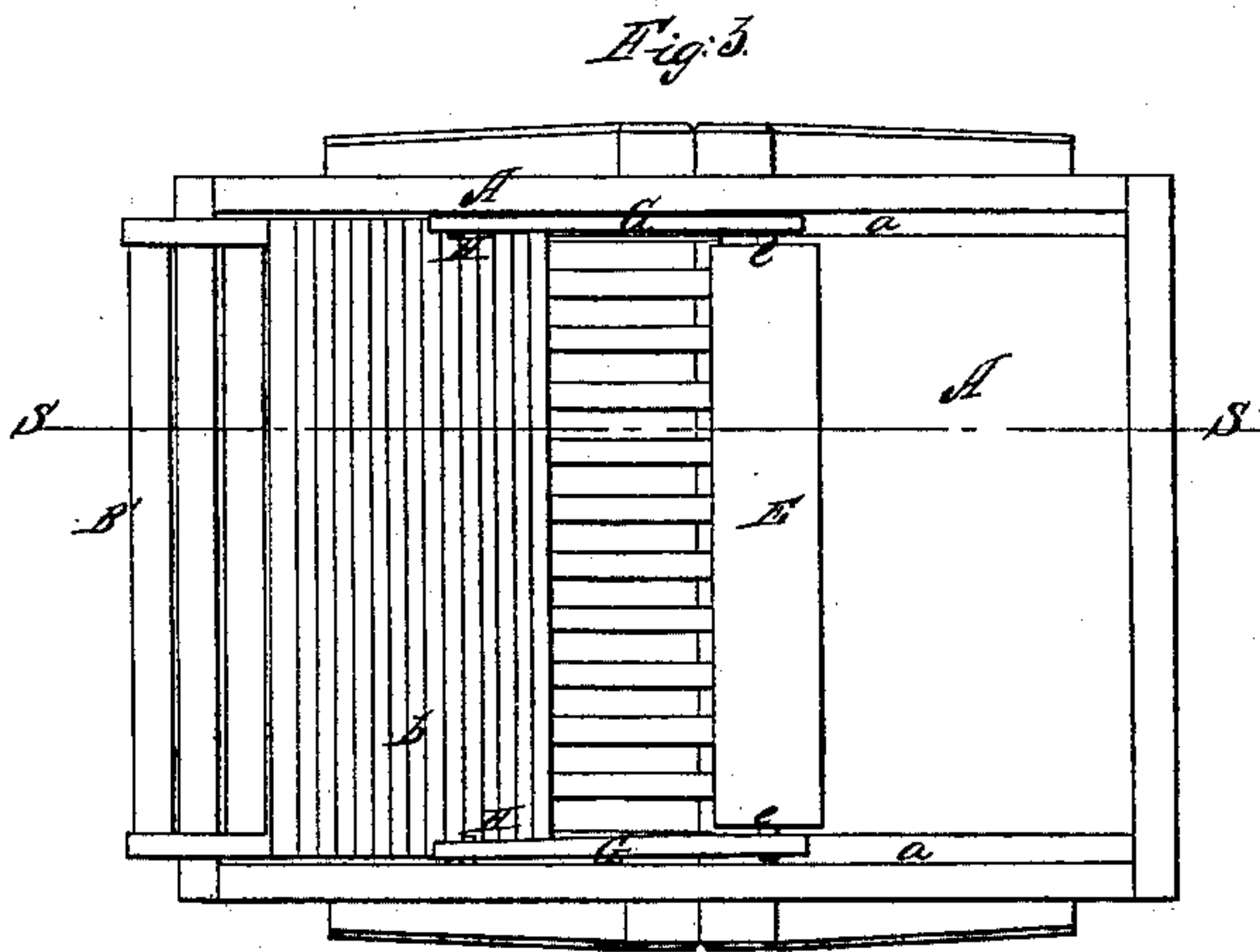
