A. M. Bailey,

Washing Machine.

NO. 113,130 Patented Mar. 28. 1871.

FIG. 1.

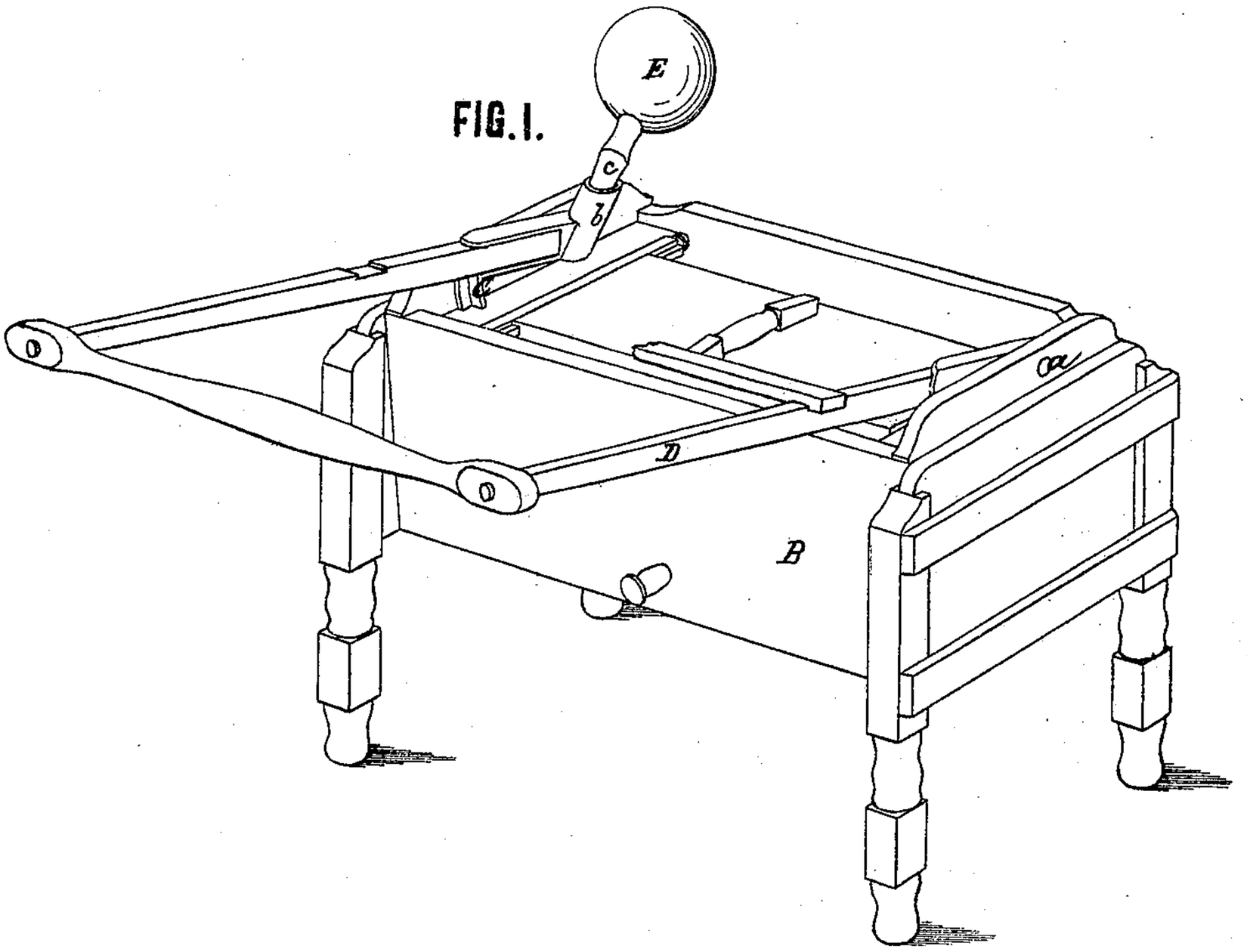
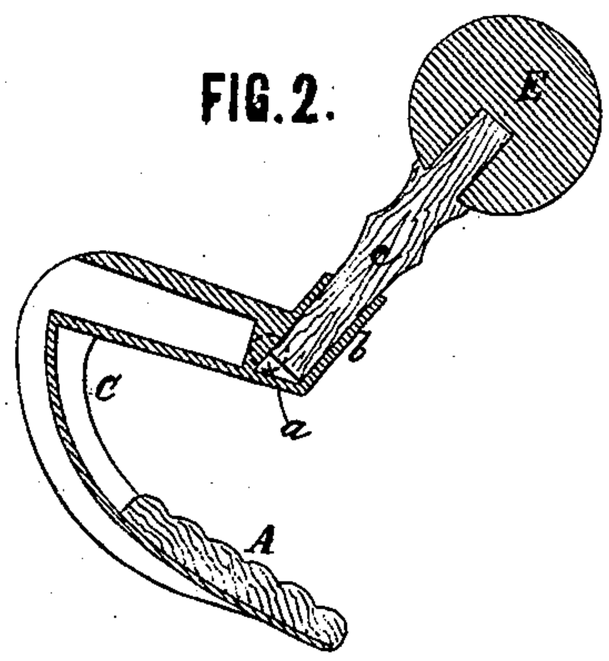


FIG. 2.



