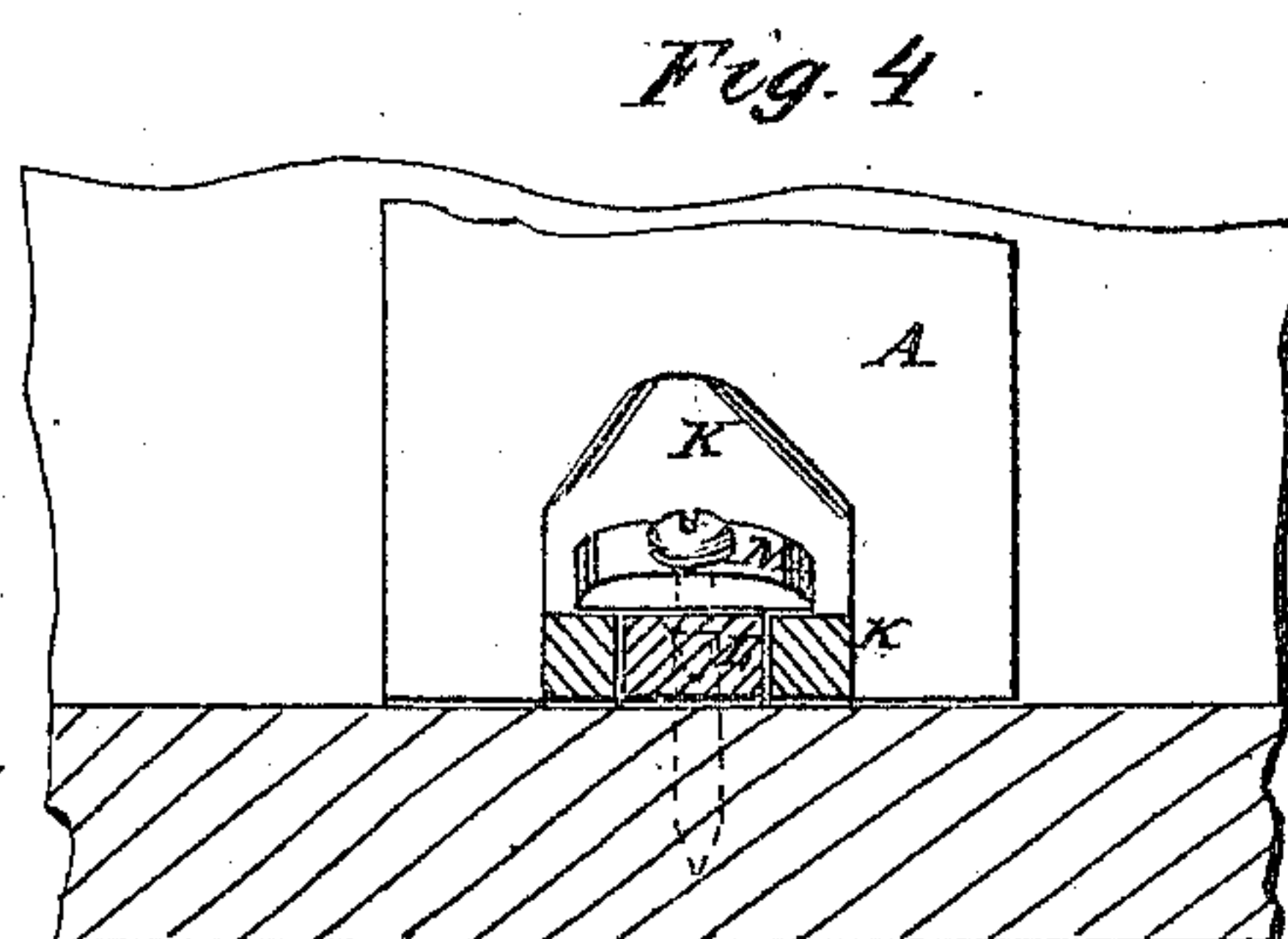
