

E. M. WALKER.
Washing-Machine.

No. 227,140.

Patented May 4, 1880.

Fig. 1.

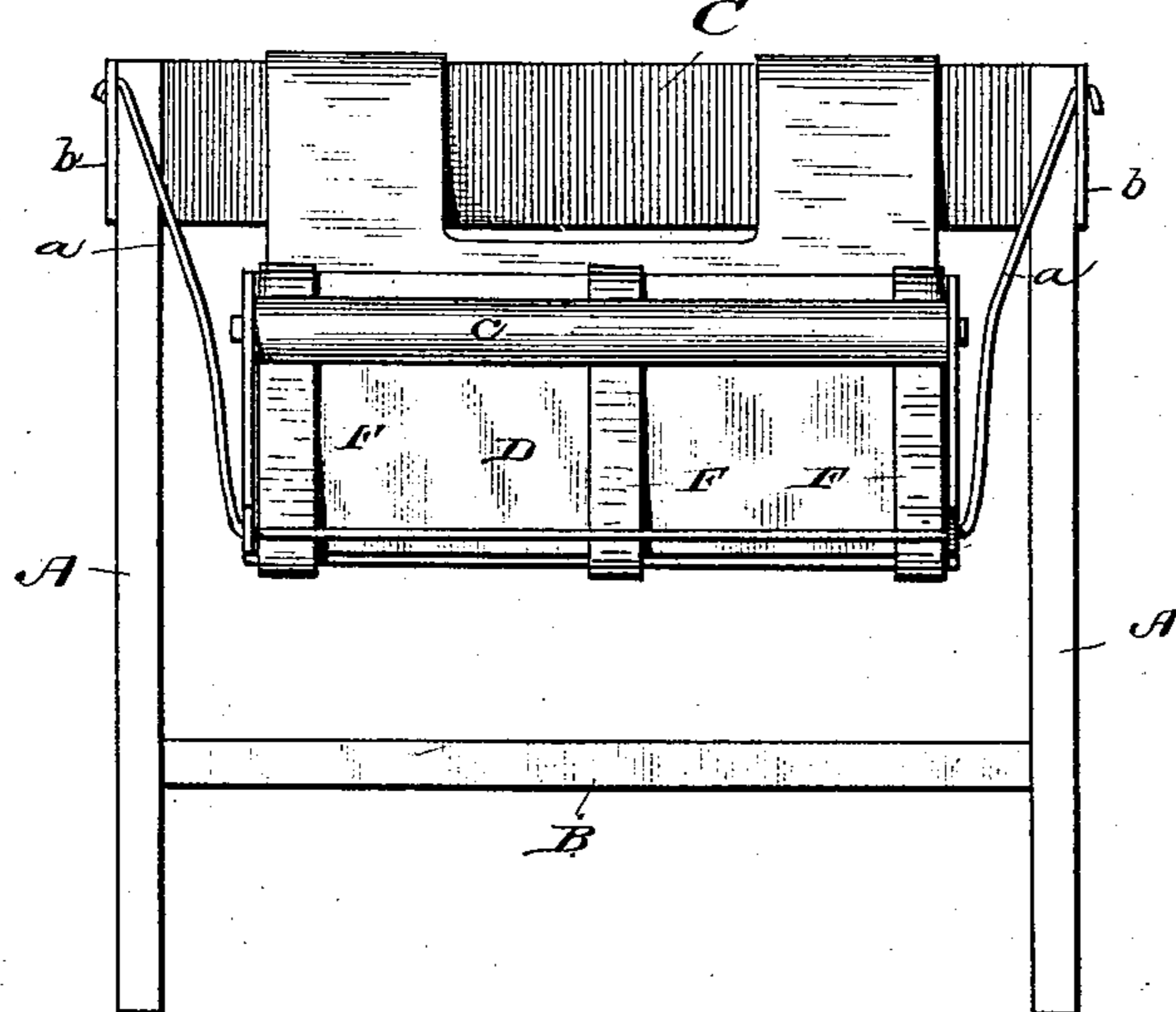


Fig. 2.

