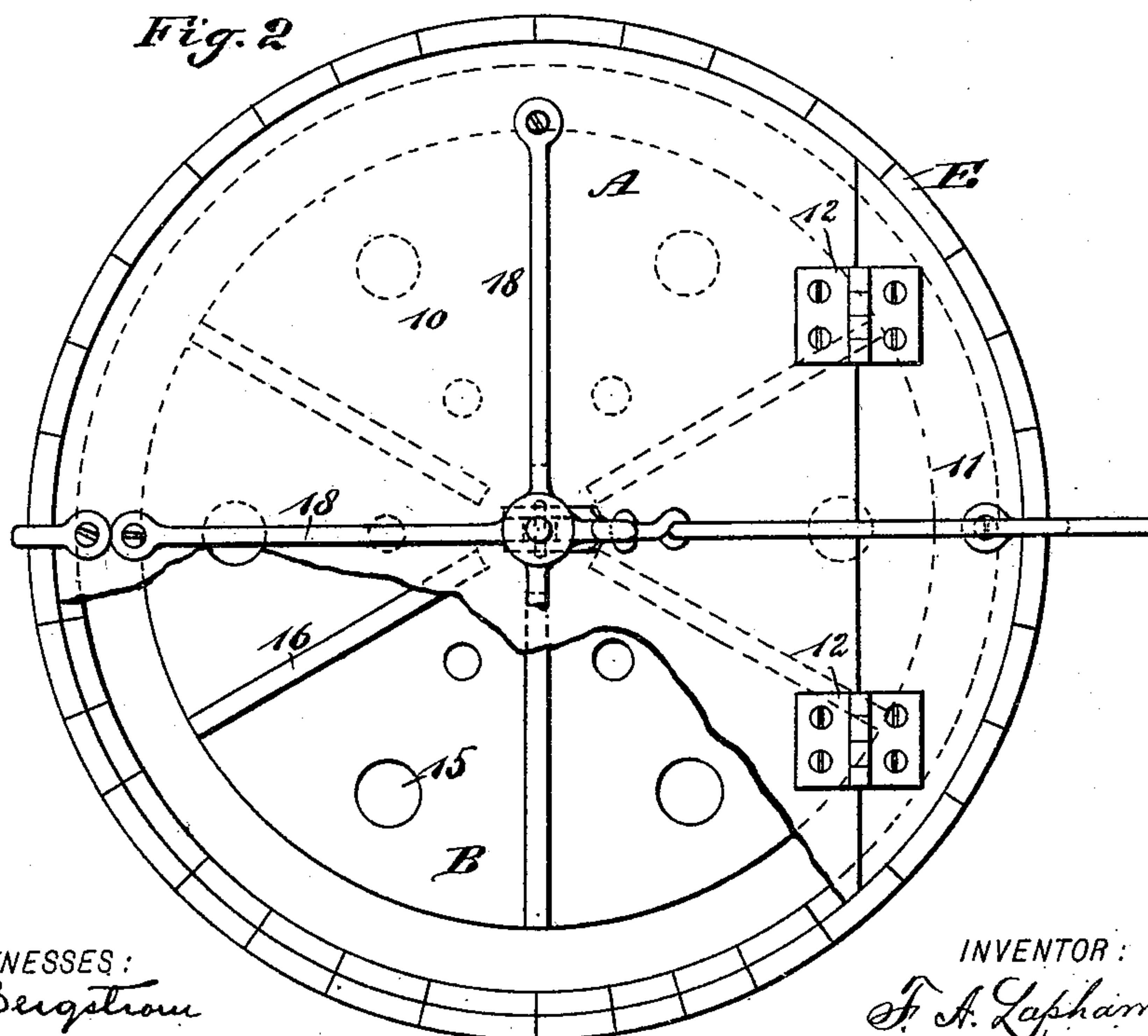
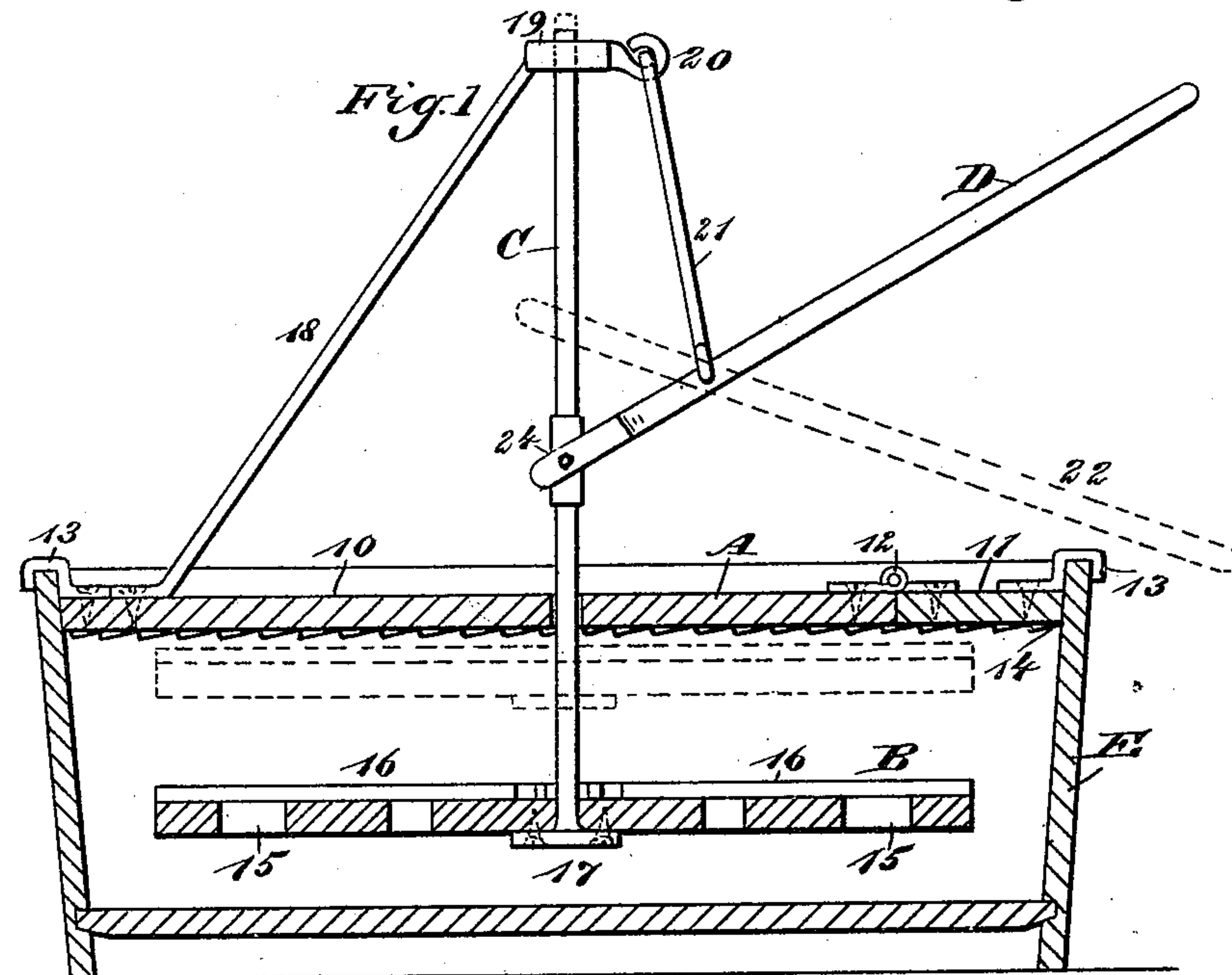