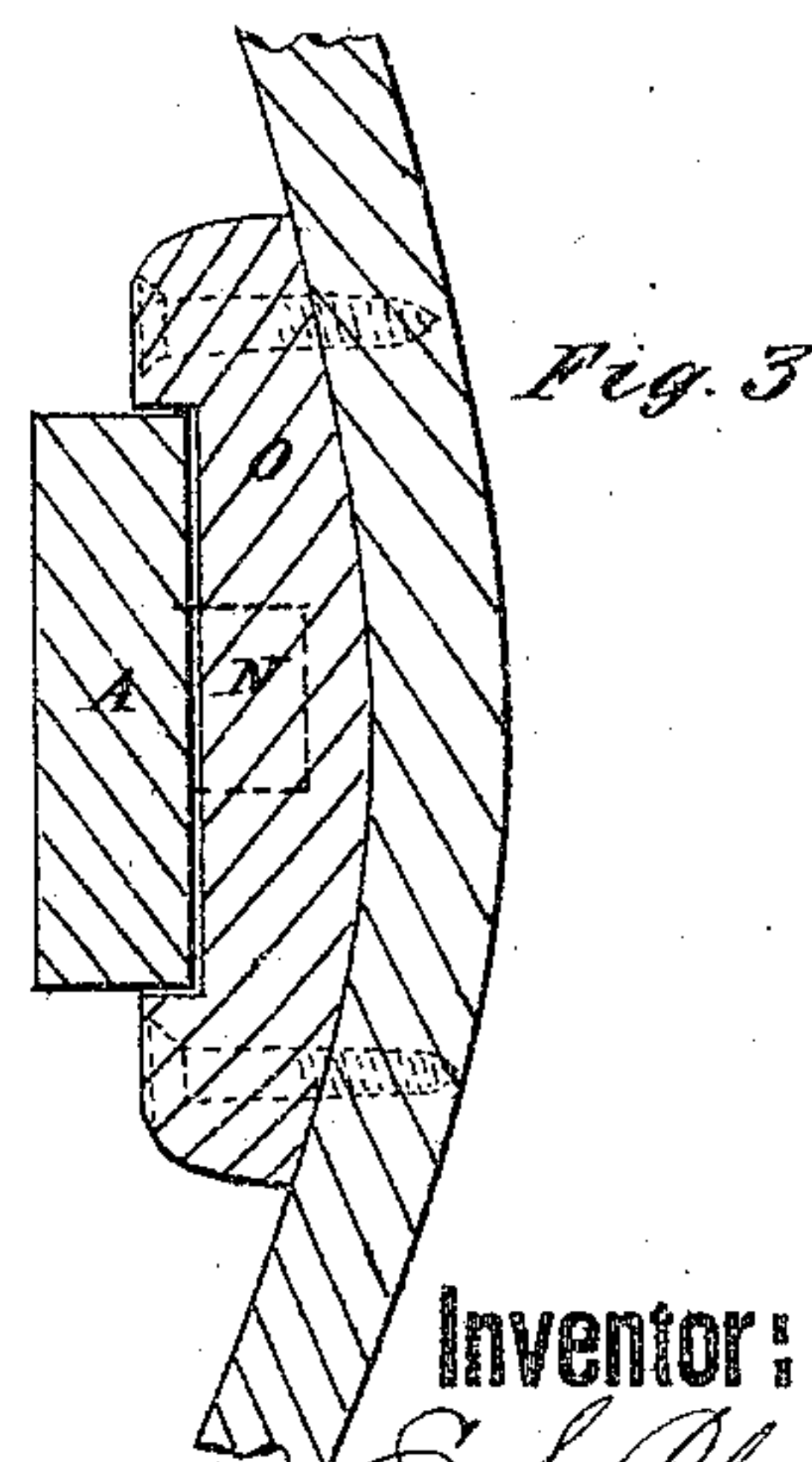
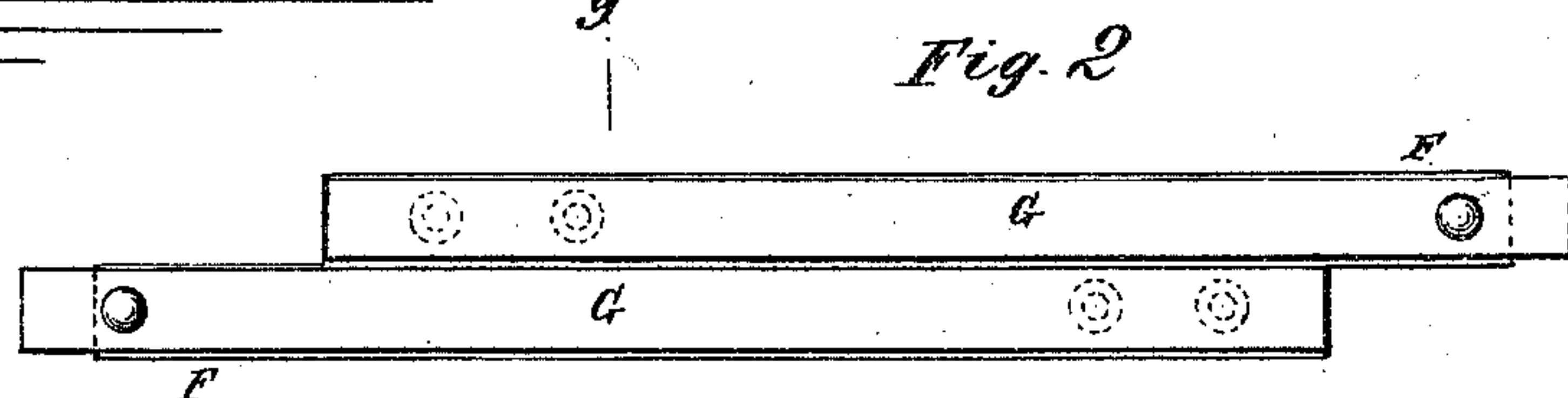