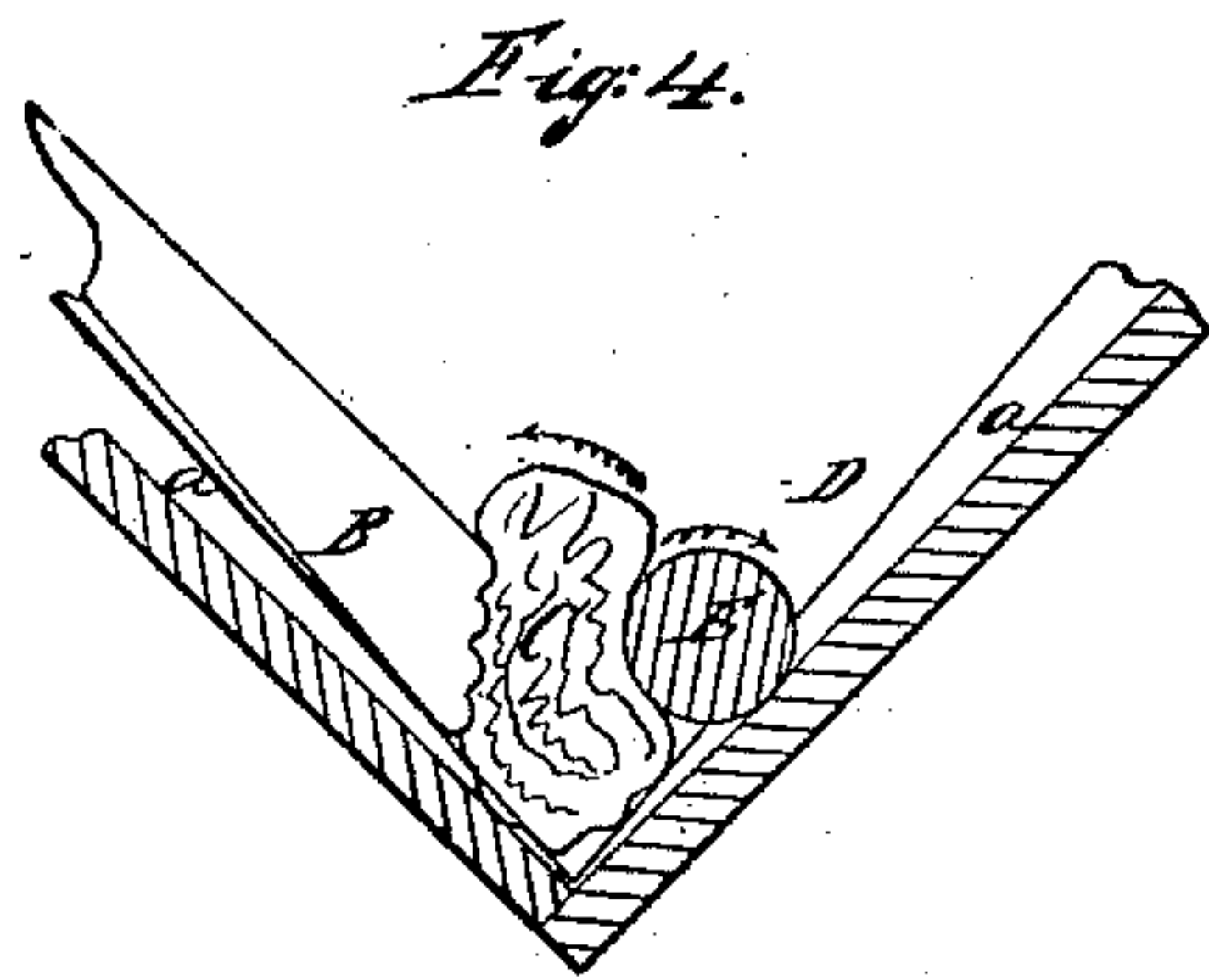
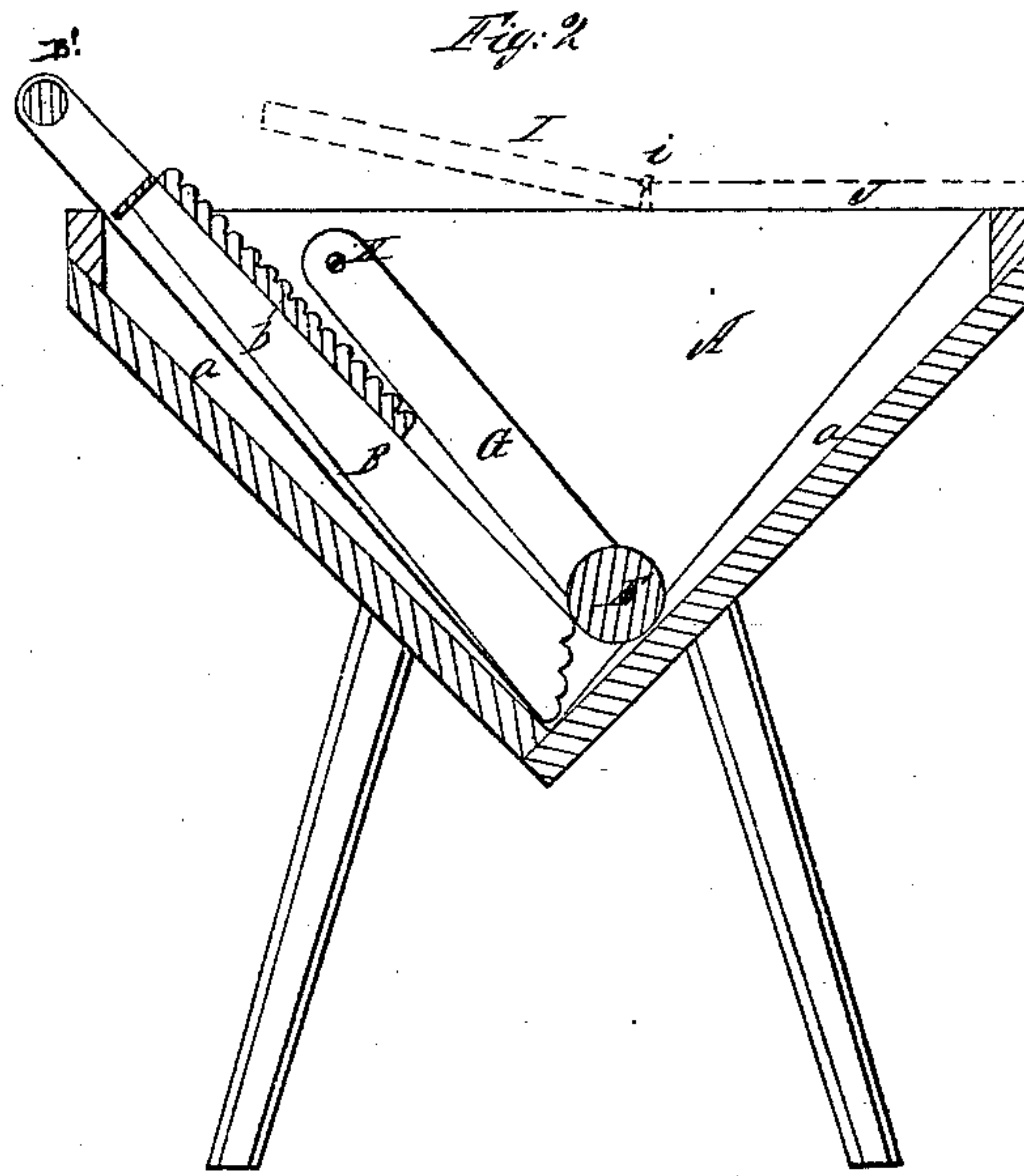