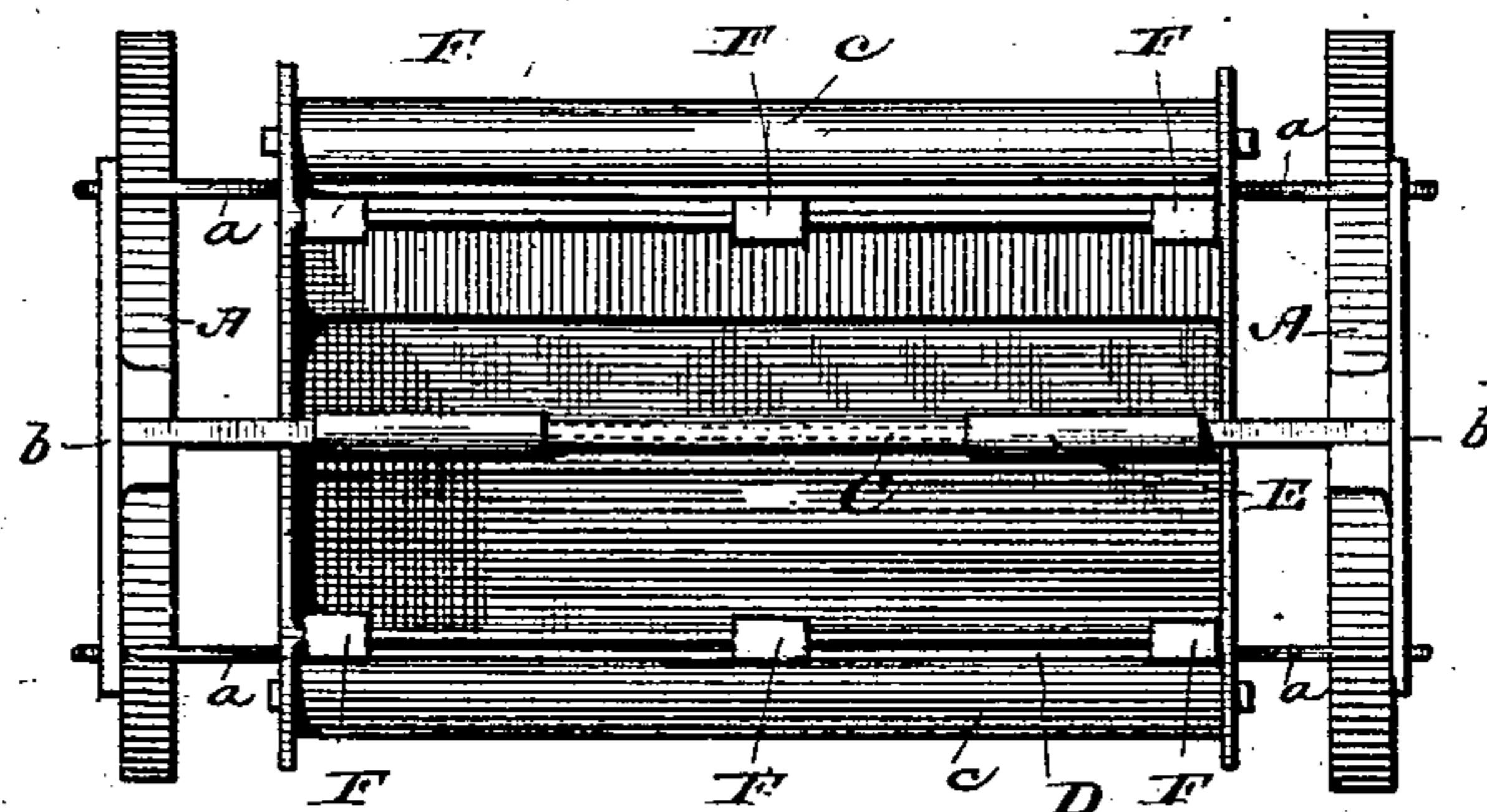