Alfred M. Bailey
by atty. A. Pollok.

WITNESSES. C. B. Nottingham
W. G. Henderson

United States Patent Office.

ALFRED M. BAILEY, OF MIDDLEFIELD, CONNECTICUT, ASSIGNOR TO THE METROPOLITAN WASHING-MACHINE COMPANY.

Letters Patent No. 113,130, dated March 28, 1871.

IMPROVEMENT IN WASHING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

Be it known that I, ALFRED M. BAILEY, of Middlefield, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification.

My invention relates to what is known as the "Doty washing-machine," in which the clothes are washed by being subjected to the action of a swinging dash-board within the tub, as described in reissued Letters Patent granted to William M. Doty on the 17th of March, 1868, No. 2,897.

In the use of the machine it was found that it required considerable labor to lift the handle attached to the swinging dash-board, and, to remedy this difficulty, springs were combined with the journals of the dash-board, which, after the handle was pulled down to throw forward the board against the front of the tub, would, by their recoil, serve to throw back the dash-board, and thus materially lessen the labor of lifting or swinging upward the handle. But the use of springs is attended with the objection that, in order to be of any assistance in throwing up the handle, they must necessarily be compressed or tightened when the handle is drawn down, and they thus offer a resistance to the downward movement of the handle, which resistance increases in proportion to the descent of the handle, and is greatest when the dash-board is delivering its blow upon the clothes—the very time when the movement of the board should be least impeded. And the effect of the spring is, in short, not so much to lessen the labor of operating the handle as to transfer the resistance which is required to be overcome from one part of the movement to another.

The object of my invention is to remedy this difficulty, so that the dasher may be moved with equal facility in either direction, and thereby be operated with greater ease and more effectively than has heretofore been practicable. To this end I dispense entirely with the springs, and combine with the dasher and its operating-lever or handle a balance-weight, united with and applied to the same, in such manner that it will allow the handle to be moved up or down with facility, and will also impart increased momentum to the dasher in its forward or downward stroke, for the better expulsion of the water from the clothes.

To enable others skilled in the art to understand and use my invention, I will now proceed to describe the manner in which the same is or may be carried into effect by reference to the accompanying drawing, in which—

Figure 1 is a perspective view of a washing-machine in which my invention is embodied.

Figure 2 is a longitudinal vertical section of one of the segmental metallic arms, to which the dasher is attached.

I will confine my description to the parts immediately connected with my invention.

The general construction of the machine is set forth in the reissue Letters Patent above referred to, and also in Letters Patent No. 73,701, dated January 28, 1868, and is too well known to require a detailed description here.

The dash-board A is hung within the clothes-tub or receptacle B, upon suitable journals *a*, to which journals recoil-springs have been hitherto applied, as above stated.

The journals are formed on segmental arms C, to which the dasher is attached.

The handle D, which operates the dasher, fits in sockets in the arms in the usual manner.

In carrying out my invention I apply to the frame which supports the dasher, and on the side of the axis *a* opposite to that on which the handle is located, a weight, E, connected with said frame either rigidly or so that it can be removed when desired. The weight is preferably so arranged and located, with relation to the dasher and handle, that when the latter is drawn down to throw forward the dasher the weight E will be a little more than counterbalanced, as indicated in fig. 1, this arrangement enabling the forward stroke of the dasher to be delivered with ease and great effectiveness, producing percussive action on the clothes, which is very essential for their thorough and rapid washing.

The weight may be applied to and connected with the dasher, or its frame or handle, by any suitable means.

When segmental arms, such as represented in fig. 2, are employed, I prefer to provide a slightly-tapering socket, *b*, formed in one piece with the arm, as shown, into which fits a correspondingly-tapered shank or spindle, *c*, attached to or making part of the weight E. The object of tapering the socket and shank is that, when the dash-board is thrown forward, the jar occasioned by the blow it delivers upon the clothes may tend to force and jam the tapering shank more tightly in its socket, and thus preventing the removable weight from being thrown out of place. The socket and shank may, however, be otherwise shaped, if desired.

The weight thus combined with the dasher and handle serves to counterbalance, to a great extent, the said parts, not only enabling them to be moved with greater facility than hitherto practicable, but increasing the momentum of the dasher, and thereby making its action upon the clothes more effective.

With the arrangement described springs are not necessary; but it is obvious that by applying a weight

) the dash-board and frame of such washing-machines as have springs the action of the board will be reatly facilitated.

Having described my invention, and the manner in hich the same is or may be carried into effect,

What I claim, and desire to secure by Letters Patnt, is—

1. The combination, with the dasher and handle in clothes washing-machine such as described, in lieu of or in connection with the ordinary springs around he journals of the dash-board, of a weight for counerbalancing said parts, substantially as and for the urposes set forth.

2. The combination, with the dasher and its segnental arm or frame, of the socket connected with he said arm, and the weight provided with a shank fitting said socket, under the arrangements substantially as shown and described.

3. The metallic segmental arm for supporting the dasher and handle, when formed with a socket for the reception of the shank of the weight, as shown and set forth.

4. The combination, with the tapering socket formed in the swinging dasher-frame or arm, of a removable weight, provided with a correspondingly-tapered shank which fits said socket, substantially as and for the purposes shown and set forth.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

Witnesses: ALFRED M. BAILEY.

WM. P. RICHARDSON,

LYMAN A. MILLS.