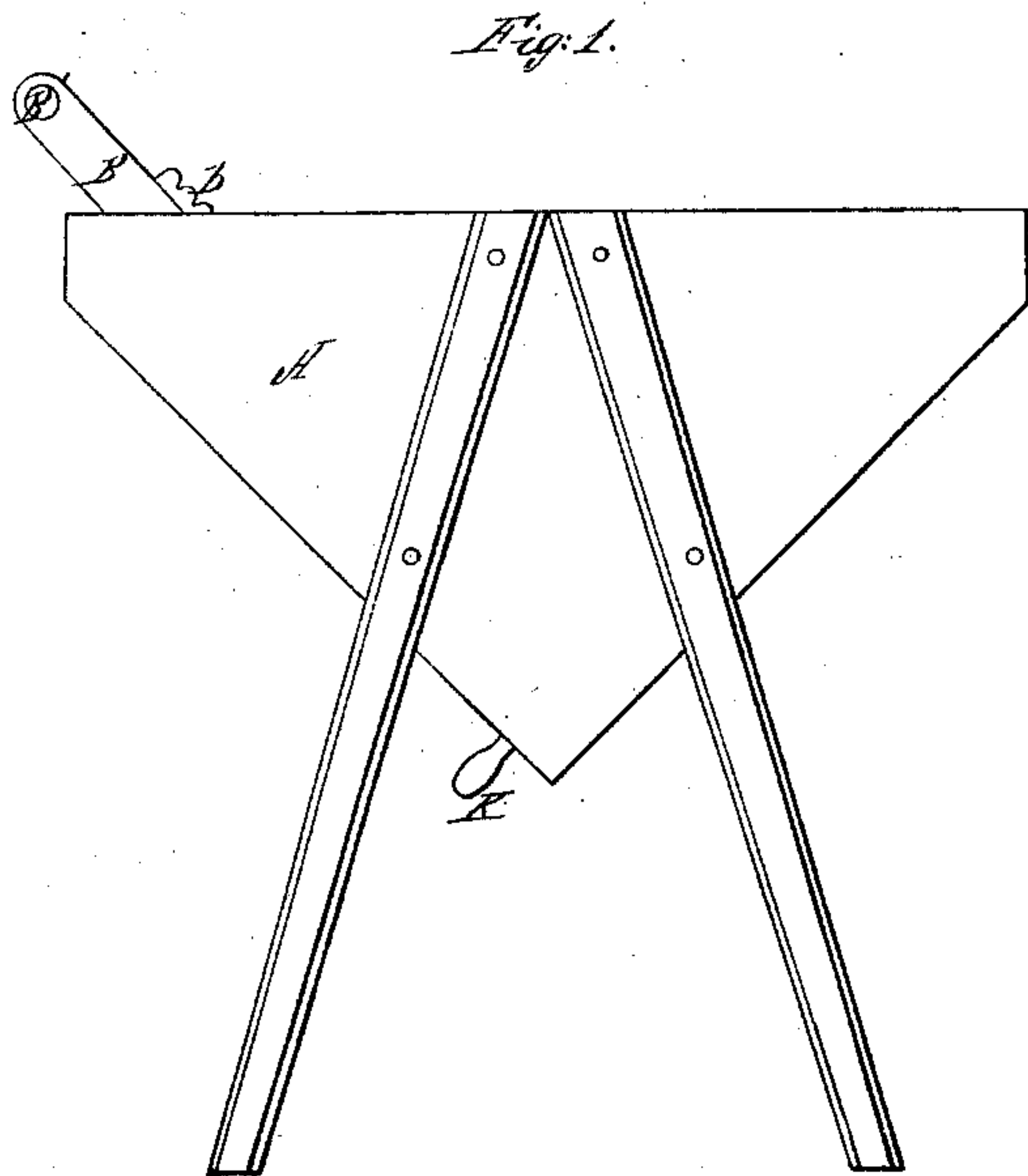


