J. W. SPANGLER & B. F. REICH.

Washing-Machine.

No. 162,112. Patented April 13, 1875.

Fig 1

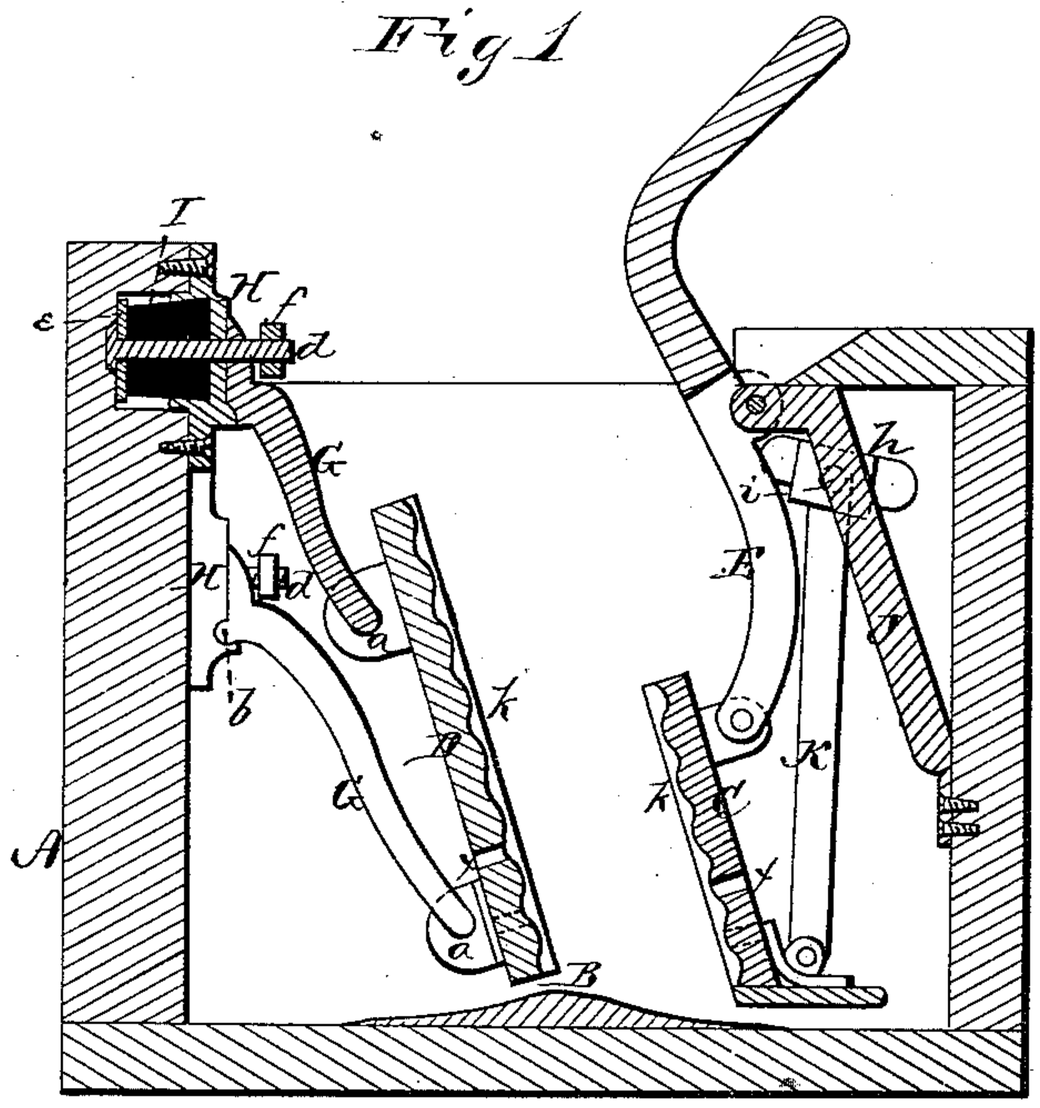
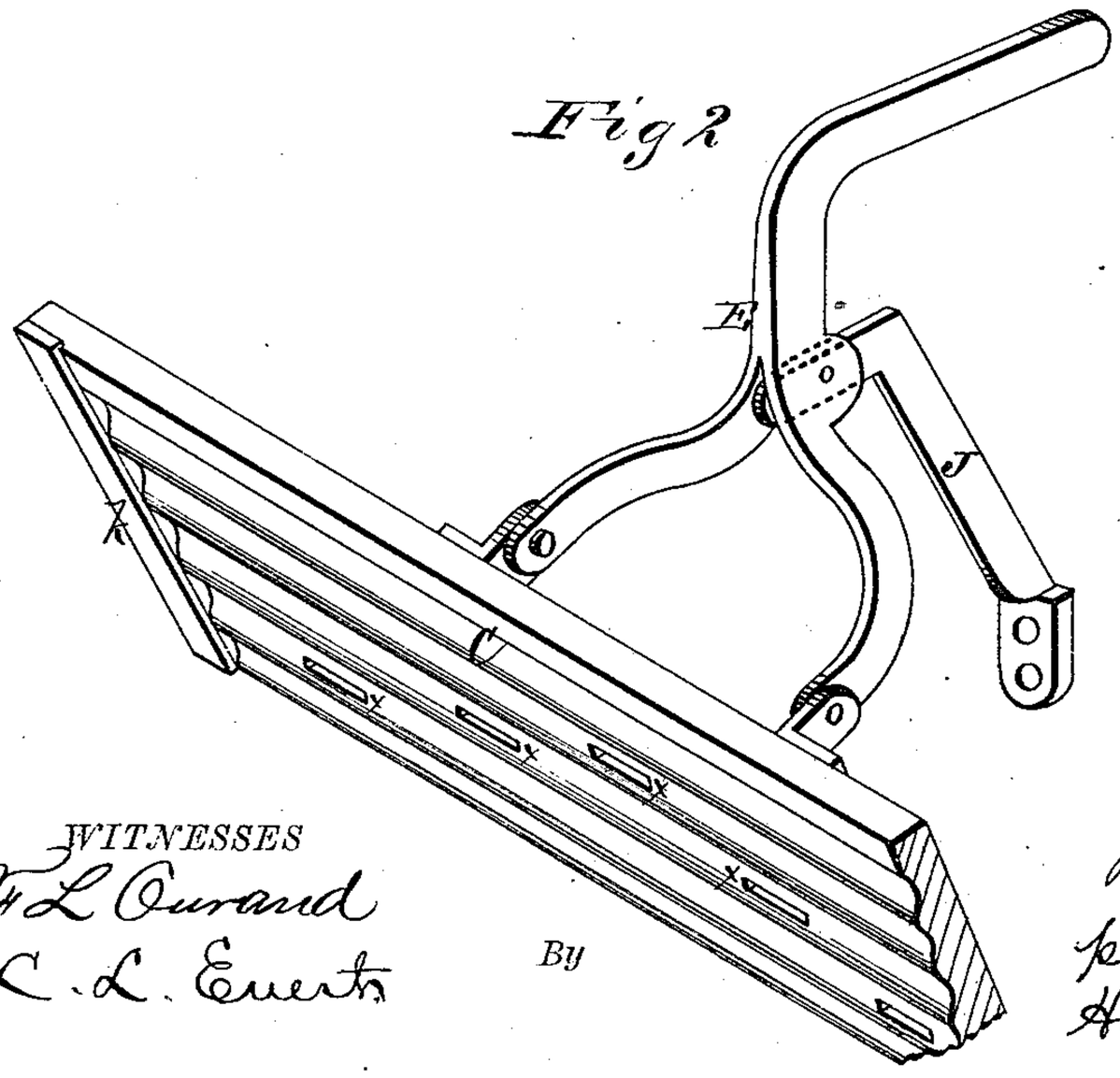