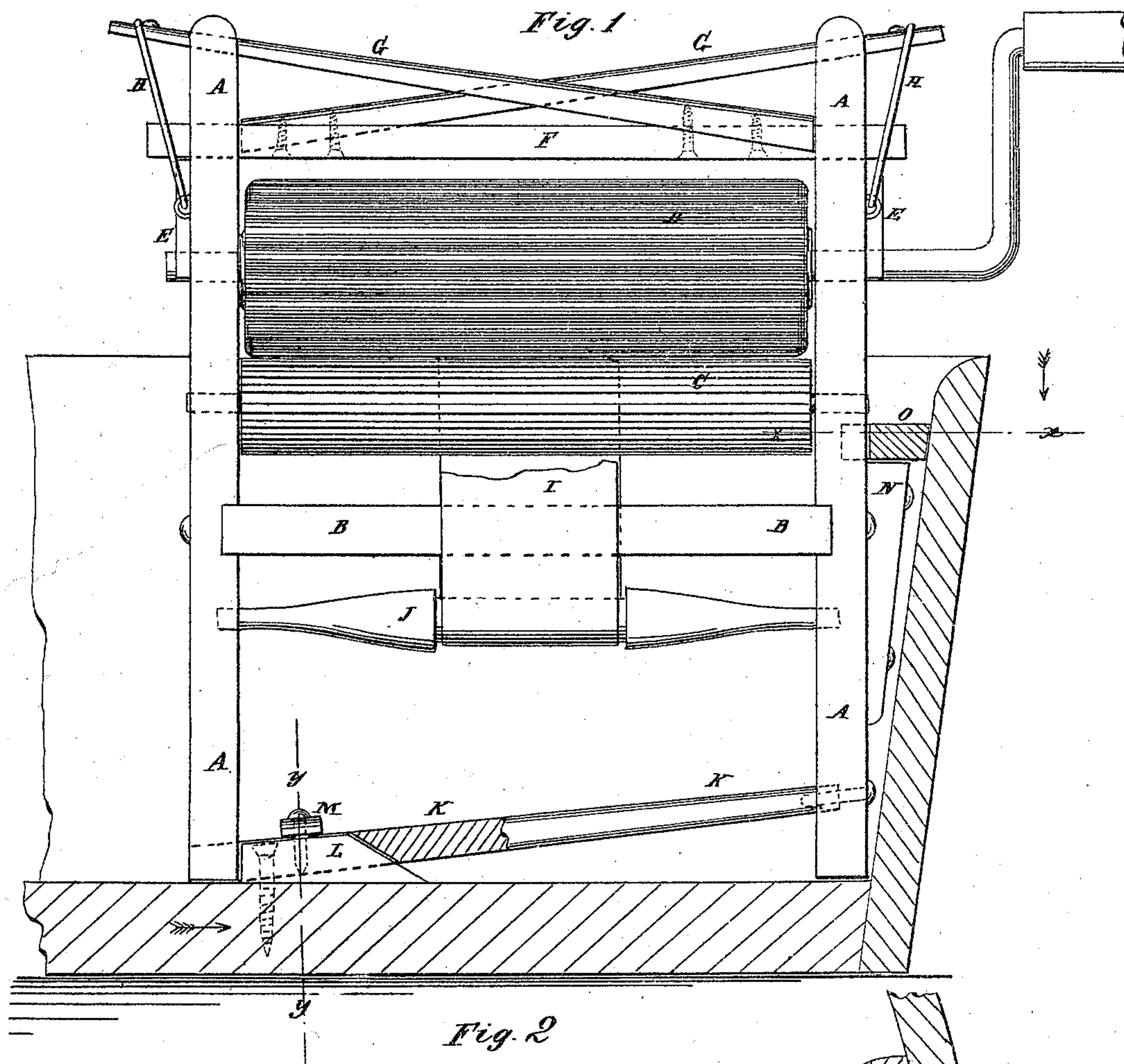


