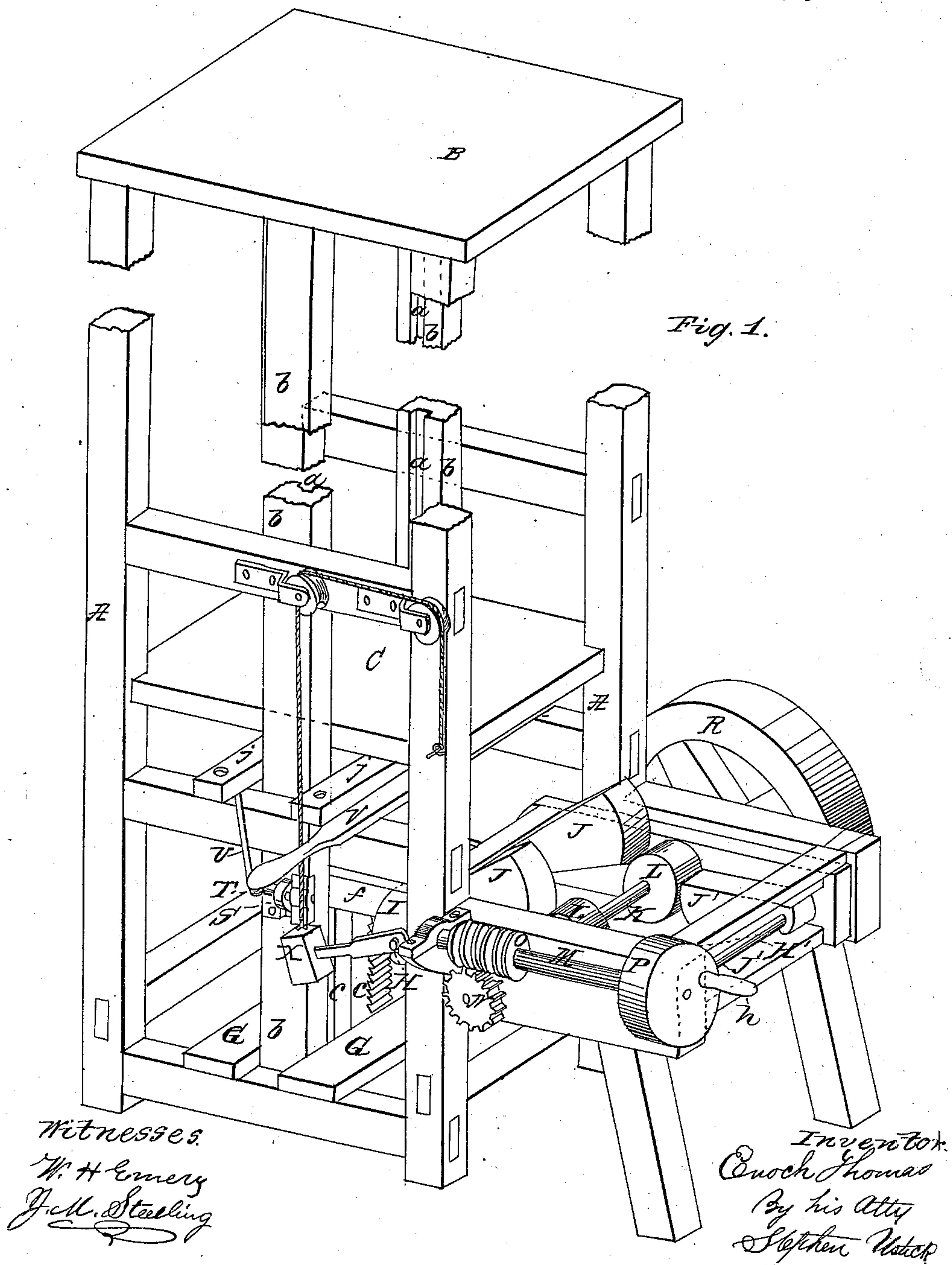


2 Sheets, Sheet 1.

*E. Thomas,*  
*Tobacco Press.*  
*N<sup>o</sup> 79,875.      Patented July 14, 1868.*



E. Thomas,

2 Sheets. Sheet 2.

Tobacco Press.

