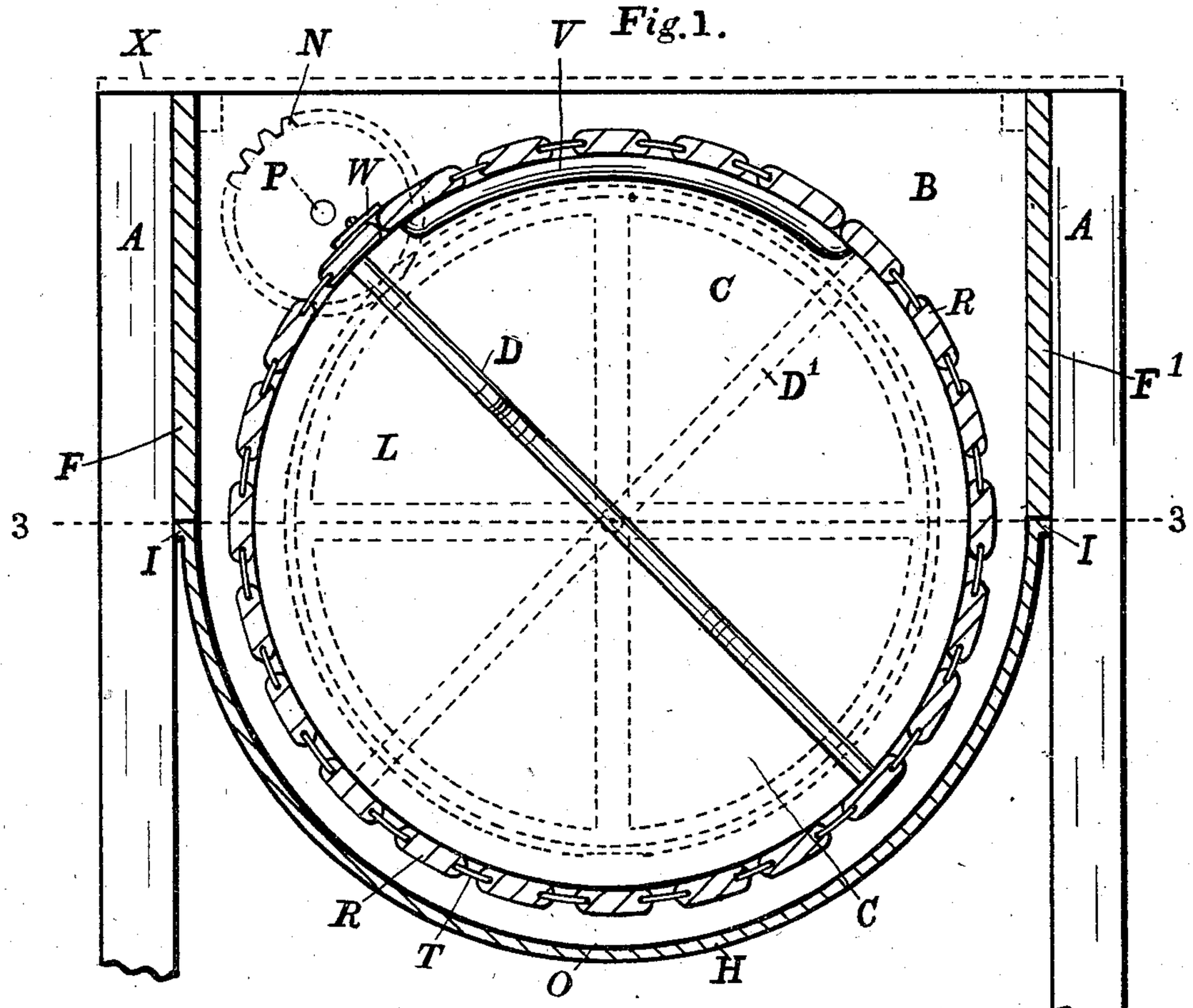
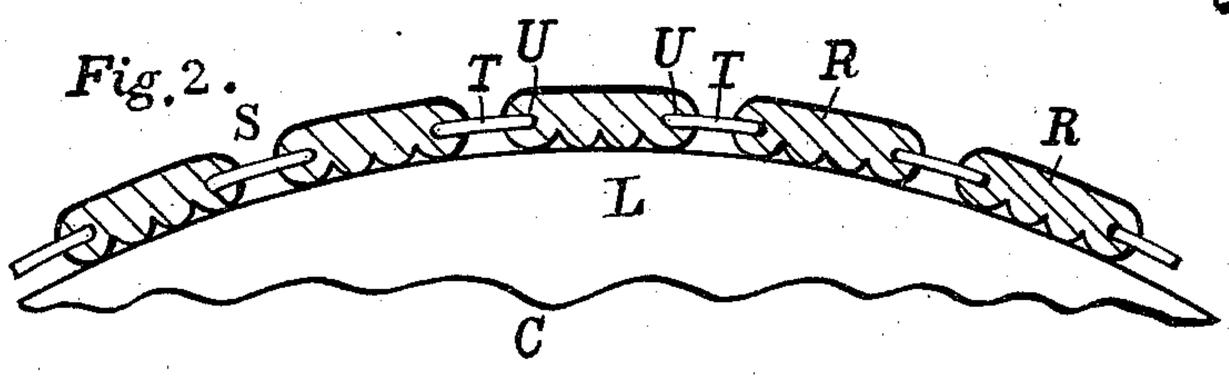


