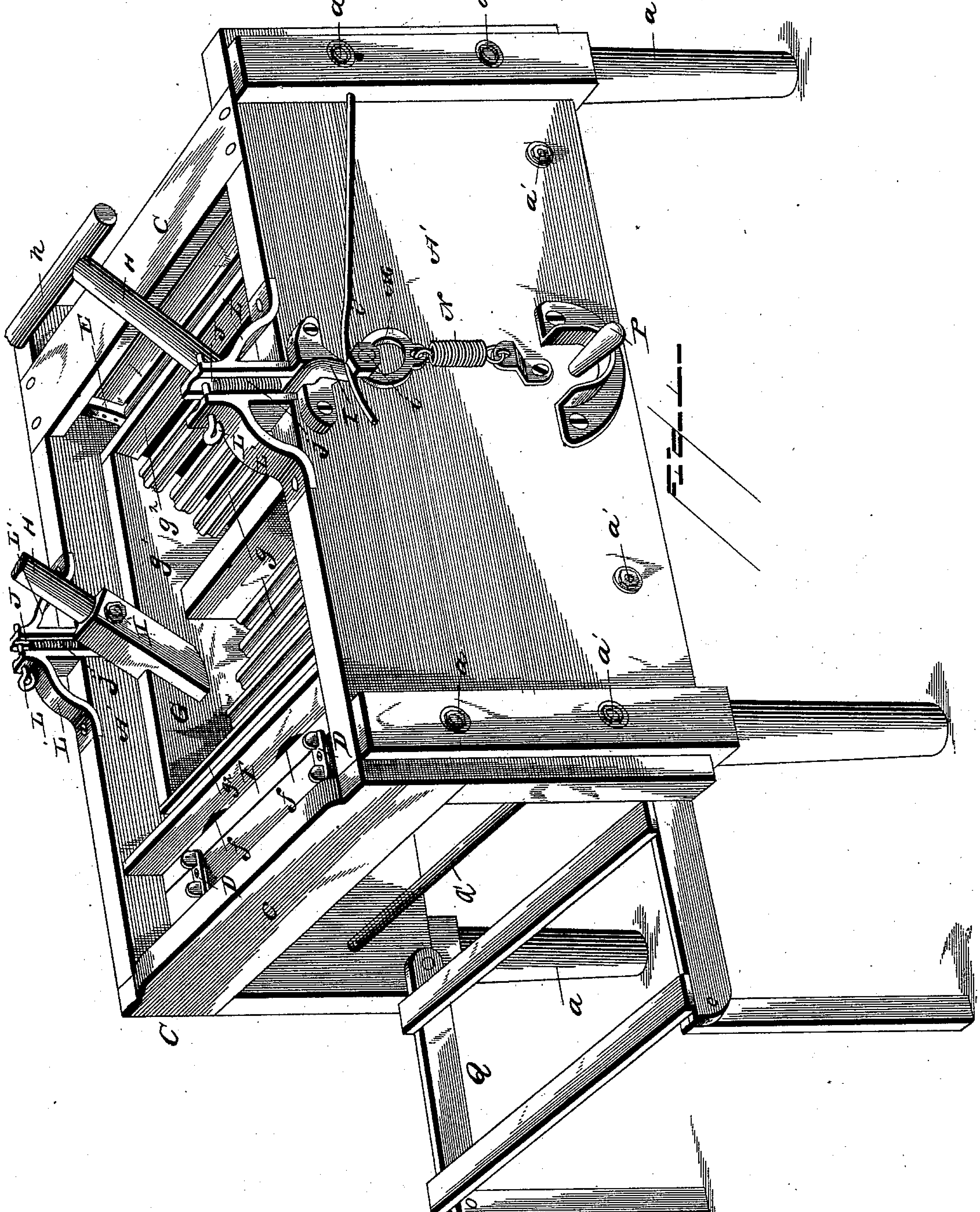
(Model.)

2 Sheets—Sheet 1.

W. W. WEISELL.

WASHING MACHINE.