N<sup>o</sup> 79,875.

Patented July 14, 1868.

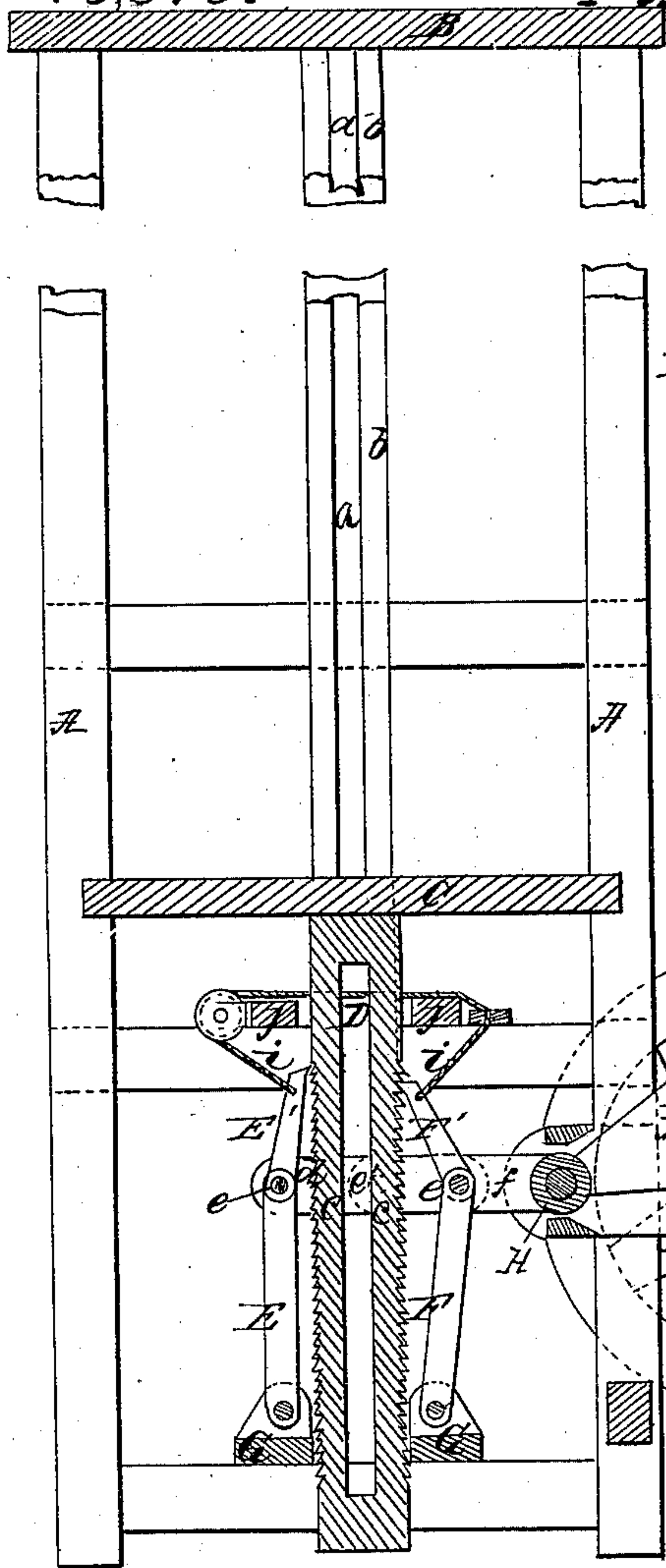


Fig. 2.

Fig. 6.

