F. M. LECHNER.

Washing-Machine.

No. 160,211. Patented Feb. 23, 1875.

Fig. 2.

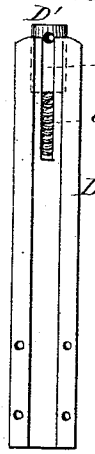
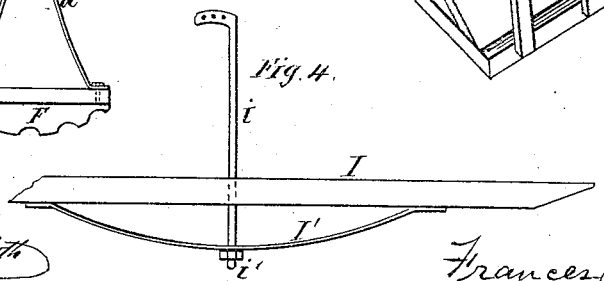


Fig. 1.

Fig. 3.

Fig. 4.



Inventor

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UNITED STATES PATENT OFFICE.

FRANCES M. LECHNER, OF WAYNESBURG, OHIO.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **160,211**, dated February 23, 1875; application filed November 25, 1874.

To all whom it may concern:

Be it known that I, FRANCES M. LECHNER, of Waynesburg, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view with one of the posts which supports the rubber removed in order to show the devices which retain said rubber in an elevated position, and Fig. 2 is a detached view of one of the posts. Fig. 3 is a detached view of one of the pendulum-arms; and Fig. 4 is a detached view of a portion of the foot-lever, showing the spring and connecting-link.

In the drawings, A is the box or body, which may be made in any usual or approved form, and of an suitable material. It is provided at one end with a trough or receptacle for soap, as is indicated at *a*. B are the legs. The rubber bed is composed of the bearing-ribs C, one arranged upon each side of the body, the ends of the ribs being beveled to correspond with the inclination of the ends of the body, so as to fit closely and be retained in place thereby, and the rollers C′ *c*. These rollers are all journaled in the ribs C, and revolve freely therein. Two or more of rollers C′, preferably the central ones, are fluted, as indicated. The rollers *c* are much smaller than rollers C′, and are placed between them, certain advantages being gained by this construction, as will be explained. D D are posts, bolted or otherwise secured to the sides of the body near or at its center. Each post has a tubular recess or groove, *d*, formed in it, to receive a spiral spring, d^1, and a sliding block, D^1. The spring d^1 rests upon the bottom of the tubular groove, and presses in an upward direction upon the block D^1. E is a rocking shaft, its ends being mounted in blocks D^1. E′ E′ are pendulum-arms supporting the rubber F from rocking shaft E. This rubber may be of the usual decription which is employed in machines of this class, and should have its lower or working face curved and ribbed or fluted. The posts D D have, in addition to the tubular slots which receive the springs and sliding blocks, narrow flat slots or ways d^2, in which the shanks of rocking shaft E move, and also wider ways upon their inner faces, in which are located the draw-rods D^2. Rods D^2 have holes at their upper ends, through which the shanks of shaft E pass, and a series of holes, d^3, at their lower ends. G is a hand-lever, pivoted to the body of the machine, and connected to the rubber by means of two rods, *g g′*, rod *g′* running diagonally across the machine to the farther end of the rubber, rod *g* passing close by that side of the body to which the hand-lever is pivoted.

By this construction and arrangement of hand-lever and rods a free and comparatively unobstructed space is left at that end of the machine for the manipulation of the clothes by the operator.

By my construction and arrangement of hand-lever and connecting-rods I am also enabled to mount said lever upon the side of the box or body of the machine, and steady it thereby, and at the same time impart a nearly direct thrust upon both ends of the rubber, thus avoiding straining the parts.

By means of the screw-bolts a^2 and the slots in the arms a^1 I can adjust either side or either end of the rubber independently at will, and thus insure a proper working relation between the rubber and the rubber-bed, which is very desirable, particularly when washing thin or frail fabrics.

H is a girt or bar, arranged below the body A, with each end resting in one of the holes at the lower ends of draw-rods D^2. I is a foot-lever, arranged below the body A, and shown partly in full lines and partly in dotted lines. It is suspended upon or from cross-bar H, and it will be readily seen that by pressing down upon this lever with his foot the operator can depress the rubber F at will while operating hand-lever G.

The rollers in the rubber-bed should be arranged in an arc of a circle, of which a point near the upper ends of posts D D is the center, and in practice it will be found that the employment of the intermediate small rollers

c, in combination with the larger rollers C′, is very desirable, as the large one will be revolved easily, thus passing the clothes (or other fabric to be washed) readily from one end of the machine to the other, while the addition of small ones greatly increases the rubbing-surface.

The operation of the machine will be understood without further description.

The construction of the pendulum-arms is shown more fully in Fig. 3, in which a^1 represents straps or fingers, preferably of metal, forming a yielding support for the rubber, and as they (the metal straps or arms) are attached to the upper parts E′ by means of screws or their equivalent, and are slotted, it is apparent that the rubber may be adjusted vertically.

I′ is an elliptic spring, arranged between the nut *i′*, link *i*, and the foot-lever or treadle, which is provided with a metal bearing or friction strip or plate, upon which the free ends of the spring rest.

I am aware that a spring has been employed to press the rubber down upon the material to be washed, and that in such machines the pressure might be increased by the use of a set-screw or its equivalent; but such construction could not be so advantageously employed in combination with a spring to raise the rubber, because one spring would counteract the effect of the other; but in my machine I can, by the use of the foot-lever, apply a yielding pressure upon the material to be washed, while at the same time the spiral springs will lift the rubber as soon as the foot is removed from the lever.

I claim—

1. The combination of the foot-lever I, spring I′, link *i*, cross-bar H, draw-rods D^2, and springs d^1 with the posts D and rock-shaft E, substantially as set forth.

2. The adjustable arms or bars a^1, in combination with the pendulum-arms E′ and rubber F, substantially as set forth.

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

FRANCES M. LECHNER.

Witnesses:
R. S. SHIELS,
O. POWERS.