(No Model.)

F. A. LAPHAM.
WASHING MACHINE.

No. 480,105.

Patented Aug. 2, 1892.



WITNESSES:
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UNITED STATES PATENT OFFICE.

FRANK A. LAPHAM, OF WATERFORD, WISCONSIN.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 480,105, dated August 2, 1892.

Application filed January 2, 1892. Serial No. 416,825. (No model.)

To all whom it may concern:

Be it known that I, FRANK A. LAPHAM, of Waterford, in the county of Racine and State of Wisconsin, have invented a new and useful Improvement in Washing-Machines, of which the following is a full, clear, and exact description.

My invention relates to an improvement in washing-machines, and has for its object to provide a machine capable of producing substantially the same movements in washing that is attained when the washing is done by hand.

A further object of the invention is to provide a machine which will be simple, durable, and economic, and also which may be applied to any ordinary wash-tub and used in connection therewith.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in both views.

Figure 1 is a central vertical section through a tub and the machine applied to the tub; and Fig. 2 is a plan view of the machine, illustrated as attached to a tub, a part of the upper portion of the machine being broken away.

In carrying out the invention the machine may be said to consist, primarily, of a cover A, a rubber B, a shaft C, and a lever D, adapted to impart movement to the shaft. The cover is usually made in two sections 10 and 11, the said sections being connected by a hinge 12, and the cover is shaped to correspond to the contour of the receptacle E, in connection with which it is to be employed, the receptacle being adapted to hold the water, washing compound, and the clothes. Ordinarily the receptacle E is a tub, which may be of any approved shape. In the drawings the tub is illustrated as circular in plan, and the cover A is of the same shape, its edges being adapted to fit closely to the inner face of the tub. The cover is held at the top of the tub or receptacle E through the medium of brackets 13, the said brackets being attached to the upper face

of the cover and shaped to clamp or receive the upper edge of the receptacle.