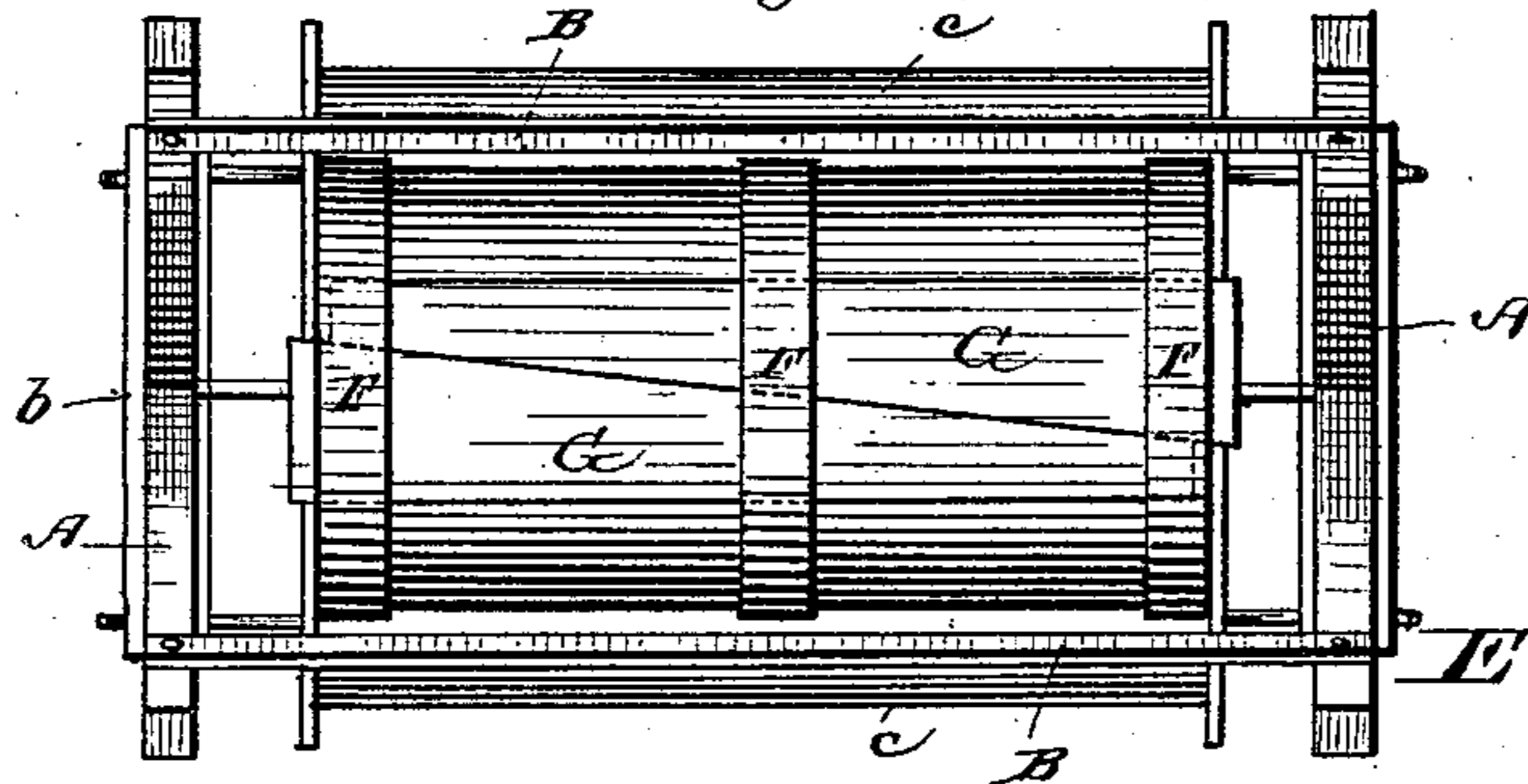


