L. J. KNOWLES.

Belt-Shipping Mechanism for Looms.

No. 197,641. Patented Nov. 27, 1877.

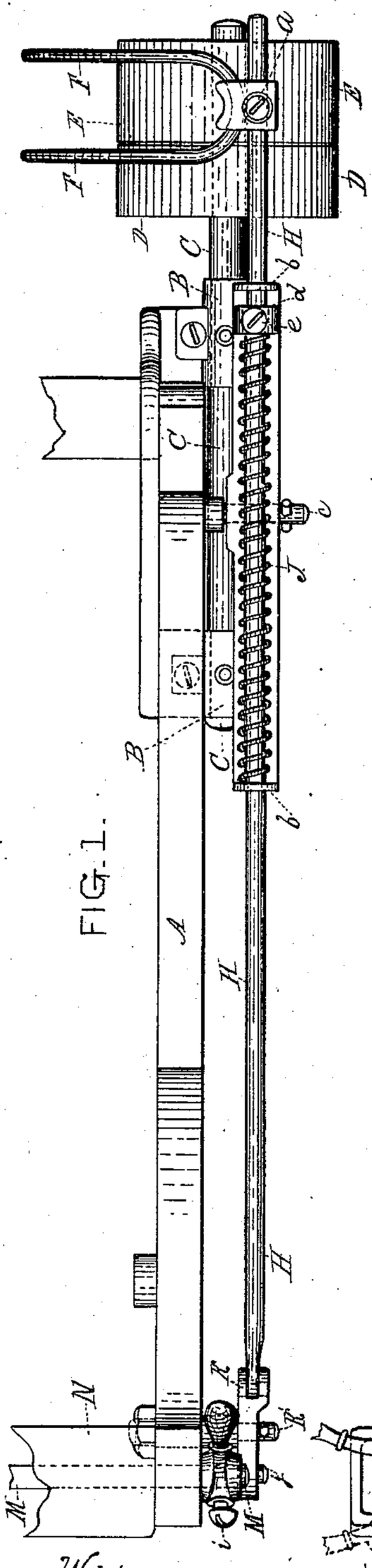

FIG. 1.

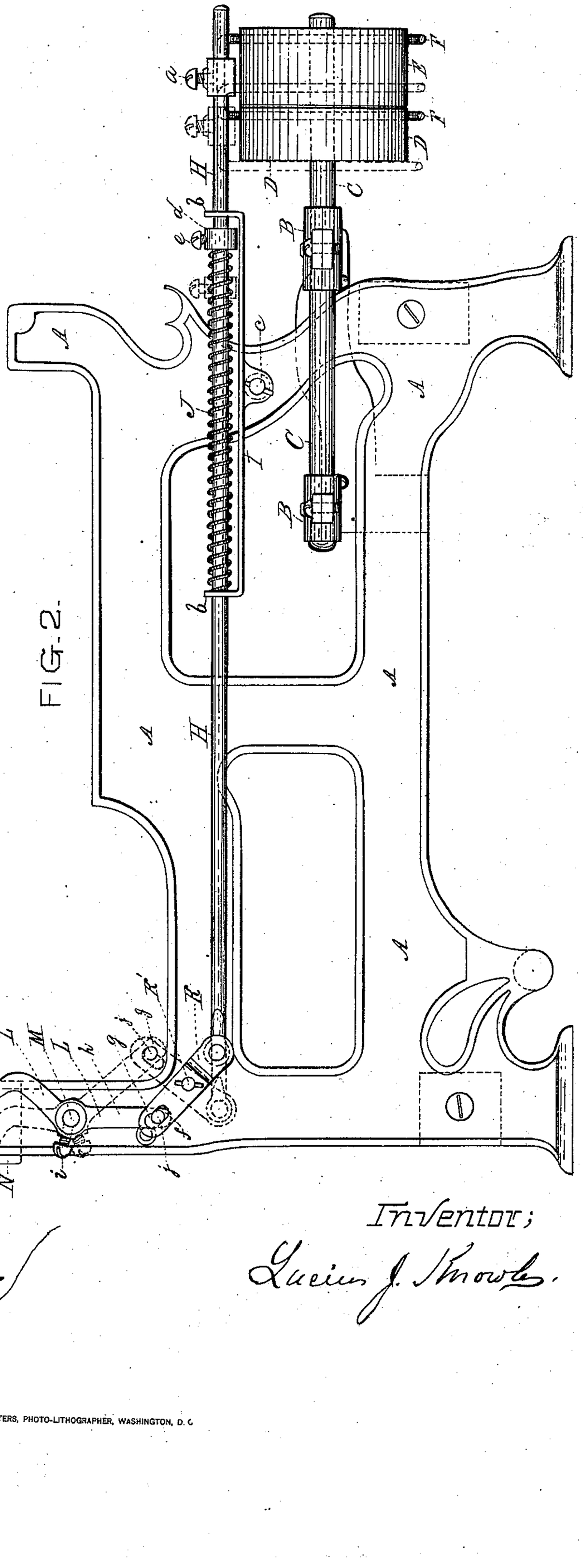

FIG. 2.