The under face of the cover A is constructed to simulate a wash-board, the said under face having attached thereto a covering 14 of zinc, which is fluted or ribbed so as to present an efficient rubbing-surface, as is best shown in Fig. 1. The rubber B, when the receptacle is circular, is preferably made in disk form and is provided with a series of openings or apertures 15, extending through from top to bottom, and upon the upper face of the rubber a series of ribs 16 is located, the said ribs being carried inward in direction of a common center—that is to say, the ribs 16 are radially located upon the rubber.

The shaft C may be of any approved construction. Ordinarily, however, it is made of a length or lengths of pipe, and the shaft passes through the rubber and is secured thereto in any suitable or approved manner. Preferably the shaft is screwed into a plate 17, the said plate being attached to the under face of the rubber at its center. Arms 18 extend upward from the outer edges of the cover A and are connected with a plate 19, centrally located at some distance above the cover. This plate, if in practice it is found desirable, may constitute an integral portion of the arm.

The plate 19 is ordinarily provided with a hook extension 20, in connection with which a link 21 is employed, the link being pivotally attached at one end of the hook. The other end of the link is connected with the lever D, which is pivoted to the shaft by means of a transverse pin 24. The upper end of the shaft C is journaled in an opening produced in the plate 19. Thus by pressing down upon the lever, as shown in dotted lines, Fig. 1, the rubber B is carried up, essentially, to an engagement with the rubbing or washing board surface of the cover A, and by carrying the lever laterally—in a half-circle, for instance—the rubber B is rocked in such a manner as to rub clothes placed between it and the rubbing-surface of the cover in like manner as when the clothes are rubbed by hand, and as the rubber B is capable of being lowered or raised in the receptacle E and is provided with the apertures or openings 15 when it is lowered the clothes carried thereby are rinsed

in the water contained in the receptacle and their position upon the rubber is changed, so that when the rubber is carried upward to an engagement with the rubbing-surface of the cover other surfaces of the clothes are presented to the latter than were presented before the lowering of the rubber. In this manner each and every part of the article or articles of clothing or apparel will be subjected to the rubbing process and by alternately laterally reciprocating the lever and imparting thereto a vertical movement the clothes are rubbed between two essentially contacting surfaces, and rinsed, shifted, and again presented to said surfaces. The ribs 16 upon the upper face of the rubber prevent the clothes from moving thereon to any great extent while the rubber is being reciprocated.

It will be observed that this machine is exceedingly simple, durable, and economic, and that it may be applied to and used in connection with any form of tub, and that the clothes to be washed will be operated upon in substantially the same manner as if the clothes were rubbed by hand.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. As an improved article of manufacture, a washing-machine adapted for attachment to a tub or like receptacle, the said machine consisting of a cover provided upon its under face with a ribbed or rubbing surface, a rubber located below the rubbing-surface of the cover, a shaft connected with the rubber and extending through the cover, a bearing for said shaft, and a lever whereby the shaft may be raised or lowered and revolved, substantially as and for the purpose specified.

2. In a washing-machine, the combination, with an upper plate or cover provided upon its inner face with a ribbed or rubbing sur-

face, and arms projected upward from the plate or cover and connected at their upper ends, of a rubber located beneath the rubbing-surface of the plate or cover, a shaft attached to the rubber and journaled in the upper connecting medium of the arms, a lever connected with the shaft, and a link connection between the lever and the connecting medium of the arms, whereby the shaft may be raised or lowered, and consequently the rubber, or whereby the shaft may be rocked or rotated, substantially as and for the purpose set forth.

3. The combination, with a receptacle, of a cover adapted to close the upper portion thereof and constructed in hinged sections, brackets supporting the cover in position, the said cover being provided upon its upper face with a ribbed or rubbing surface, and arms projected upward from the cover attached thereto and connected at their upper ends by a plate or block, of a rubber, of substantially disk shape, located beneath the rubbing-surface of the cover, the said rubber being provided with apertures extending through from top to bottom and ribs upon its upper face, a shaft connected with the rubber, passing loosely through the cover and journaled in the connecting medium of the cover-arms, a lever having a pivotal connection with the shaft, and a link connecting the lever with the connecting medium of the cover-arms, substantially as shown and described, whereby the rubber may be raised or lowered and rocked within the receptacle in engagement with the rubbing-surface of the cover or below said surface, as and for the purpose specified.

FRANK A. LAPHAM.

Witnesses:

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