No. 362,561. Patented May 10, 1887.



Witnesses

C. W. Dashiell

E. G. Siggers

Inventor

Wm. W. Weisell.

By his Attorneys

C. A. Snow & Co.

N. PETERS. Photo-Lithographer. Washington. D. C.

(Model.)

2 Sheets—Sheet 2.

W. W. WEISELL.

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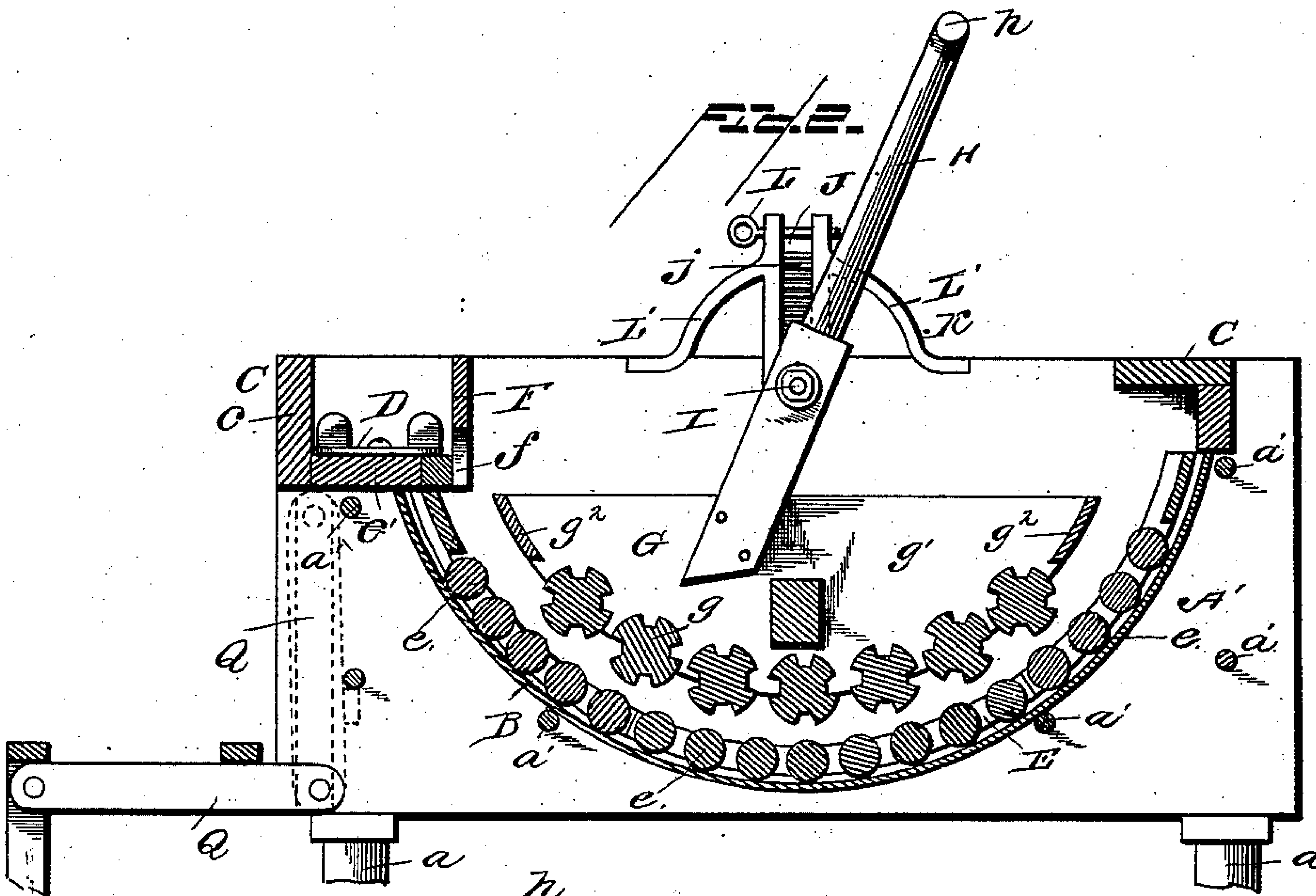

Fig. 2.