Fig. 2.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.

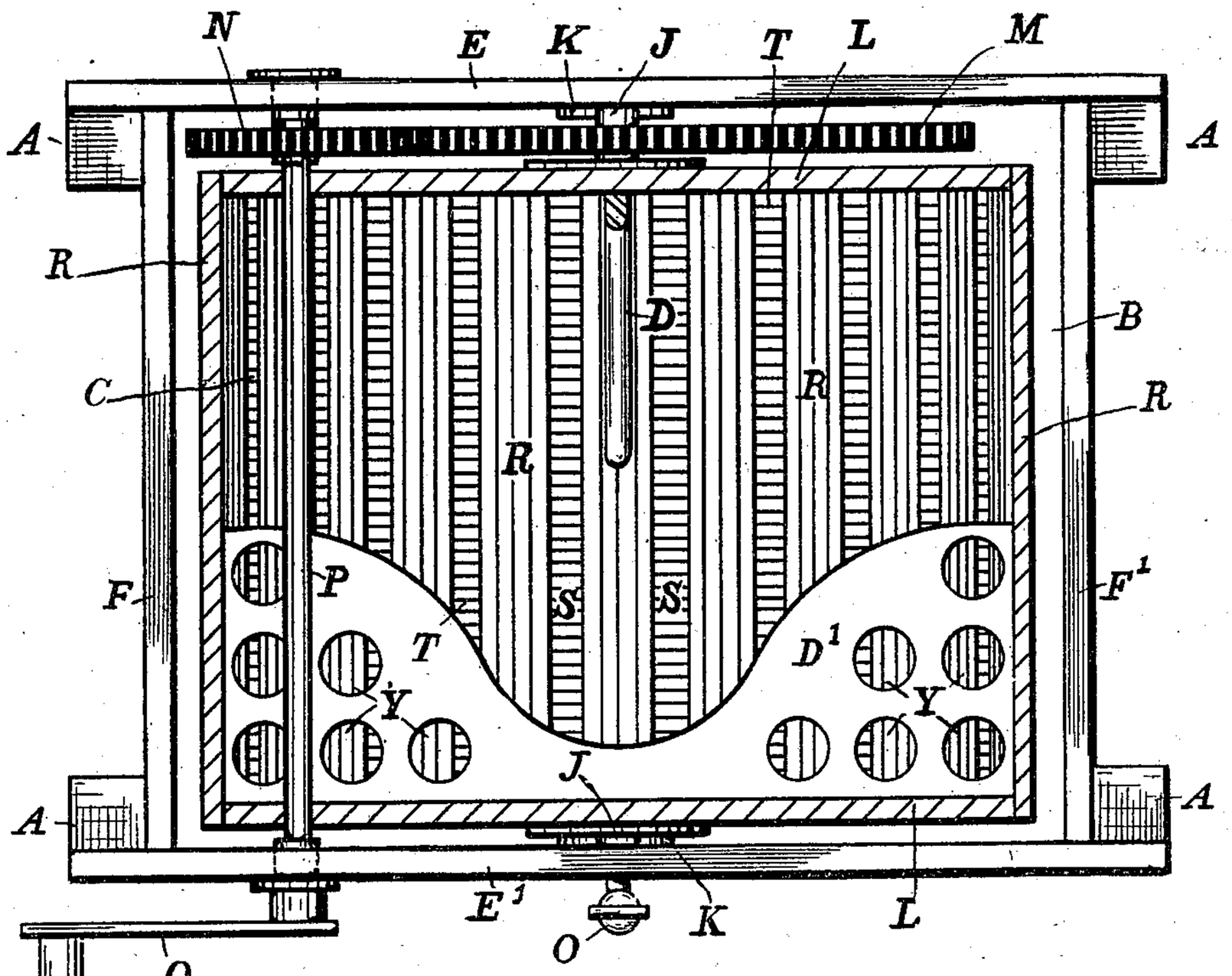
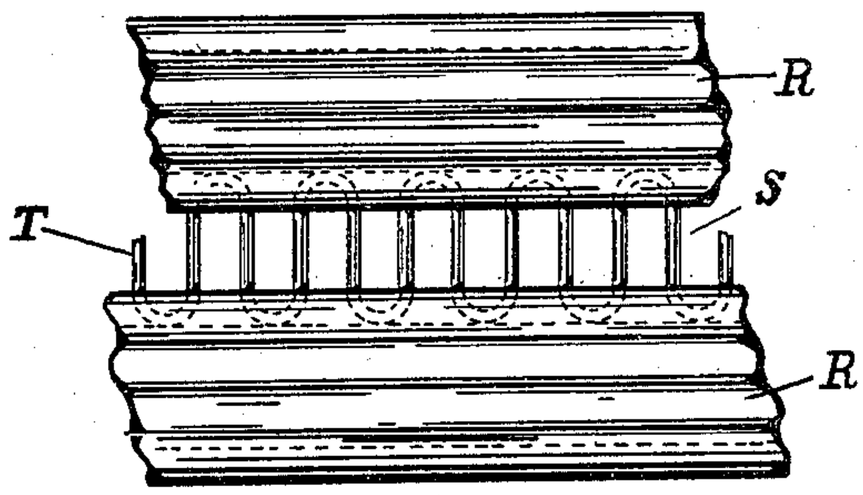


Fig. 4.



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UNITED STATES PATENT OFFICE.

DE WITT HAWLEY, OF ROCHESTER, NEW YORK, ASSIGNOR OF ONE-HALF TO GEORGE P. BORTLE, OF ROCHESTER, NEW YORK.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 725,443, dated April 14, 1903.

Application filed June 26, 1902. Serial No. 113,204. (No model.)

To all whom it may concern:

Be it known that I, DE WITT HAWLEY, a citizen of the United States, residing at Rochester, New York, have invented certain Improvements in Washing-Machines, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to certain improvements in the construction of washing-machines, which improvements are fully described and illustrated in the following specification and the accompanying drawings, the novel features thereof being specified in the claims annexed to the said specification.

In the accompanying drawings, representing a washing-machine embodying my improvements, Figure 1 is a central vertical section. Fig. 2 is a partial section of the revolving drum on an enlarged scale. Fig. 3 is a partial plan view, the drum being sectioned on line 3 3 of Fig. 1. Fig. 4 represents the inner surface of the bars or slats on the drum.

