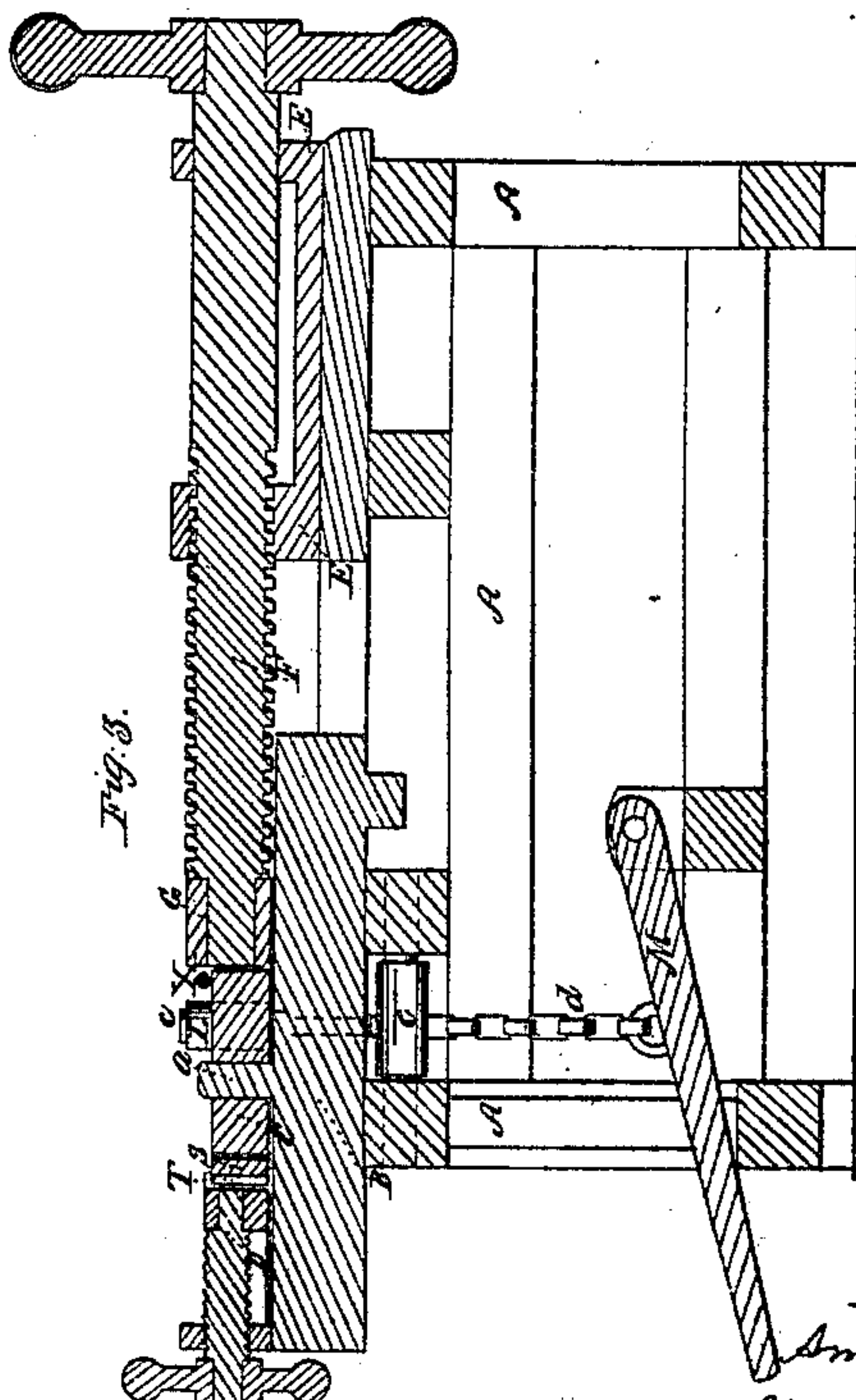
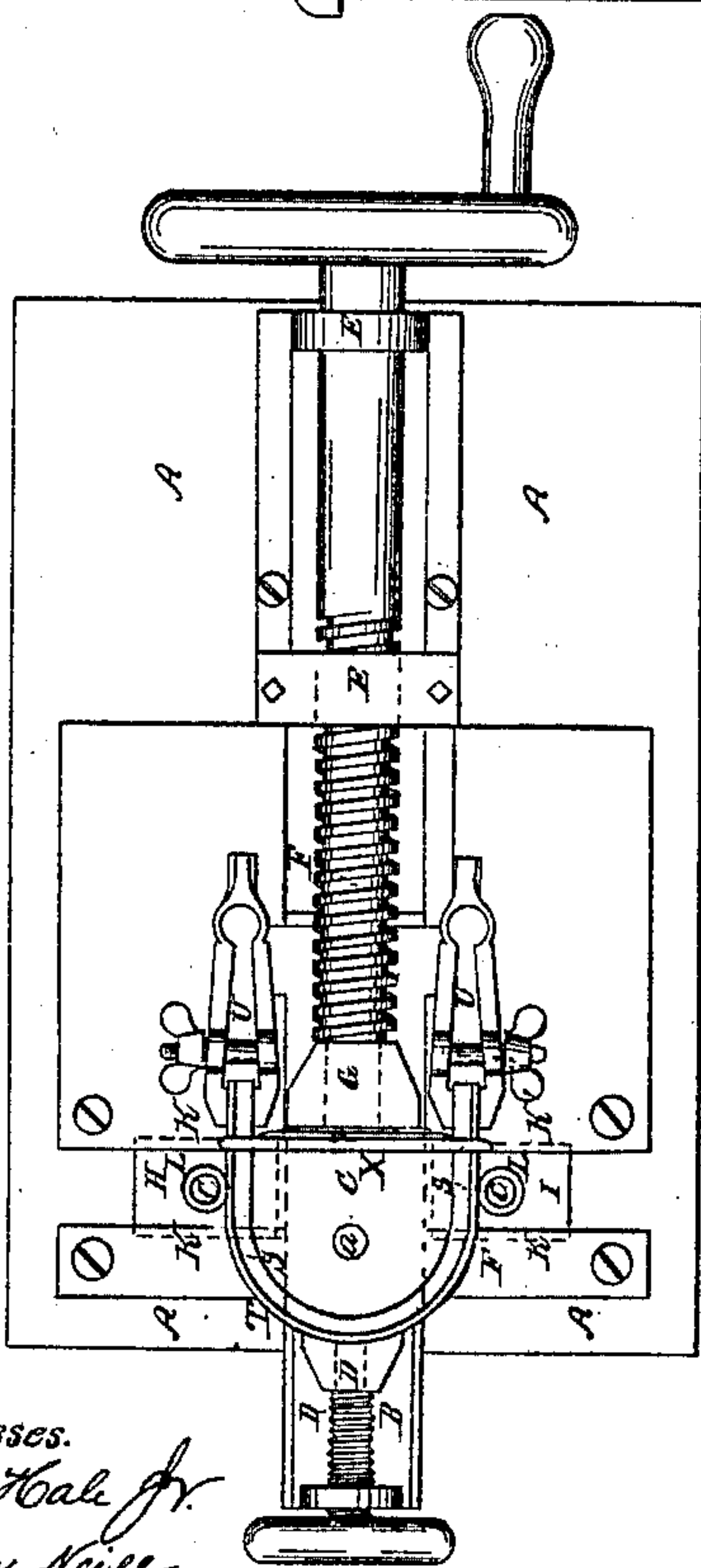
