(No Model.)

J. P. HALLSTEN & C. J. ANDERSON.

WASHING MACHINE.

No. 483,443. Patented Sept. 27, 1892.

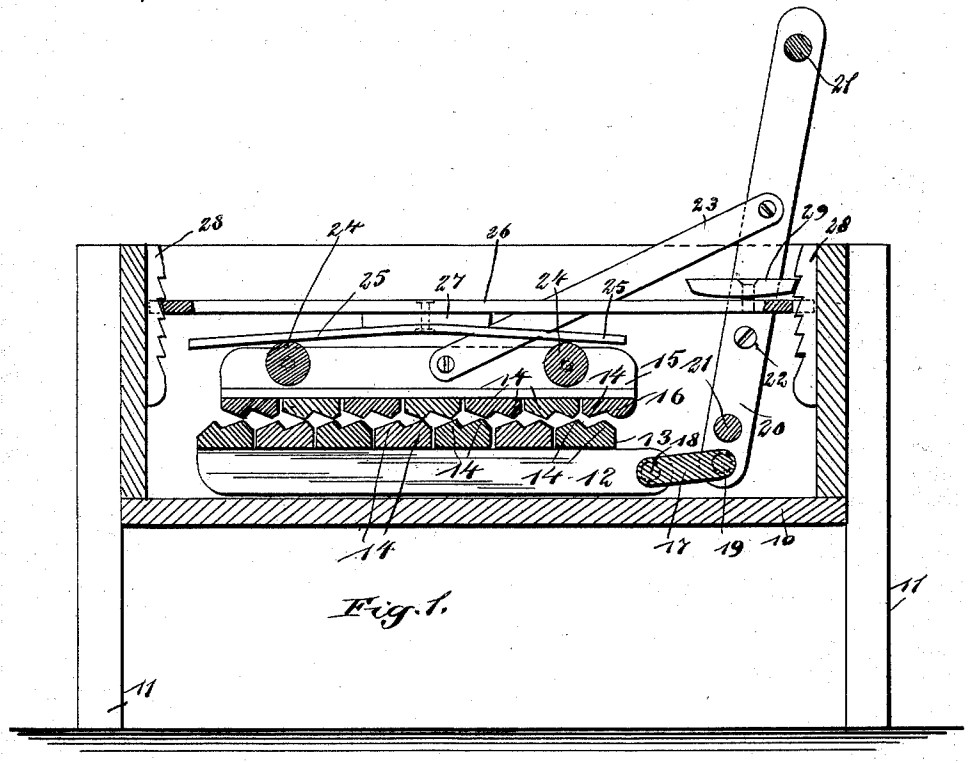

Fig. 1.

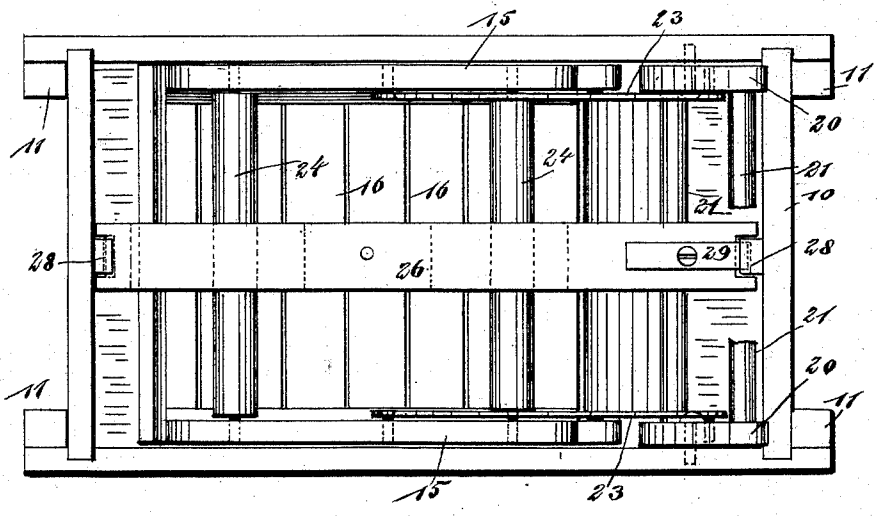

Fig. 2.

WITNESSES:
F. McArdle.
C. Sedgwick

INVENTOR
C. J. Anderson
BY J. P. Hallsten
Munn & Co
ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN P. HALLSTEN AND CHARLES J. ANDERSON, OF ROCK ISLAND, ILLINOIS.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 483,443, dated September 27, 1892.

Application filed April 22, 1892. Serial No. 430,194. (No model.)