J. Johnson, *Washing Machine,*

N^o 44,801.

Patented Oct. 25, 1864.



Witnesses:

Thomas L. Johnson
D. W. Johnson

Inventor:

Joseph Johnson

UNITED STATES PATENT OFFICE.

JOSEE JOHNSON, OF NEW YORK, N. Y.

IMPROVED WASHING-MACHINE.

Specification forming part of Letters Patent No. 44,804, dated October 25, 1864.

To all whom it may concern:

Be it known that I, JOSEE JOHNSON, of the city, county, and State of New York, have invented a certain new and useful Improvement in Washing-Machines; and I do hereby declare that the following is a full and exact description thereof.

The accompanying drawings form a part of this specification.

Figure 1 is a side elevation. Fig. 2 is a vertical section on the line S S in Fig. 3, and Fig. 3 is a plan view showing my machine in an empty condition. Fig. 4 is a transverse section of the parts in the bottom of the box or tub when the machine is in operation.

Similar letters of reference indicate like parts in all the figures.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation, by the aid of the drawings and of the letters of reference marked thereon.

A A is a water-tight vessel, formed with inclined sides, and supported on stout legs at a convenient height, as represented. The inclination of the sides is interrupted near the top by interposing a short perpendicular portion, as represented, the effect of which is to check the tendency of the water to slop over, in consequence of the oscillating motion of the pounder and of the clothes and roller.

B is a pounder formed of parallel slats, with suitably-formed teeth or rounded shoulders at their lower ends, and *b* is a thin wash-board with a ridged or grooved upper surface, securely fixed upon the upper side of the pounder B, as represented.