As shown in the accompanying drawings, my improved washing-machine consists of a suitable frame A, supporting a tank or reservoir B, within which revolves the perforated drum C, having the internally-projecting wings or lifters D D′. In the construction illustrated the reservoir consists of the end plates E E′, the sides F F′, and the bottom H, which may be conveniently made of sheet metal, preferably galvanized, bent to a suitable shape and attached to the sides at I in any preferred manner. The drum is arranged to be revolved within the reservoir, being provided centrally on each end with the studs or trunnions J, which rotate in suitable bearings K, attached to the inner surfaces of the end plates E E′. As the bearings K are open on their upper sides, they permit the ready removal of the drum from the reservoir. The studs J are attached to the ends or heads L L of the drum by suitable flanges. One of the studs J carries a spur-gear M, by which rotary motion is transmitted to the drum from the pinion N, the shaft P, and hand-crank Q.

O represents a cock by which the liquid in the reservoir may be drawn off.

The revolving drum consists of the circular heads L L, the slats R, connecting the heads together at their edges, and the inwardly-projecting lifters or wings D D′, placed at such an angle relatively to each other that clothing falling against one of them is thrown to the opposite end as the drum revolves. At their extremities the slats R are attached to the edges of the heads of the drum in any suitable manner, spaces S being left between the edges of adjacent slats, which spaces are crossed by suitable wire-work to permit the escape of the fluid, but to retain the smallest or finest articles in the wash within the drum. In the construction shown the spaces S between the slats are partially closed by the wire T, bent on itself repeatedly, preferably galvanized, and having its curved ends inserted in grooves U, Fig. 2, cut in the edges of the slats. This wire screen is easily bent by suitable devices and forms an effective means of preventing the escape of any clothing through the spaces between the slats, while allowing free circulation to the washing liquid. The wings D D′ project inward from the heads L at right angles with each other, their inner edges being recessed or cut away toward the center on curved lines, as shown, or in any other preferred manner.

I usually construct the drum entirely of wood, except the wire screen T; but it will be obvious that it may be made of any suitable material.

For the practical operation of my improved washing-machine a number of the slats are made removable, being attached together by curved segments V, Fig. 1, and held in place on the drum by suitable buttons or turning clips W or other devices, so as to permit the insertion and removal of the articles to be washed. The wash having been placed within the drum and the drum closed and a suitable soapy solution poured into the reservoir, a few minutes turning will cleanse and purify all the clothing in the machine. The wings are preferably perforated, as indicated at Y, Fig. 3. The reservoir may be provided with a suitable removable cover X, Fig. 1. The finest lace curtains can be washed, as well as the heaviest blankets. As indicated in Fig.

2, the slats R are preferably corrugated on their inner surfaces.

I am aware that the heads of washing cylinders or drums have been provided with series of narrow ribs or arms, and such construction is not of my invention. My improvement requires lifters reaching across the heads and having their end portions extending from the heads each approximately one-half the length of the drum, all as set forth, whereby the contents of the drum will be thrown successively on opposite sides of a lifter by a continuous rotation of the drum in one direction.

I claim—

1. In a washing-machine, the revolving drum comprising the circular heads, the separate slats attached to the peripheries of the heads, and grooved on their edges, the recurved wire screen inserted in the grooves in the slats, and crossing the spaces between them and the angularly-arranged inwardly-projecting wings secured to the heads, as and for the purposes set forth.

2. In a washing-machine, a revolving drum, and a pair of lifters each extending inwardly from and adjacent to the heads of the drum the end portions of the lifters extending to near the transverse central plane of said drum, said lifters being situated in intersecting planes, whereby the contents of the drum will be thrown back and forth to opposite sides of the lifters successively during a continuous rotation of the drum.

3. In a washing-machine, a revolving drum, and lifters extending inwardly from the heads of the drum, said lifters being situated in intersecting planes, and recessed at their centers.

DE WITT HAWLEY.

Witnesses:
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