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IMPROVEMENT IN BELT-SHIPPING MECHANISMS FOR LOOMS.

Specification forming part of Letters Patent No. **197,641**, dated November 27, 1877; application filed November 3, 1877.

To all whom it may concern:

Be it known that I, LUCIUS J. KNOWLES, of the city and county of Worcester and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Shippers for Power-Looms; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a top or plan view of so much of a loom as is necessary to illustrate my present invention; and Fig. 2 represents a side view of the parts shown in Fig. 1, the upper end of the shipper-handle being represented broken off.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it more in detail.

In the drawings, the part marked A represents one side of a loom-frame, to which are secured bearings B for the shaft C, upon the end of which are arranged the pulleys D and E, for the driving-belt of the loom to run upon. D represents the tight pulley, and E the loose pulley. The shipper-fork F is secured by an adjusting-screw, *a*, to the shipper-rod H, which passes loosely through holes in the projections *b b* upon the rocking plate I, pivoted at *c* upon a standard projecting from the loom-frame. A spiral spring, J, is arranged upon rod H, with one end bearing against one of the projections *b* of the rocking plate I, while the other end presses against a stop, *d*, upon the rod H, and which is held in place upon said rod by means of a set-screw, *e;* consequently the tendency of the spring J is to always force rod H back to the position shown in full lines in the drawings, and this tendency can be increased by compressing spring J more or less, as desired, which is done by loosening set-screw *e*, and slipping the stop-piece *d* toward spring J, and then securing it in place upon rod H again. Upon the front end of rod H is hinged a link-piece, K, which is journaled upon a stud, K′, projecting from the side of the loom-frame. Said link-piece K, having a slot, *f*, with a notch or recess, *g*, in one side, the upper end of link-piece K is secured to the lower end *h* of shipper-handle L, which is fastened to one end of rod M by means of a set-screw, *i*, rod M extending through, under the breast-beam N, to the other side of the loom, and is provided with a handle, so that the shipper-handle can be operated from either side of the loom. The connection between link-piece K and handle L is formed by a stud or pin, *j*, projecting from the side of the lower end of handle L into and through slot *f*, as fully indicated in the drawings.

In the case of a narrow loom, instead of a rod, M, running through under the breast-beam, shipper-handle L could be supported upon a stud projecting from the side of the loom-frame, and which stud would be a substitute for the projecting end of rod M, as shown in the drawings.

When the belt is to be thrown upon tight pulley D, the operative takes hold of one of the shipper-handles, L, and pulls it forward into the position shown in dotted lines, Fig. 2, drawing the belt upon the tight pulley D, and when the parts are in such positions pin *j*, upon the lower end of shipper-handle L, which passes through slot *f*, rests in the notch or recess *g* in the upper end of slot *f*, thereby locking the shipper-rod H, and the parts connected therewith, in the positions shown in dotted lines, Fig. 2, with the belt upon the tight pulley D. As the end of link-piece K, to which the front end of shipper-rod H is hinged, moves in the arc of a circle, plate I, which supports the rod, is pivoted or hinged, as before explained, whereby all binding or cramping of the rod in the bearings *b b* is obviated.

To throw the belt upon the loose pulley E, the operative has only to push one of the handles back sufficiently far to throw pin *j* out of the notch or recess *g*, when spring J, expanding, carries rod H, with its shipper-fork F, back into the position shown in full lines in the drawings, and the belt will be retained upon the loose pulley E until one of the shipper-handles is drawn forward again, as before explained.

By the combination and arrangement of the parts as shown and described, I have simplified the operation of power-loom shippers, so that only one motion is required of the handle to force the belt upon the loose pulley, or from the loose pulley to the tight pulley.

Having described my improvements in shippers for power-looms, what I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

1. The combination, with the side of the loom-frame A, provided with projecting pin or stud *c* and shipper-rod H, of supporting-plate I, provided with bent bearing ends *b b*, spring J, and stop-piece *d*, substantially as and for the purposes set forth.

2. The combination, with rod H and shipper-handle L of a power-loom, of the hinged or pivoted notched and slotted link-piece K, said parts being arranged in relation to each other, as and for the purposes set forth.

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Witnesses:
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