Fig. 3.



Witnesses.

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Fig. 3.

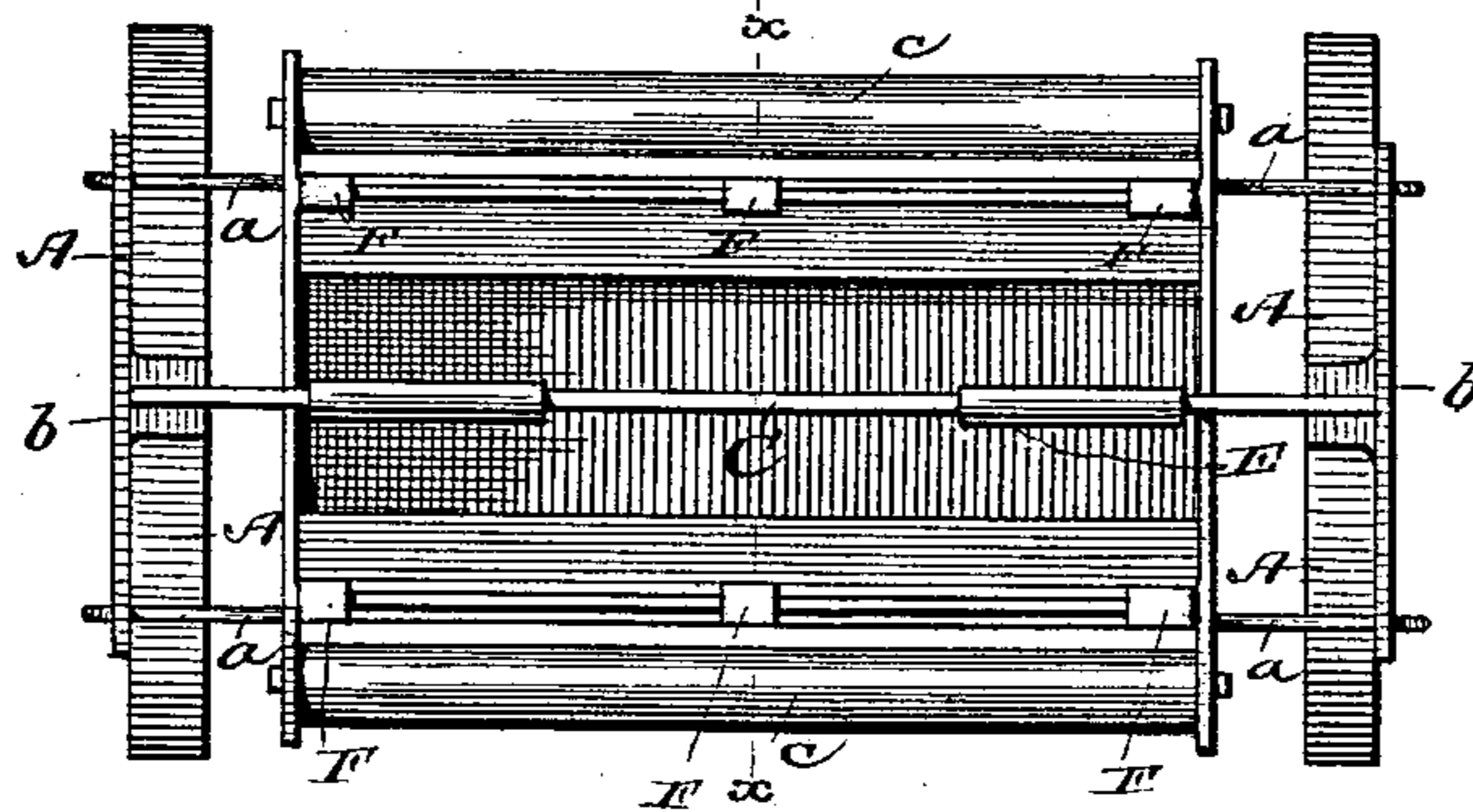


Fig. 4.