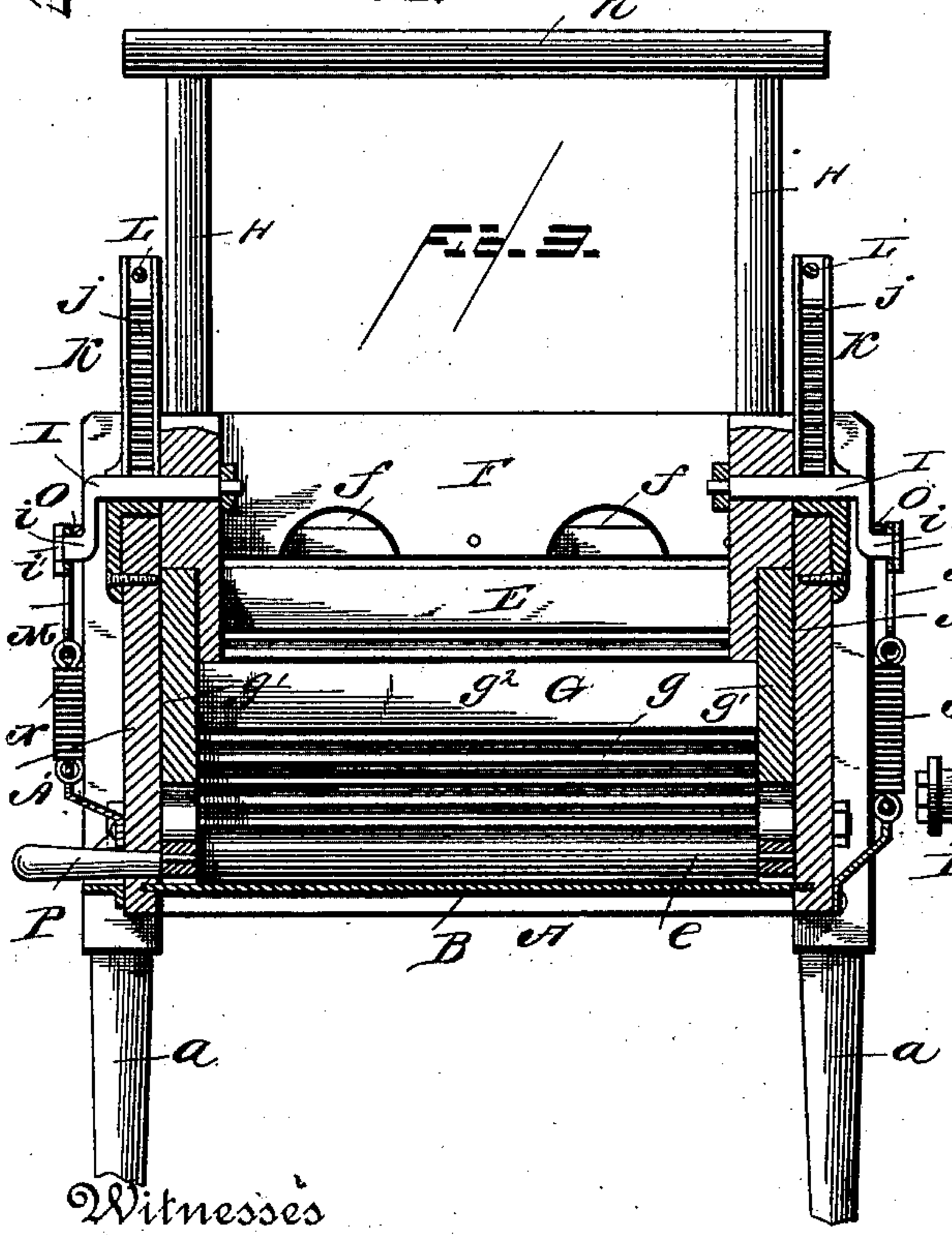

Fig. 3.