To all whom it may concern:

Be it known that we, JOHN P. HALLSTEN and CHARLES J. ANDERSON, of Rock Island, in the county of Rock Island and State of Illinois, have invented new and useful Improvements in Washing-Machines, of which the following is a full, clear, and exact description.

Our invention relates to improvements in washing-machines; and the object of our invention is to produce a double-acting machine in which rubbing-boards may be made to rub on both sides of the clothing at the same time and in substantially the same manner that clothing is rubbed upon a washing-board by hand and to construct the parts so that this action may be easily and rapidly accomplished.

To this end our invention consists in a washing-machine the construction of which will be hereinafter described and claimed.

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

Figure 1 is a central vertical longitudinal section of the machine, and Fig. 2 is a plan of the same.

The machine is provided with a tub 10, which may have a suitable outlet at the bottom and which is supported upon legs 11. Within the tub are rubbing-boards arranged one upon another, the lower board comprising side pieces 12, which are held to slide on the tub-bottom, and cross-slats 13, these slats being provided upon their upper sides with corrugations or teeth 14, having inclined sides, so that a nice rubbing effect may be obtained, and the slats are placed a little apart, so that the water may pass readily between them. The upper rubbing-board comprises side pieces 15, having cross-slots 16 on the under side, these being arranged to pass over the cross-slats 13, and they have also similar corrugations or teeth 14. The rubbing-boards are intended to move simultaneously in opposite directions, and consequently when any article of clothing is held between them it will be quickly and thoroughly rubbed by the movement of the rubbing-boards. A link or hinge-plate 17 is pivoted at one edge to the ends of the lower side pieces 12, as shown at 18 in Fig. 1, and the opposite edge of the hinge-plate is pivoted, as shown at 19, to the lower ends of the vertical or nearly-vertical levers 20, these levers being connected at top and bottom by cross-rods 21, and they are fulcrumed, as shown at 22, on the sides of the tub. Links 23 are pivoted to the upper portions of the levers, and the lower ends of the links are pivoted to the side pieces 15 of the upper rubbing-board. The upper cross-rod 21 serves as a handle, and by moving the levers 20 backward and forward it will be seen that the tilting of the levers on the fulcrums 22 will cause the two rubbing-boards to be simultaneously moved, but in opposite directions.

Journaled on the upper rubbing-board and between the side pieces 15 are rollers 24, which are adapted to be pressed upon by the spring-plate 25, the free ends of which extend slightly downward and the middle portion of which is secured to a bar 26, a concave block 27 being held between the bar and the middle portion of the spring-plate. The bar 26 extends longitudinally of the tub and is recessed at the ends, as shown in Fig. 2, so as to fit over the toothed cleats 28, which cleats are securely fastened to the inside of the tub at the ends and near the middle. The cleats 28 have serrations or teeth thereon, which are adapted to engage the ends of the bar 26, and the bar is of such length that when one end of it is in engagement with the teeth of one cleat the opposite end may be freely moved over the teeth of the opposite cleat. To fasten the bar, a button 29 is used, which is pivoted on the upper side and near one end of the bar, and this may be turned lengthwise of the bar, so as to extend beneath one of the teeth on the cleat 28, as shown in the drawings. By fastening the bar 26 to the cleats 28 the spring-plate 25 may be pressed upon the rollers 24, thus pressing the upper rubbing-board downward, so that the clothing will be held firmly between it and the lower rubbing-board, and the spring-plate will yield sufficiently to permit the boards to be easily moved backward and forward.

The operation of the machine is as follows: The tub is partially filled with suds and the clothing in the tub is inserted piece by piece between the rubbing-boards, and when the

clothing is held between them the operator grasps the upper cross-rod 21 and moves the levers 20 backward and forward. The movement will be imparted to the rubbing-boards, which will move in opposite directions, and the clothing will be rubbed between them and quickly cleaned.

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

1. A washing-machine comprising the tub having transversely-toothed ends and the reciprocating upper rubber, a lower rubbing-surface, the bar engaging at one end one set of teeth, provided with a locking-button at its other end to engage the other set of teeth, and a spring-plate on the under side of the bar and bearing down on the upper rubber, substantially as set forth.

2. The combination, with the tub and its reciprocating upper rubber provided at opposite sides of its center with transverse rollers, of a vertically-adjustable bar and a longitudinally-extending spring secured at its middle to the under side of said bar and bearing at opposite sides of its center upon said rollers, substantially as set forth.

3. The combination, with a tub having toothed cleats therein and reciprocating rubbing-boards the upper of which has rollers on its upper side, of a bar held between the toothed cleats and a spring-plate secured to the under side of the bar and held to press upon the rollers, substantially as described.

JOHN P. HALLSTEN.
CHARLES J. ANDERSON.

Witnesses:
H. V. FISHER,
N. C. HOWARD.