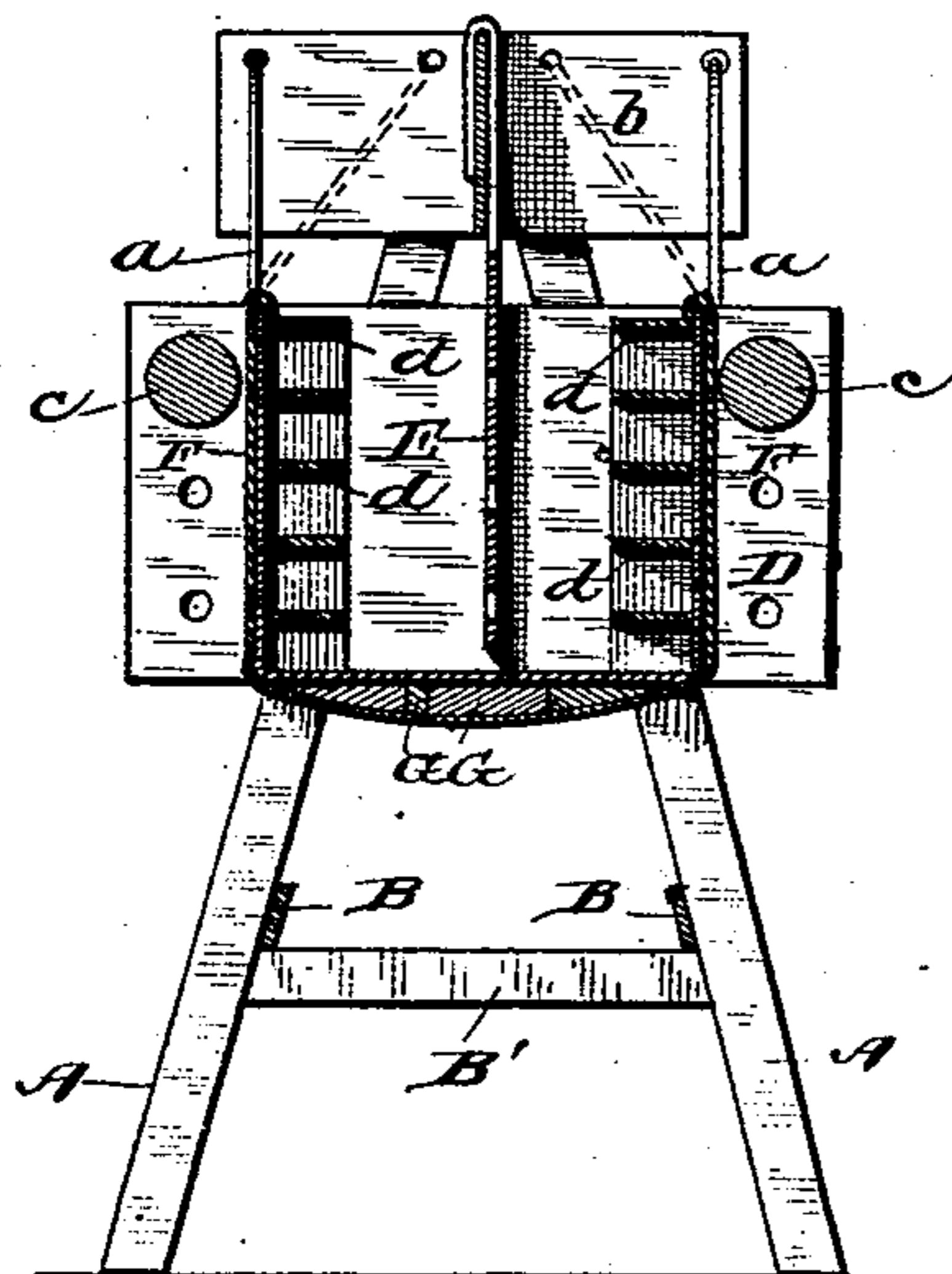


Fig. 5.