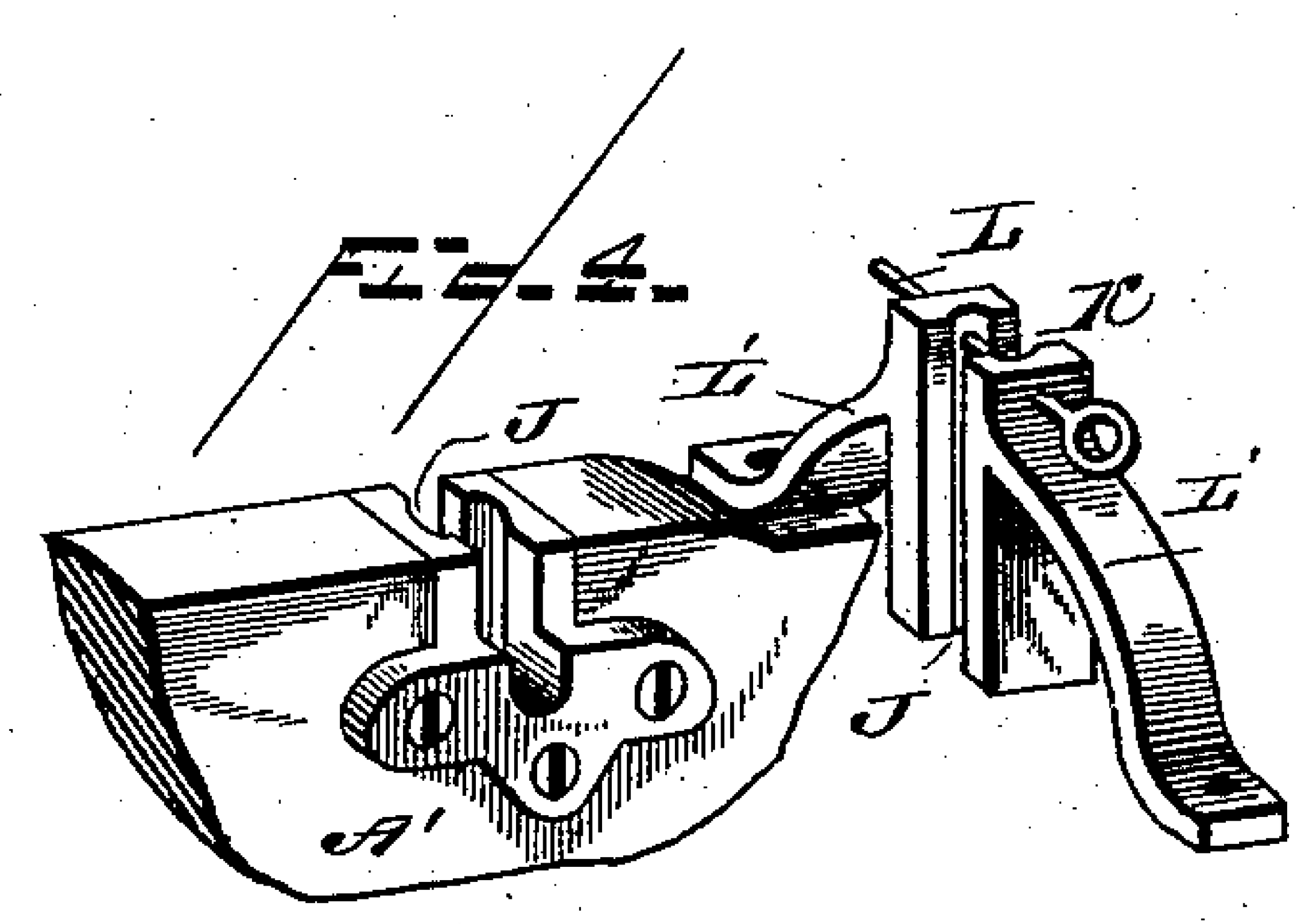

Fig. 4.