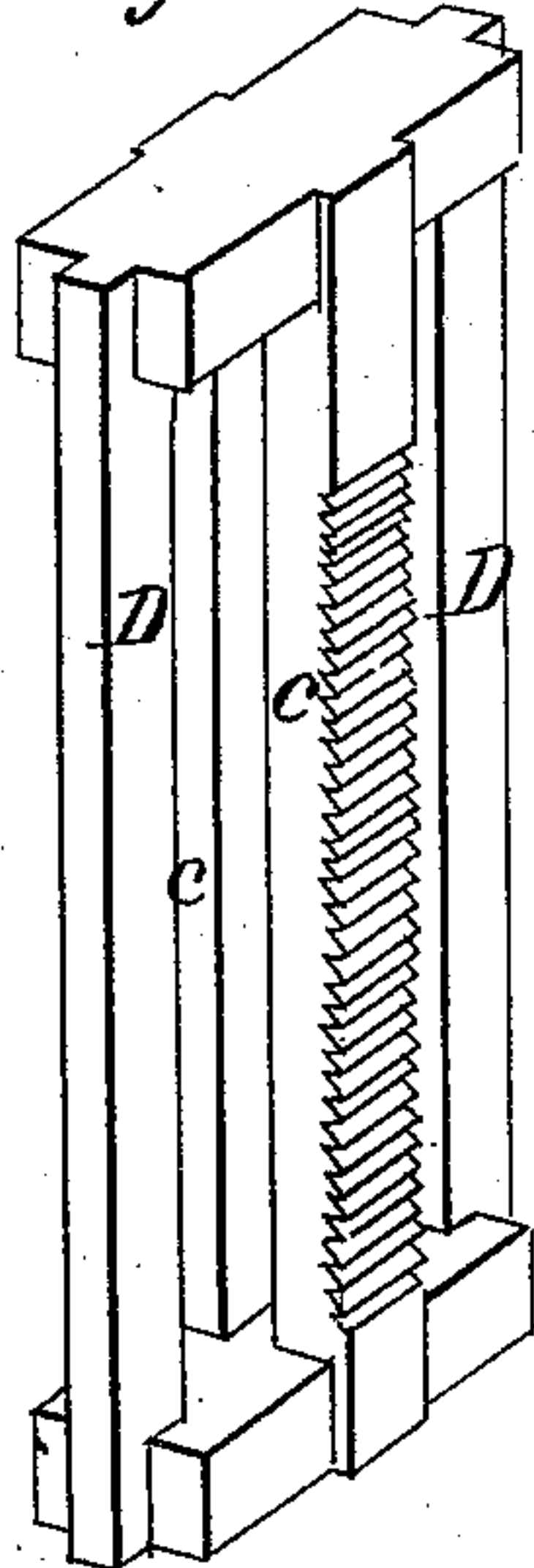


Fig. 5.