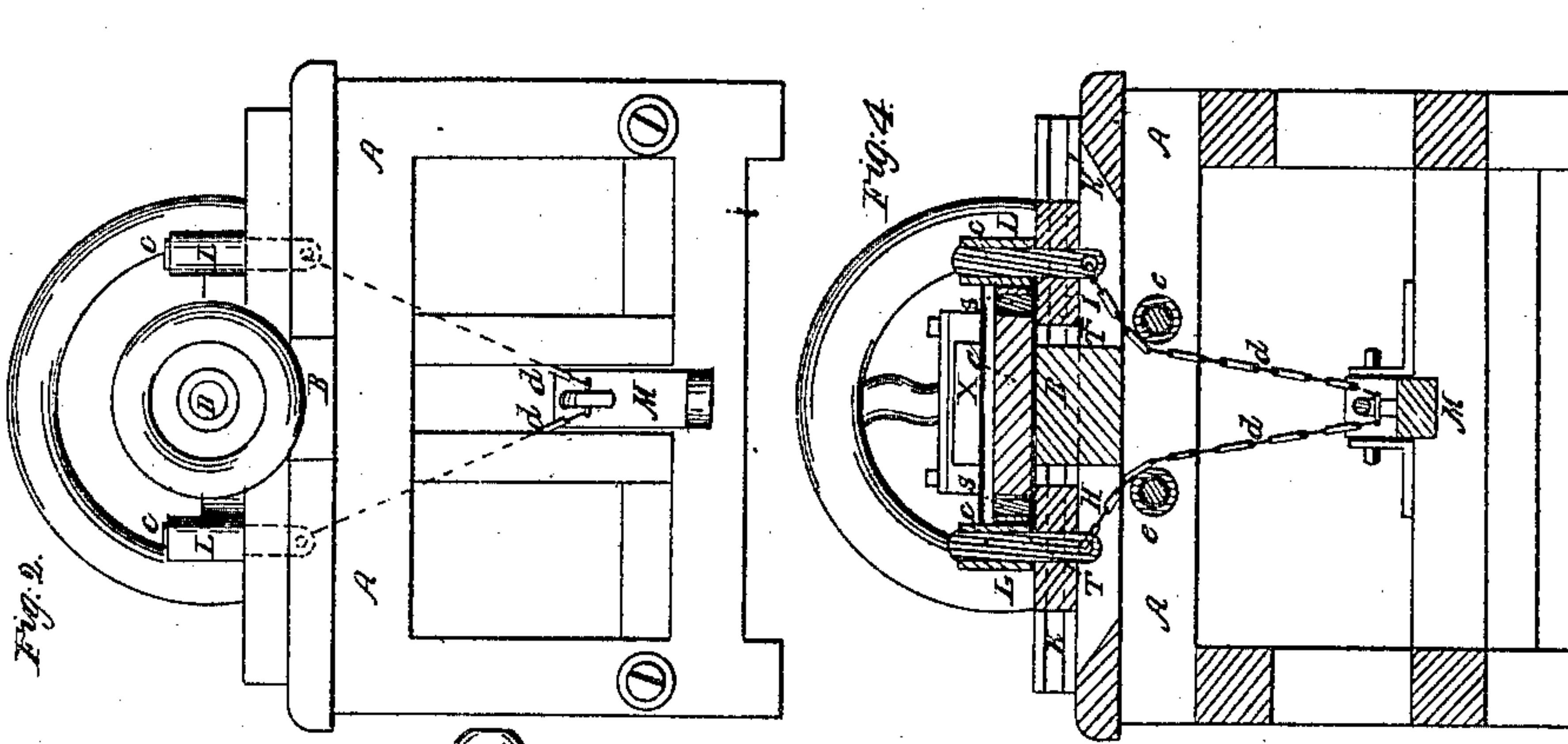