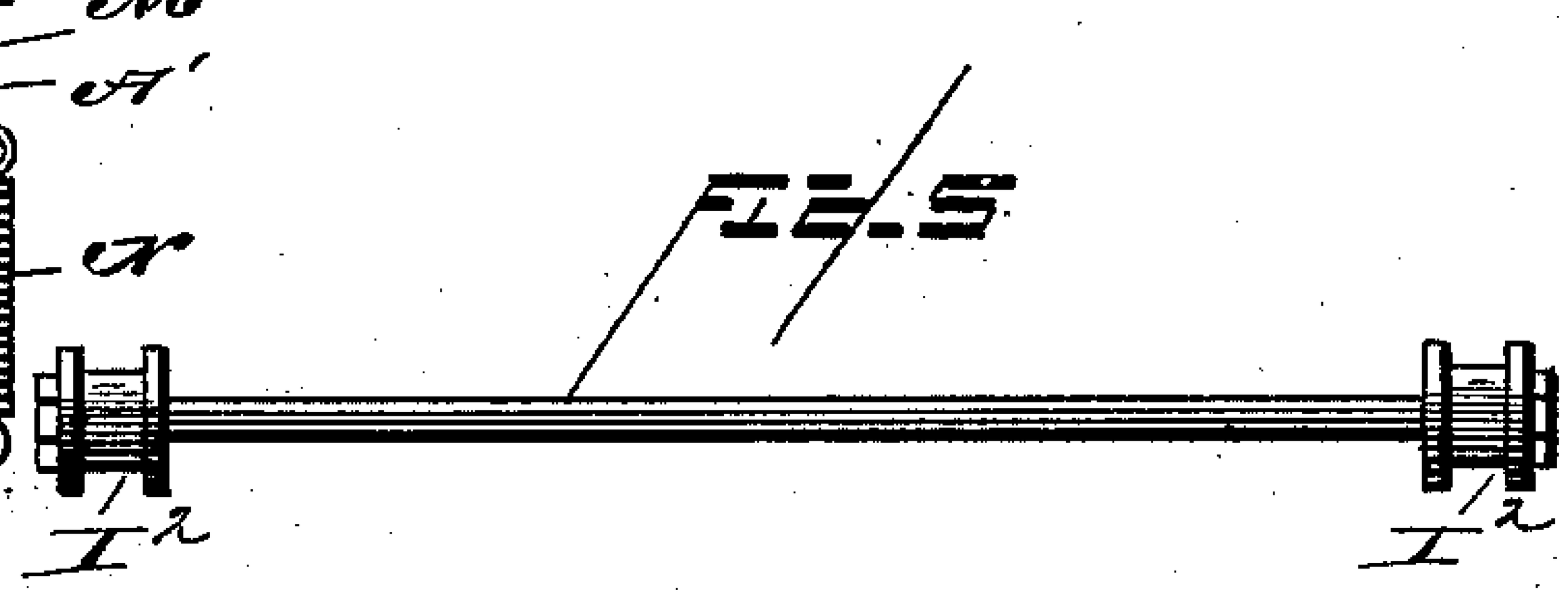

Fig. 5.

Witnesses

[illegible]

E. G. Siggers

Inventor

Wm. W. Weisell.

By his Attorneys

C. A. Snow & Co.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM WILSON WEISELL, OF BLUFFTON, INDIANA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 362,561, dated May 10, 1887.

Application filed December 22, 1886. Serial No. 222,291. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM WILSON WEISELL, a citizen of the United States, residing at Bluffton, in the county of Wells and State of Indiana, have invented a new and useful Improvement in Reciprocating-Rubber Washing-Machines, of which the following is a specification.

My invention relates to improvements in that class of machines known as "reciprocating rubber washing-machines;" and it consists in certain novel features of construction, combination, and arrangement, as will be hereinafter first fully described, and then pointed out in the claims.