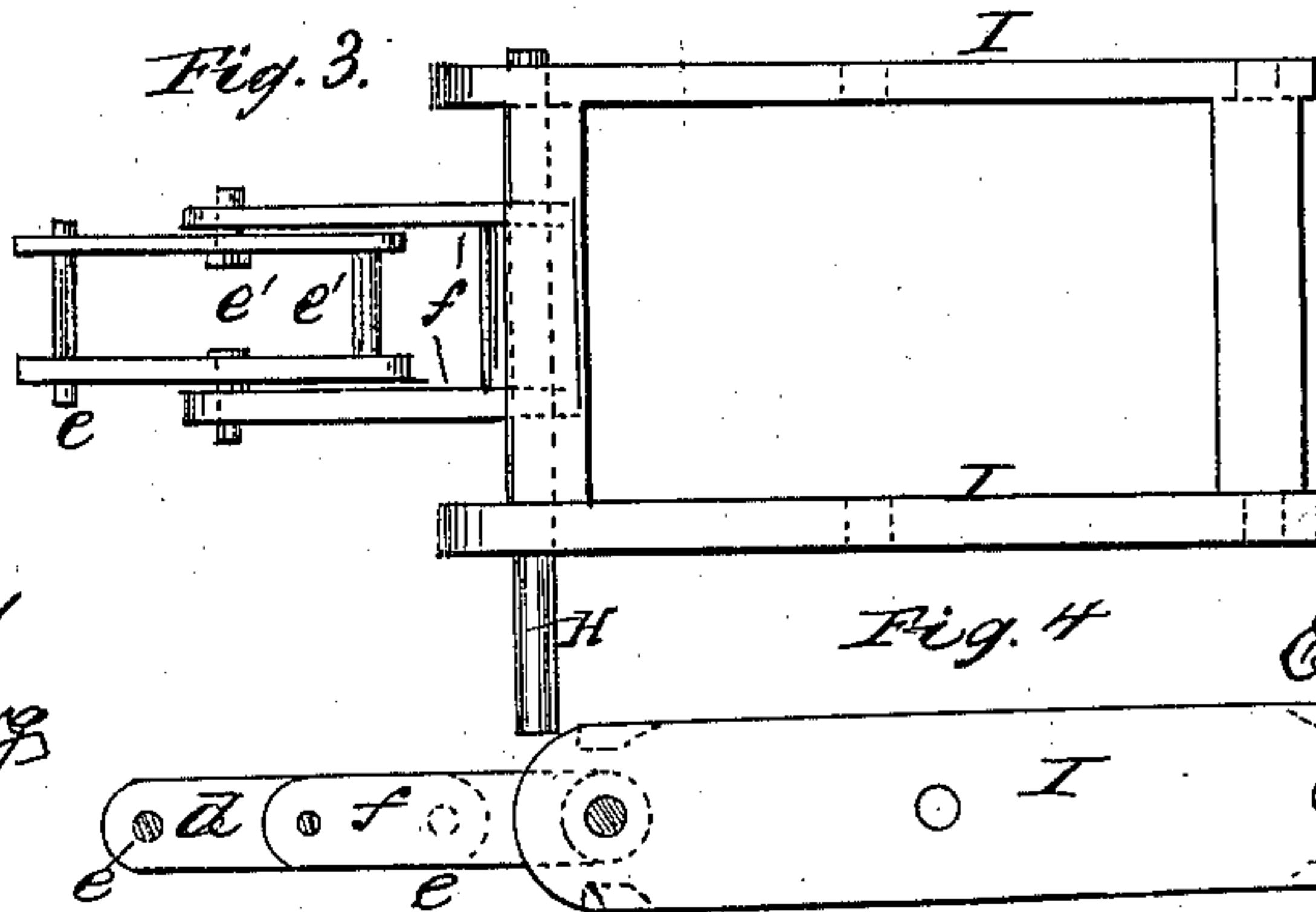
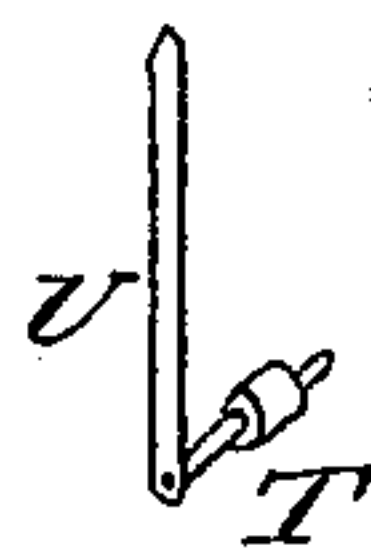


Fig. 3.

Fig. 4.

Witnesses.

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# United States Patent Office.

ENOCH THOMAS, OF CRAIGSVILLE, VIRGINIA.

*Letters Patent No. 79,875, dated July 14, 1868.*

## IMPROVEMENT IN OIL, TOBACCO, AND OTHER PRESSES.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, ENOCH THOMAS, of Craigsville, county of Augusta, State of Virginia, have invented a new and useful Improvement in Cotton and Hay Presses; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists mainly in double-acting toggle-levers with the follower of a press for oil, tobacco, cotton, hay, &c., in combination with double-acting sectors and eccentric-wheels, whereby the power of the levers is brought to bear alternately upon the follower.

In the accompanying drawings, which make a part of this specification—

Figure 1 is an isometrical view of the improved press.

Figure 2 is a vertical longitudinal section of the same.

Figure 3 is a top view of the sliding frame I, connecting-rods *ff*, and rods *dd*.

Figure 4 is an edge view of the same.

Figure 5 is an isometrical view of the eccentric-shaft T and lever U.

Figure 6 is a like view of the follower-frame D.

Like letters in all the figures indicate the same parts.