E. S. BLISS.
Washing-Machines.

No. 139,940.

Patented June 17, 1873.



Witnesses:

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UNITED STATES PATENT OFFICE.

EDWIN S. BLISS, OF RICHBURG, NEW YORK.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **139,940**, dated June 17, 1873; application filed May 17, 1873.

To all whom it may concern:

Be it known that I, EDWIN S. BLISS, of Richburg, in the county of Allegany and State of New York, have invented a new and useful Improvement in Washing-Machines, of which the following is a specification:

Figure 1 is a side view of my improved machine, parts being broken away to show the construction. Fig. 2 is a top view of the spring. Fig. 3 is a detail section taken through the line *x x*, Fig. 1. Fig. 4. is a detail section taken through the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved washing-machine of that class in which the clothes are washed by alternately saturating them and passing them between rollers by which the water is pressed out, carrying the dirt with it, and which shall be simple in construction, not liable to get out of order, and effective in operation.

The invention consists in the spring constructed, as herein shown and described, in combination with the standards, rollers, and loops, and in the slotted cross-bar, the block, the button, the cleat, and the notched block, constructed and arranged in connection with the washing-machine, as herein shown and described, for securing said machine in a wash-tub, as set forth.

A are the standards or uprights of the machine, the middle parts of which are connected by a cross-bar, B. C are the lower rollers, the journals of which revolve in bearings in the standards A. D is the upper or pressure-roller, the journals of which revolve in bearings E, which slide up and down in slots in the upper part of the standards A. F is a bar, the ends of which are cut away or rabbeted upon their opposite sides, as shown in Fig. 2, so that its ends may fit into the slots in the upper parts of the standards A, and rest upon the tops of the bearings E. The upper side of the body of the bar F at the shoulders formed by the rabbets, is beveled off, and to the inclines thus formed are attached the ends of the two elastic bars, G, the other ends of which project through the slots of the stand-

ards A, so as to receive the loops H, the ends of which are pivoted to the outer sides of the standards A. The pressure of the spring is regulated by moving the loops H out or in upon the projecting ends of the spring-bars G. The loops H may be kept in place upon the projecting ends of the spring-bars G by round-headed tacks driven into said bars. I is the guide-apron or belt, which passes around the lower rollers C, and around the roller J, pivoted to the standards A below the cross-bar B. K is a cross-bar, one end of which is secured to the lower end of one of the standards A, and the other end is attached to the other standard A a little above its lower end. In the lower end of the cross-bar K is formed a slot, the inner end of which is inclined to fit upon the inclined end of the small block L, attached to the bottom of the tub, and to which the said bar K is secured by a button, M, pivoted to the top of the said block L. To the outer side of the standard A, to which the upper end of the bar K is attached, is secured a cleat or block, N, in such a position that its upper end, when the machine is in place, may rest against the lower side of the block O, attached to the upper part of the tub, and the inner edge of which is notched to receive the standard A.

By this arrangement the machine can be quickly attached to and detached from the tub, and when attached will be firmly and securely held.

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

1. The spring F G, constructed as herein shown and described, in combination with the standards A, rollers D C, and loops H, substantially as and for the purpose set forth.

2. The slotted cross-bar K, block L, button M, cleat N, and notched-block O, constructed and arranged, in connection with the washing-machine, as herein shown and described, for securing said machine in a wash-tub, as set forth.

EDWIN S. BLISS.

Witnesses:

J. S. ROWLEY,
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