In the annexed drawings, Figure 1 is a perspective view of my improved washing-machine. Fig. 2 is a vertical longitudinal section, and Fig. 3 is a vertical cross-section, of the same. Fig. 4 is a detail view showing a slight modification of the standards which support the shaft of the reciprocating rubber; and Fig. 5 is a detail view showing a straight shaft, which may be substituted for the crank-shaft shown in the other figures.

In carrying out my invention I employ a rectangular suds-box, A, which may be of any desired size, and is supported upon legs *a*, which are of the proper height to bring the operating-lever within convenient reach of the operator. The sides A′ of the suds-box are made of wood and held together by bolts *a′*, which also pass through the upper ends of the legs and secure them to the suds-box, as shown. Upon the inner face of each side A′, I form a semicircular groove, which extends between the two upper corners of the same. The bottom B (formed of any non-corrosive material, such as zinc, galvanized iron, &c.) rests in these grooves, and is thereby held in position between the sides A′. Cross-pieces C are secured to the sides A′ at the upper corners thereof, and cover the edges of the bottom B, thereby protecting them from injury and preventing their tearing or cutting the clothes of the operator. At one end of the suds-box these cross pieces or bars are so arranged as to provide a rail, *c*, to which a wringer may be secured, and a shelf, *c′*, a short distance below the upper edge of the wringer-rail, upon which I pivotally secure two buttons, D D, which normally hold the wash-board in the suds-box.

The wash-board E rests upon the bottom B, and consists of an open semicircular frame carrying a series of rollers, *e*, which may have either smooth or corrugated surfaces, as desired. The wash-board is made in two or more sections, so that it may be easily removed for the purpose of cleaning the machine or to replace a broken part.

It may sometimes be found desirable to use some smooth rollers and some corrugated rollers in the same machine, when the sectional wash-board will be found particularly advantageous. The wash-board has a curvature equal to that of the bottom B and rests directly upon the same, as shown and before mentioned. It is held in place by the buttons D D, before referred to, and the cross-bars C at the other end of the suds-box. The end of the wash-board which rests against the buttons D is provided with an upwardly-projecting guard-strip, F, over which the clothes are drawn to the wringer, and which is provided with two openings, *f f*, at the bottom edge, through which the water passes back into the suds-box as the clothes are passed through the wringer.

G is the reciprocating rubber, between which and the wash-board E the clothes are washed. The rubber consists of a series of rollers, *g*, preferably corrugated, journaled in the semicircular side pieces, *g′ g′*, along the semicircular edge thereof, which is placed downward, as shown, so that the rollers *g* will be arranged in a line parallel to the wash-board E. The sides *g′* are suitably braced by the cross-pieces g^2, one at the bottom and one at each corner.

H H are two levers, which are secured to the side pieces, *g′*, and extend upward therefrom, preferably at an angle of about forty degrees. Their upper ends are connected by a cross bar or handle, *h*, which is grasped by the operator when using the machine. The rubber G is hung upon a crank shaft or shafts, I, which are inserted through the levers H and slots J in the standards K, secured upon the upper edge of the sides A′ of the suds-box, as shown. The slots J extend from the top of the standards to near the bottom thereof, and the crank-shafts I rest upon the bottom of the slots, as shown. Coiled springs *j* are placed in the slots J and rest upon the shafts I. The upper open end of the slot is closed by a pin, L, inserted through the ends of the standard,

and the spring *j*, acting between the said pin and the shafts I, tends to keep the shafts in the bottom of the slot and prevent their rising, which would diminish the pressure on the clothes.

L' are braces which serve to secure the standards in their proper position on the sides of the suds-box. The standards and braces are preferably made integral with each other, by casting or otherwise. They may, however, be made as shown in Fig. 4. In this form the standards are divided, and one of the braces is hinged to the side of the suds-box so as to swing away from the other part. This construction facilitates the removal of the rubber, as it does not have to be lifted as high as when the other form is used.