Fig 2



WITNESSES
F. L. Durand
C. L. Everts

By

INVENTORS.
Jacob W. Spangler.
Benj. F. Reich
per
Alexander Mueller
Attorney

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

JACOB W. SPANGLER AND BENJAMIN F. REICH, OF YORK, PA.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **162,112**, dated April 13, 1875; application filed December 19, 1874.

To all whom it may concern:

Be it known that we, JACOB W. SPANGLER and BENJAMIN F. REICH, of York, in the county of York and in the State of Pennsylvania, have invented certain new and useful Improvements in Washing-Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

Our present invention is intended as an improvement upon the washing-machine for which Letters Patent Nos. 151,447 and 157,237 were granted to us May 26, 1874, and November 24, 1874, respectively, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a transverse vertical section of our improved washing-machine. Fig. 2 is a perspective view of the operating wash-board.

A represents the wash-box, of any suitable dimensions, provided longitudinally in the center of its bottom with a triangular piece, B, the two upper sides of which are made slightly concave, as shown in Fig. 1. C and D represent the two wash-boards, the former being operated by means of a lever, E, and the latter yielding to the pressure thereof. To the back of the wash-board D are attached ears *a a*, in which three levers, G, are inserted. The upper ends of these levers are, on their inner sides, formed with projections *b*, which rest in recesses formed on plates H, secured or fastened to the side of the box A on the inner side, as shown. Each plate H has a circular recess formed on its inner side for the reception of a rubber block, I, which extends into a recess made into the side of the box. Through the upper end of each lever G, above the projections *b*, is passed a bolt, *d*. This bolt first passes through a washer or plate, *e*, then through the rubber block or spring I, the plate H, and lever G, and a nut, *f*, is screwed on the end of the bolt. These rubber springs I give the board D the backward and downward motion, the levers G turning on the projections *b* as fulcrums, and the tension of said springs may be regulated by loosening or tightening the nuts *f* on the bolts *d*.

When any force is applied to the lower ends of the levers or arms G G they will turn on their fulcrums, and, through the medium of bolts *d*, compress the rubbers I, and thus produce spring.

The lever E, which operates the wash-board C, in this case is bifurcated near or at the point where it is attached to the support J, which support is bolted fast to the end piece and lid of the box, the lever working in connection therewith in the form of a hinge-joint. The extremities of the lever E are attached to the wash-board by means of hooks and brackets, or any other suitable means. At each end of the box is a straight bar, K, which is attached to the box by placing a small cap, *h*, over its upper end, and passing a screw, rivet, or bolt, *i*, through them into the box, which fastens the bar securely, and still allows it free motion. The lower ends of these bars are attached to the wash-board by hooks and brackets or other suitable means.

The wash-boards C and D are fluted, and have strips *k* attached at their ends, so that the boards, when they come in contact, will slide smoothly upon each other without the fluted or ribbed parts catching or striking against each other. The wash-boards are provided with slots *x*, to let the water pass through freely.

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

1. The combination, with the wash-board D, the hinged levers G, provided with fulcrums *b*, the stationary recessed plates H, rubber springs I, bolts *d*, and nuts *f*, all constructed and arranged to operate substantially as and for the purposes herein set forth.

2. The combination, with the wash-board C, of the bifurcated lever E, support J, and end bars K K with caps *h h*, all substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 3d day of December, 1874.

JACOB W. SPANGLER.
BENJAMIN F. REICH.

Witnesses:
GEORGE M. SHETTER,
FELIX FLUHRER.