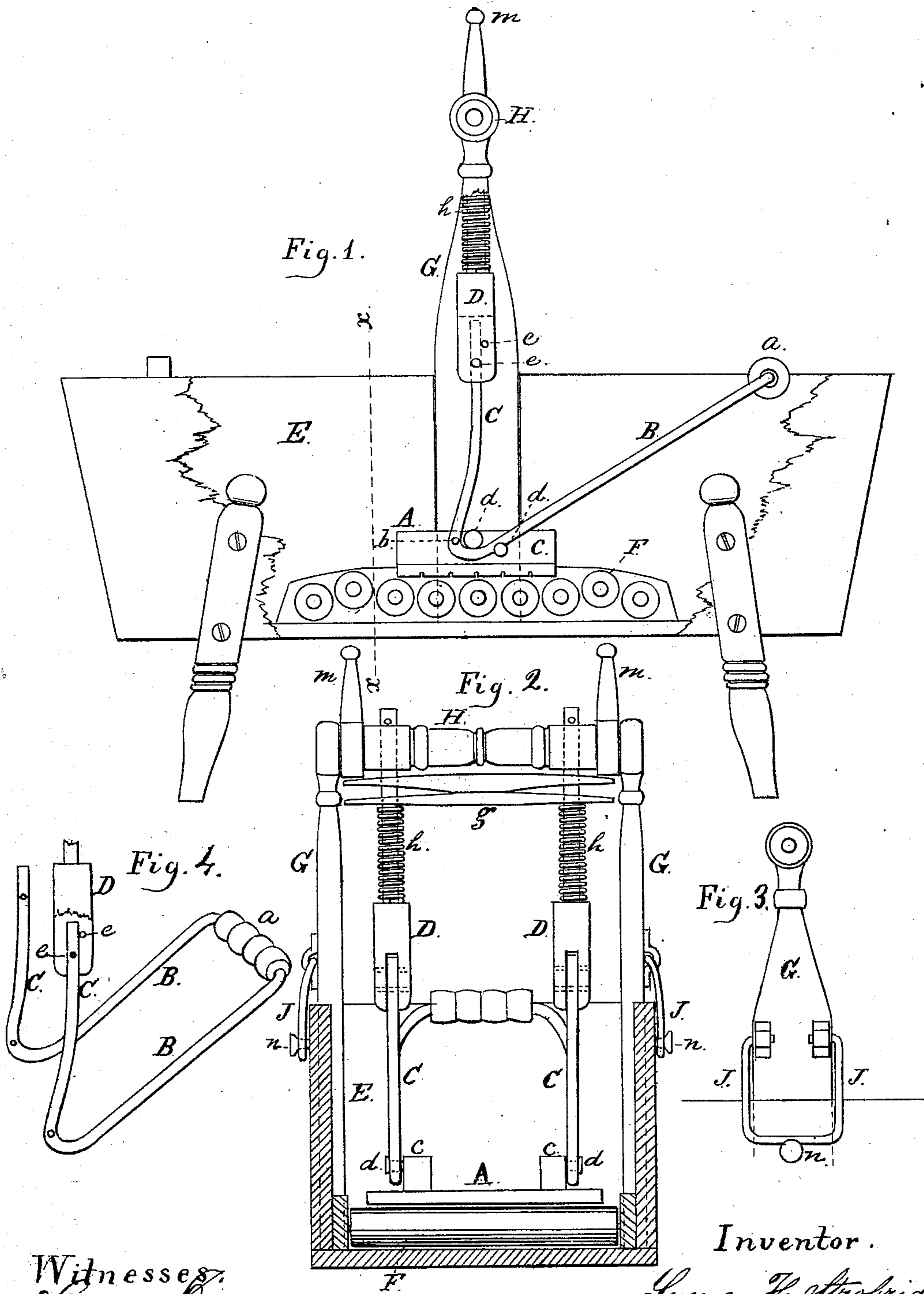


L. H. STROBRIDGE.
Washing-Machines.

No. 140,558.

Patented July 1, 1873.



Witnesses:
Harry Coleman.
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Inventor.
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UNITED STATES PATENT OFFICE.

LYMAN H. STROBRIDGE, OF NAPLES, NEW YORK.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **140,558**, dated July 1, 1873; application filed May 6, 1873.

To all whom it may concern:

Be it known that I, LYMAN H. STROBRIDGE, of Naples, in the county of Ontario and State of New York, 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 that will enable others skilled in the art to which it appertains 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 longitudinal vertical section. Fig. 2 is a cross-section, as indicated by the line *xx* of Fig. 1. Fig. 3 is a view of wire-holder. Fig. 4 is a perspective view of combined spring push-rods and oscillating arms.