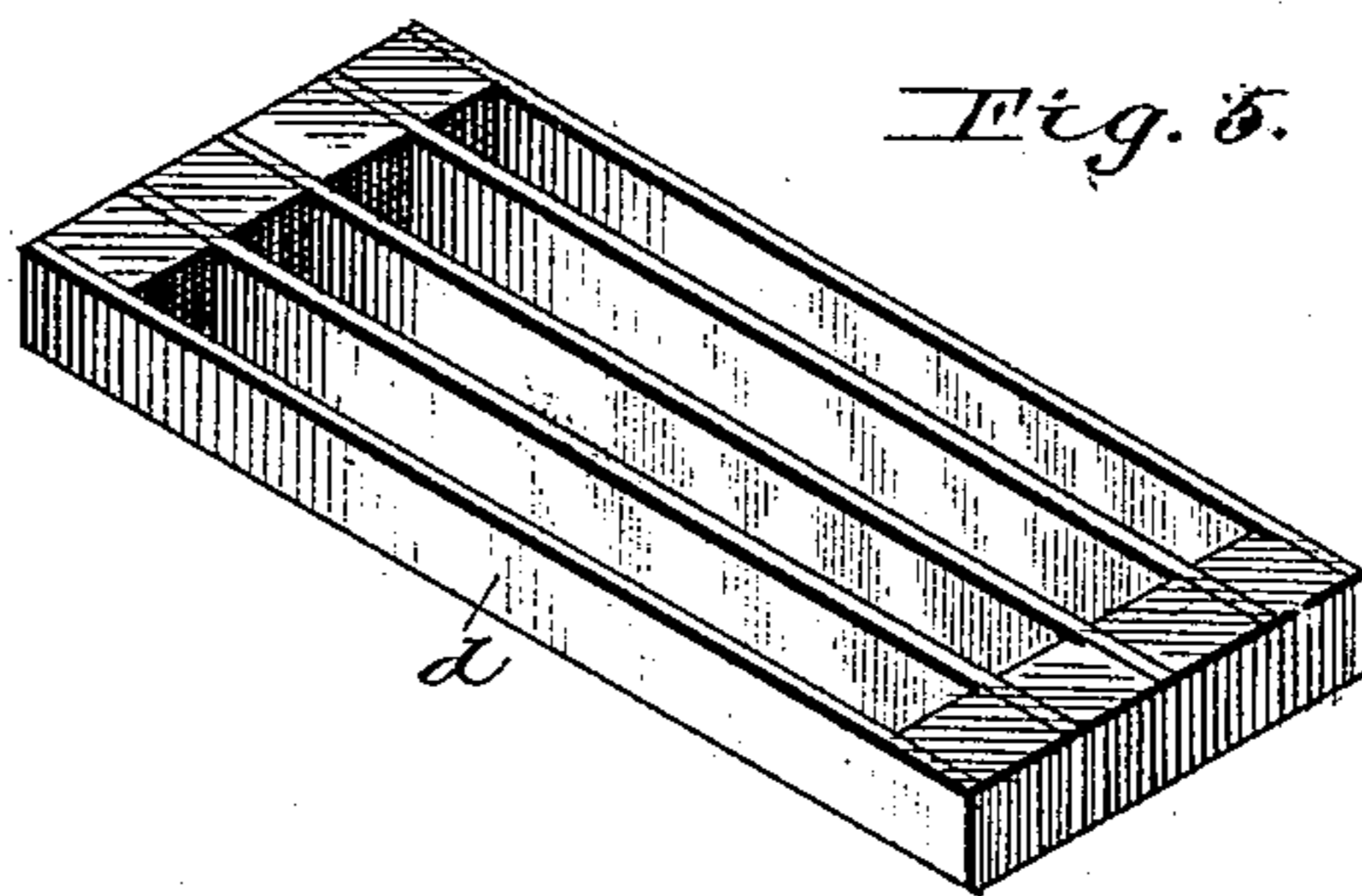