B' is a handle or cylindrical bar, by which it is operated. This pounder is slid by the direct action of the hands of the operator being alternately drawn upward on the inclined side of the box or tub A and thrust downward in the reverse direction. In this movement it slides on the slats or raised ways *a a* at the sides, which are adapted to hold it at a slight elevation—say one-half inch clear of the inner surface of the inclined side of the tub.

C indicates an irregular mass of clothes which is subjected to the washing operation.

D indicates the water, which is by preference hot, and more or less saturated with soap, as usual.

E is a heavy roller of locust or lignum vitæ

wood. It is desirable that its specific gravity should be somewhat greater than the water. Very nearly the same effect may be attained either by using a dense wood or by loading the roller with metal at its ends or in its interior; or it may be loaded by a mass of any suitable character, mounted exterior to the roller and connected by arms or links. I turn on the ends of the roller or drive into the ends suitable guides or journals, as indicated by *e e*. The ends of these journals or guides *e e* touch against or come very near to the inner perpendicular faces or ends of the box or tub A.

G G are links or slight strips of wood with a hole at each end. The hole at one end fits over and embraces the corresponding journal *e* of the roller E, and the hole at the other end fits over and turns upon a pin, H, fixed in the inside of the box A. Smooth nails or screws of the ordinary character, with rounded heads and shanks, may be employed to form the journals *e* and the pins H; but in such case I take care to employ nails or screws of brass or of some metal which will not rust and discolor the clothes. I can use iron nails or screws for this purpose, however, if the surfaces are carefully tinned or otherwise efficiently protected from oxidation. The roller E tends by its gravity to rest upon and press down with a gentle force against the clothes in a direction at right angles to that of the pounder B. The inertia of the roller E acts, in addition to its gravity, to resist the escape of the clothes from the pounder B when a blow is struck. The action of the pounder B tends to roll the mass of clothes by striking with most force at the very bottom of the mass. The form and arrangement of the roller E allow it to revolve with great freedom, and when the parts are properly proportioned the clothes at each blow of the pounder change their position and partially roll over with a gentle and very desirable change of position, and also with a slight rubbing action throughout the whole mass. At each blow the roller E jumps or moves away from the mass of clothes, but it returns immediately after, and is pressing gently against the clothes in time for the next blow. I find that the size or diameter of the roller E is important. I have been most successful with rollers of locust wood which were just three and three fourths

inches in diameter; but I do not confine myself to that particular material or those precise dimensions.

The whole or a portion of the top of my machine may be covered by a lid of wood; or a simple cloth may be thrown across to diminish the escape of steam. In case a wooden cover is employed, I can adapt it to be entirely removed from the tub A at will, or to be elevated by turning on hinges; or I can make a portion permanently fixed and another portion removable.

I have indicated by red outlines a cover which is both removable and hinged, it being intended to allow a part, I, to be lifted by turning on the hinge i, or to allow the hinged part I, and also the part J, which rests constantly on the tub A when in use, to be readily lifted off when required.

K is a plug, by the removal of which the tub may be readily drained when required.

I do not consider the links or arms G necessary to the success of my invention. The roller E will maintain its place and operate in very nearly the same manner whether the links G and pins H are employed or not.

The roll E may be roughened or grooved in any approved manner as frequently employed in washing-machines; but I have found a plain cylindrical roll to answer well, and I find that such a roll turns a little at each blow of the pounder, and that it and the clothes re-

volve slowly in this manner, so as to present all parts very uniformly and efficiently.

The advantages of my invention are best exhibited in Fig. 4, showing that when the pounder B is pressed downward to the bottom of the tub it forces the clothes against the roller E, by the use of which, arranged as represented relatively to the pounder, I get a pressing and squeezing action in addition to the usual effect of pounding. The downward motion of the pounder B causes the mass of clothes C to roll slightly in the direction indicated by the arrows as well as to be compressed and the several members or parts of the mass to be gently rubbed together throughout its whole extent. As the pounder B is raised after each blow, the weight of the roller E causes the clothes to fall back promptly under the pounder for the next blow.

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

In washing-machines, in connection with a pounder, B, the employment of a roller, E, arranged as described, with or without guiding-links, so as to operate in combination with the pounder, substantially in the manner and for the purpose herein set forth.

JOSEF JOHNSON.

Witnesses:

THOMAS DREW STETSON,
D. W. STETSON.