A. P. SPAULDING & E. PIERCE.  
MACHINE FOR BENDING WOOD.

No. 30,004.

Patented Sept. 11, 1860.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

AMOS P. SPAULDING AND ELISHA PIERCE, OF WESTMINSTER, MASSACHUSETTS.

## MACHINE FOR BENDING WOOD.

Specification of Letters Patent No. 30,004, dated September 11, 1860.

*To all whom it may concern:*

Be it known that we, AMOS P. SPAULDING and ELISHA PIERCE, of Westminster, in the county of Worcester and State of Massachusetts, have invented an Improved Machine for Bending Wood for Various Purposes; and we do hereby declare the same to be fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1, is a top view; Fig. 2, a front elevation and Fig. 3, a longitudinal section of it. Fig. 4, is a transverse section taken through the pressure rollers and their carriages.

The nature of our invention consists in the arrangement, and combination of vises or their equivalents with the bearing strip of the mechanism for bending and holding the wood as specified.

In the drawings, A, exhibits the frame of the machine, the same being made so as to support a movable carriage B, and permit the same to be slid or moved endwise back and forth. This carriage sustains on a pin *a*, a pattern block C, whose external periphery may be supposed to be curved to the shape to which a strip or piece of wood may be required to be bent or bended by the machine.

In advance of the pattern is a screw clamp D, which is supported by the carriage B, and serves to press the middle part of the strip of wood S, closely against the pattern while such strip is being operated on or bent.

In rear of the carriage B, there is a puppet E, which projects above and from the frame A, and carries a male screw F, which at its front end bears against a block G, that rests in contact with the pattern. Furthermore, there are on opposite sides of the carriage B, two slides or separate carriages, H, I, which play or slide laterally between ways or guides K, K', K', K', arranged as shown in Figs. 1, and 4. Each of the carriages, H, I, supports on a vertical journal *c*, projecting from it, a roller L. The two carriages, H, I, are connected with a treadle M, by means of chains *d*, *d*, which pass around

guides or rollers, *e*, *e*, and so that when the treadle is depressed, the two pressure rollers, L, L, shall be drawn toward each other and the pattern block.

In the drawings, the strip of wood S, is exhibited as bent around the pattern and as having another wooden strip, T, placed against its external surface, such strip T, being employed to prevent breakage of the fibers of the strip, S, while such strip may be acted on, or be in the act of being bent by the pattern and the pressure rollers. Preparatory to bending the strip S, we confine its two ends to those of the strip, T, by means of two clamps or vises, U, U, but not so strongly as to prevent the proper slipping of one strip on the other while the bending of them takes place, the force of grip of each vise being such as will allow of the said slip of one strip on the other and still hold to the other so as to permit the outer fibers of the strip S, from being raised and separated from the rest. The two strips so held together by the vises are next to be placed at the middle of the inner one, against the middle of the toe or front part of the periphery of the pattern and between the same and the pressure rollers and they the said strips should be firmly clamped to the pattern by the clamp D. Next, the screw F, should be revolved so as to force the carriage B, the pattern, and the strip forward, a person at the same time stepping on and forcing downward the treadle so as to cause the pressure rollers to approach one another and force the strips toward the pattern. Thus by the combined movements of the pattern and the pressure rollers, the strip will be bent into the shape required, after which a retainer X, may be passed over the pattern and the strips so as to confine them together while they are being removed from, as well as after their removal from the carriage, B.

We do not claim so confining the wood at its two ends by stationary abutments carried by a flexible bearer or strip, that while such wood may be in the process of being bent, its fibers may be more or less "upset" or be prevented from longitudinal movement

with respect to each other, nor do we claim  
a rotary pattern and a movable carriage or  
a roller operating together for the purpose  
of bending a strip of wood.

5 We claim—

The combination and arrangement of the  
vises, U, U, or their equivalents with the

bearing strip T, of the mechanism for hold-  
ing and bending the wood as specified.

AMOS P. SPAULDING.

ELISHA PIERCE.

Witnesses:

JEROME WHITMAN,

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