Like letters in the different figures of the drawings indicate like parts.

This invention relates to washing-machines having a vibrating rubber; and its object is to afford a simple and convenient method of attaching and operating the rubber by means of spring push-rods and oscillating arms formed of one continuous rod or piece of wire, the rubber being attached by pivot-pins in the curves or bends of the arms, so as to allow a short rocking movement to the rubber, which is regulated by stop-pins on the sides of the arms, the arms having a hinged or pivotal connection in slots of the vibrating arms, so that in connection with the short rocking movement allowed the rubber the rubber can be readily made to adjust itself to the different thicknesses of clothes. This invention has also for its object the pivoting of wire-holders to the standards, in combination with one or more headed pins attached to the sides of the wash-box, so that the rubber may be elevated and held upon the pins so as to wash with more or less water, the heads of the pins preventing the holders from slipping off.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

A is the rubber. B B are the spring push-rods; and C C, the oscillating arms. A rod or piece of wire suitable for the purpose, and of the proper length, is selected to form the

arms, and before being bent a wooden handle, *a*, of suitable length, with a hole through the center of it longitudinally, is slipped on over the rod, and when about the center thereof the rod is bent at right angles from each end of the handle, in the same direction, so as to form the push-rods B B, and then bent up so as to form the oscillating arms C C. The rubber is attached by pivot-pins *b b* passed through the curves or bends of the arms, and thence into the sides of the cross-bars *c c* attached near the ends of the rubber, so as to allow the rubber a short rocking movement. The pivot-pins are placed in the arms a little above the centers of their curves, and the arms pivoted a little way from the centers of the cross-bars, or nearer to the back edge of the rubber than to the front edge thereof, so as to allow a stop-pin, *d*, to be attached to the cross-bars on each side of the arms, for the purpose of regulating the rocking movement of the rubber, the stop-pins being so placed as to allow the arms a slight play between them. The arms, with the rubber thus attached, are hinged or pivoted in slots in the ends of the vibrating arms D D, stop-pins *e e* being passed through the slots in front of the ends of the arms to prevent their swinging back of the vibrating arms. Thus it will be seen (the push-rods and arms being formed of one continuous rod or piece of wire) they will obviously have a spring-like tendency when the rubber is operated upon, and therefore will yield or give in such a manner that the rubber will more readily adapt itself to the uneven surfaces of the clothes, so that delicate fabrics can be washed with less liability of their being injured. The wash-box E is longitudinal in shape, and supported on suitably-constructed legs. The wash-board F consists of a series of rollers arranged together and attached to side plates, in the usual manner. The standards G G are attached to the side plates of the wash-board, and arranged to fit and slide freely in grooves in the sides of the box on the interior thereof. The vibrating arms D D are provided, as usual, with spiral springs *h h* and double transverse springs *g*, and arranged to vibrate from holes in the rocking shaft H. The spiral springs surround the upper parts of the arms, which

are made small enough in diameter to form a shoulder below so as to allow the springs to rest thereupon. The double transverse spring is made to embrace loosely the vibrating-arms and rest upon the spiral springs. Lever-cams *m m* are attached to the rocking shaft, and arranged to operate upon the transverse spring so as to increase the pressure of the spring upon the rubber. The vibrating motion of the arms *D D* is regulated by pins passed through them over the top of the rocking shaft, the ends of which latter have a pivotal bearing in the standards. *J J* are the wire-holders, formed, as shown in Fig. 3, of one piece of wire, the ends being made to have a hinged or pivotal connection in plates attached to the sides of the standards. *n n* are the headed pins, attached to the sides of the box.

To wash with much or less water, or rinse the clothes, the washing apparatus or rubber is raised up in the box and the holders placed on the pins, the heads of which prevent the holders from slipping off. Additional pins may be attached to the sides of the box, so that the rubber may be elevated at any desired height for the purpose above mentioned.

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

1. The combined spring push-rods *B B* and oscillating arms *C C*, formed of one continuous rod or piece of wire, in combination with rubber *A* and vibrating arms *D D*, substantially as set forth.

2. The combined spring push-rods *B B* and oscillating arms *C C*, arranged so as to have a pivotal connection with the rubber *A* and with the slotted ends of the vibrating arms *D D*, in combination with the stop-pins *d* and *e*, the whole constructed and arranged substantially as and for the purpose set forth.

3. The wire-holders *J J*, having a pivotal connection with the standards *G G*, in combination with one or more headed pins, *n n*, attached to the sides of the box, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 26th day of September, 1872.

LYMAN H. STROBRIDGE.

Witnesses:

S. L. DEYO,
IRA DEYO.