The crank-shafts I pass through the slots J, and the cranked portion is formed of their outer ends, as shown. The pintle ends *i* are provided with heads *i'*, behind which loops M rest upon and pass around the pintles. Coiled springs N have one end secured to the lower portion of the loops M and their other end secured to the side of the suds-box near its lower edge, as shown.

O is a straight or curved leaf-spring or spring-rod, which has one end secured to the side of the suds-box, near either end thereof, and has its other end extended over and resting upon the pintles *i*.

In the drawings I have shown two short crank-shafts, I, but it is apparent that to use one shaft extending through both arms would involve no departure from my invention. A straight shaft, as shown in Fig. 5, may be used instead of the crank-shaft or shafts. This straight shaft is provided at its ends with grooved pulleys or rollers I^2, in the grooves of which the loop M and the end of the spring O rest.

P is a plug, which closes an opening in the side of the suds-box near its lower edge, through which the water is allowed to escape after the clothes have been washed.

Q is a folding bench pivotally secured to the wringer end of the suds-box. When extended, as shown in Fig. 1, it forms a convenient support for a basket placed thereon to receive the clothes from the wringer. When folded, as shown in Fig. 2, it will close up under the wringer-rail and between the sides of the suds-box, occupying very little space, and forming no obstacle to the disposition of the machine when not in use.

The operation of my machine will be readily understood. The rubber is first removed from the suds-box, and the clothes to be washed and soap and water are placed in the suds-box. The rubber is then replaced, the springs *j* and the pins L placed in position, the springs O and N adjusted, and the machine is ready for use. The handle *h* is grasped by the operator and vibrated rapidly until the clothes are thoroughly cleansed. The rubber is then removed, the wringer attached, and the clothes run therethrough, as will be understood.

The arrangement of springs shown allows the rubber to yield readily to the thickness or quantity of clothes being washed, and at the same time aids the operator in exerting the pressure necessary to thoroughly cleanse them.

It may be unnecessary sometimes to use both springs O and N in order to gain the necessary pressure, and either one or both may be used, according to the quantity or quality of the clothes being washed.

While, as before stated, the straight shaft shown in Fig. 5 may be used, it will be found most desirable to use the crank shaft or shafts, as when the crank-shafts are used the springs N O aid the operator in changing or reversing the stroke of the rubber. As the rubber is vibrated the pintles *i* will be simultaneously vibrated, in a direction contrary to that of the handle-bar, as will be readily understood. When the handle-bar has reached its lowest position, the pintles will be at their highest position and the springs will exert an increased tension upon the same and will tend to draw them back to their original position, so that the labor required of the operator will be greatly dimished, as is obvious. Should the clothes bunch up, three or four strokes will relieve the trouble.

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

1. The combination, with the suds-box, of the reciprocating rubber hung upon crank-shafts, the cranked portions of which are outside of the suds-box, and springs having one end secured to the suds-box near its lower edge, and loops secured to the other ends of the springs and encircling the cranked portion of the said shafts, substantially as described and shown.

2. In a reciprocating-rubber washing-machine, the combination, with the suds-box and the reciprocating rubber having a crank-shaft, of springs secured to the sides of the box and bearing on the cranked ends of the shaft to reverse its stroke, substantially as set forth.

3. In a reciprocating-rubber washing-machine, the combination, with the suds-box and the reciprocating rubber having a crank-shaft, of coiled springs secured to the sides of the box near its bottom, and spring-rods secured to the sides of the box near the end thereof, the said coiled springs and spring-rods bearing on the cranked ends of the rubber-shaft to reverse its stroke, substantially as specified.

4. The combination of the suds-box, the divided standards pivotally secured upon the upper edges of the suds-box, and the rubber having its shaft resting in the base of said standards below their swinging portions, substantially as described.

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

Witnesses: WILLIAM WILSON WEISELL.
JOSEPH S. DAILEY,
THOMAS J. LOWARDS.