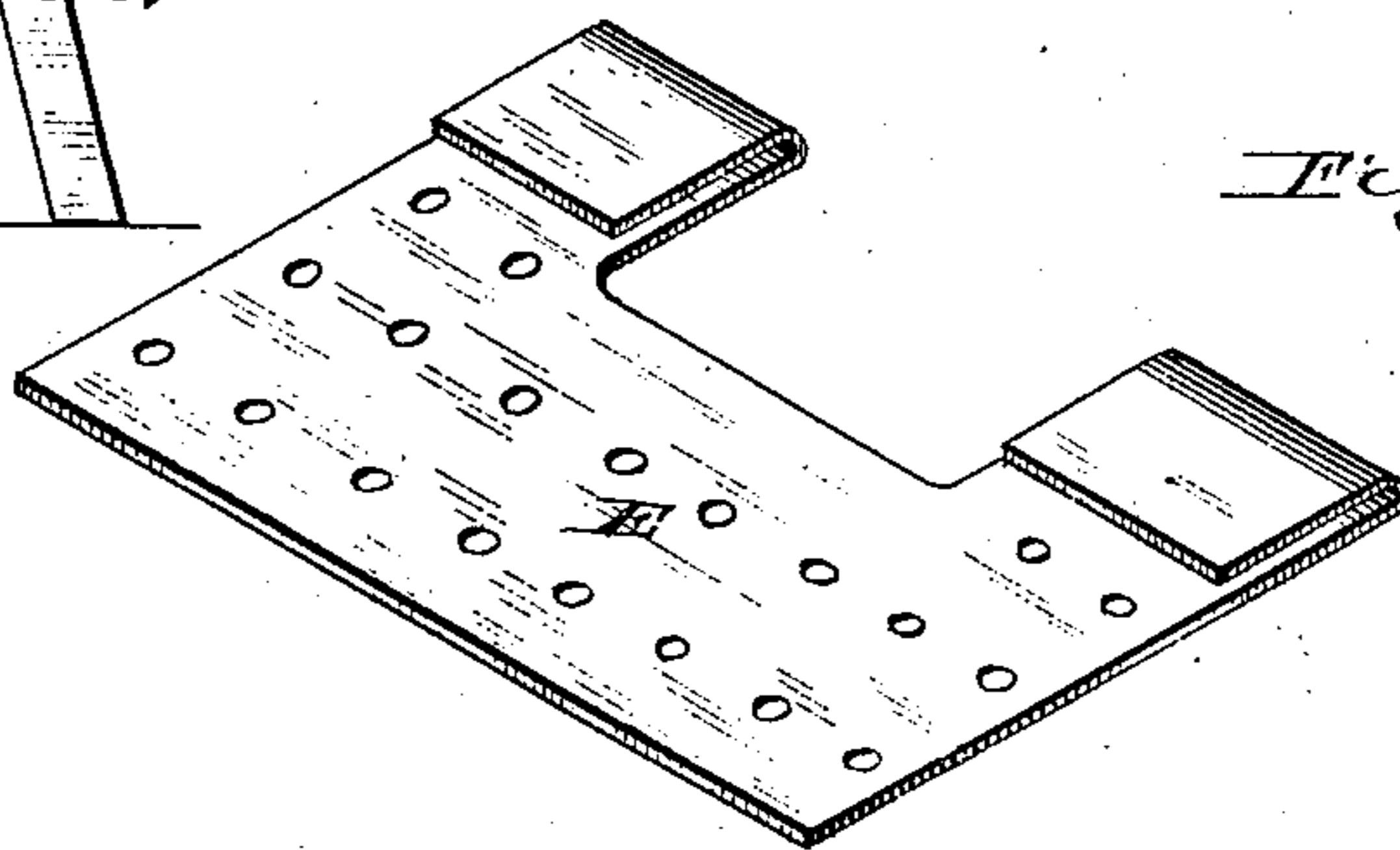


Fig. 6.



Witnesses.

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UNITED STATES PATENT OFFICE.

ELIAS M. WALKER, OF GALLATIN, MISSOURI.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 227,140, dated May 4, 1880.

Application filed February 7, 1880.

To all whom it may concern:

Be it known that I, ELIAS M. WALKER, citizen of the United States, residing at Gallatin, in the county of Davies and State of Missouri, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as 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 letters or figures of reference marked thereon, which form a part of this specification.

This invention has for its object the economy of material and space and the efficiency, simplicity, and cheapness of construction of machines for washing clothes.

The invention consists in forming the frame of a washing-machine of two inverted-V-shaped sides connected by suitable braces below and by a broad top rail, with which is combined a tub suspended from arms on the side pieces by means of hangers, said tub being provided with roller-handles, and operating in connection with a perforated plate or board suspended from the aforesaid top rail.

In the drawings illustrating my invention, in the several figures of which like parts are similarly designated, Figure 1 is a side elevation of my machine. Fig. 2 is a top-plan view. Fig. 3 is a similar view of another form; Fig. 4, a central vertical cross-section on the plane of the line *xx* of Fig. 3. Fig. 5 is a perspective view of the slatted rack used in the tub. Fig. 6 is a perspective view of the perforated plate or board to be suspended in the tub; and Fig. 7 is a bottom view, showing wedges placed between the body of the machine and hoops around the same, for the purpose of tightening the tub.

The sides or end pieces of my frame are composed of inverted-V-shaped frames connected by braces *B B'* below and by a cross-rail, *C*, at the top.

D is a tub of wood or metal, suspended between the sides *A A* by means of hangers *a a* on each side of the suds-box, depending from arms *b*, attached to the tops of the said frames or sides. This tub is provided with handles *c*, roller-handles being preferred, by which the operator is enabled to pull or push the tub in

one or both directions only, and allow it by gravity to swing in the opposite direction.

The length of the hangers *a* being fixed, the tub as it is swung will necessarily have a rising-and-falling motion in the arc of a circle, which will impart a measure of agitation within the tub that will facilitate the washing, and this will be enhanced by the sudden stopping and reversal of the tub's motion by the limit of oscillation fixedly by the length of the hangers.

The tub is provided on one or both of its sides with a slatted rack, *d*, and when used on both sides two persons may use the machine at the same time, one on each side.

From the top rail, *C*, depends a perforated plate or board, *E*, extending in the tub nearly to its bottom. The clothes to be washed are placed in the tub between this plate and the slatted rack, and water being poured into said tub, the tub is set in motion, and the movement thereof and that of the clothes will cause the water to flow back and forth in the tub, and its contact with the slatted racks and its passage through the perforated plate or board *E* will violently agitate it, causing the clothes to be dashed against the racks, and pressed or squeezed between them and the plate or board, whereby the dirt is speedily removed. As the tub is drawn away from the perforated board *E* it draws the clothes away from the bottom of said board, while at the top they fall toward the board.

If it is desired to give to the tub more of a tilting motion than is permitted when the hangers depend perpendicularly, as shown in full lines in the drawings, the hangers can be removed from the holes near the end of arms *b* and inserted in the holes made in the arms near to cross-rail *C*. It will then be found that the hangers will have the inclination from the cross-rail to the bottom of the tub shown by dotted lines in Fig. 4, and that the tub will tilt more than when suspended, as shown by full lines.

It frequently happens that the boards of which the tubs are commonly made shrink, and then the tubs leak, unless there is provided some means for tightening the boards. I therefore encircle the body of the tub with a series of hoops, *F*, made of ordinary hoop-iron,

and drive wedges G in between said hoops and the body of the tub. The inclines of the wedges come together, as shown in Fig. 7, and when the boards shrink, and openings are thereby
5 formed, the wedges are driven in from the ends, whereby the boards are tightened and leaks stopped.

Other devices than the perforated plate or board and the slatted racks may be used, and
10 I am aware that these devices and the method of their operation are not new.

I am also aware that it is not broadly new to make a framing with inverted-V-shaped sides connected at top and bottom.

15 I prefer to make the perforated plate or board and the hangers detachable.

Having described my invention, what I claim is—

1. In a washing-machine, an oscillating tub, in combination with double hangers *a* and
20 frame A, having arms *b*, substantially as described.

2. In a washing-machine, the combination of the tub, encircling-hoops, and intermediate
25 wedges, for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ELIAS M. WALKER.

Witnesses:

C. E. ENGLISH,
S. J. WALKER.