A represents the standing frame of the press, which may be made either of wood or iron. B is the head of the press, between which and the follower C the material is pressed. D is the follower-frame, which slides in grooves, *aa*, in the uprights *bb*. There are toggle-joint levers, E E' and F F', jointed at the lower ends of E and F to the cross-pieces G G. The upper ends of E' and F' are pawl-shaped, and in the pressing-operation of the levers catch in the ratchets *cc*, which are formed on the edges of the follower-frame D.

The rods *dd* are connected at their ends, by means of the joint-pins *ee*, with the toggle-levers, and the connecting-rods *ff* are connected at one end to the rods *dd* by means of the pins *e'e'*, and at their other ends are permanently connected to the rocking-shaft H, which has its bearing in the horizontal sliding frame I, so that the reciprocating motion of the said frame gives an alternate action to the toggles and produces a double action of the same.

A shaft, running clear through the connecting-rods *dd* and the connecting-rods *ff*, should take the place of the pins *e'e'*, there being openings in the follower-frame D of sufficient capacity to allow of a free lateral movement back and forth of the said shaft, in the operation of the sliding frame I.

The said shaft H is provided with sectors, J J, and the rocking-shaft H', at the other end of the frame, has like sectors, J' J'.

K is a shaft, which has its bearing in the standing frame A. On this shaft there are eccentric-wheels, L L, which, by pressing upon the sectors J J and J' J' alternately, give a reciprocating motion to the frame I, and operate the toggles for elevating the follower C, the upper ends of the levers E' and F', being pressed into the ratchets *cc* of the follower-frame D. The shaft K is revolved by means of its connection with the driving-shaft M, there being a cog-wheel, N, on one end of the shaft K, and a worm-pinion, O, on the driving-shaft M.

P is a fly-wheel, on the outer end of the shaft, the momentum of which increases the leverage of the press. It may also serve as a band-wheel to connect with the motive-power. In some cases hand-power may be used, the said wheel being provided with a handle, *h*. There is a fly-wheel, R, on the opposite end of the shaft K, which also increases the leverage of its momentum, and the increased diameter of its rim over that of the eccentric-wheels L L. These wheels may be used conjointly, as represented in the drawings, or one may be used without the other, and may be shifted from one shaft to the other, as circumstances may require. Friction-wheels may be used, if desired, in place of the sectors J J and J' J'.

S is a friction-wheel, in one of the uprights, *b*. It turns on the eccentric-shaft T, which is provided with a lever, U, for changing its position.

The crank and shaft are shown in detail in fig. 5.



The object of this wheel and crank is to sustain the follower-frame D, upon which the wheel bears when the toggles are being released. When the follower is to be lowered, the crank is turned outward, to release the wheel from the frame, to allow the latter to drop gradually.

There is a lever, V, connected with the pieces E' and F' of the toggles by means of the cords i i, arranged as seen in fig. 1, for disconnecting the levers from the follower-frame D. When the follower is to be lowered, at other times, the springs W W, whose heels are secured to the cross-bars j j, bear the upper ends of the levers E and E' into the ratchets c c.

The operation is as follows:

The shaft K, by means of its connections with the driving-shaft M, as above described, is made to revolve in the direction of the arrow, so as to cause the eccentric-wheels L L to act upon the sectors J J and J' J', thereby producing a reciprocating motion of the sliding frame I, and producing an alternate motion of the toggle-levers.

When the eccentrics are in the position represented in figs. 1 and 2, they press upon the sectors J J, and bear the frame I inwards, pressing the levers E and E', to produce thereby an upward motion of the follower C, and bringing the levers F and F' into a position for pressing.

The sectors J' J' are released from the eccentrics while the latter press upon the sectors J J, and drop into the position they assume in figs. 1 and 2. When the pressing parts of the eccentrics reach the sectors J' J', which are in their lower position, into which they had come by their own weight, the sectors J J have been released, and the rocking-shaft H, to which they are connected, is turned partly around by the counter-weight X, so as to bring them into the position they assume in figs. 1 and 2; and an outward motion is given to the reciprocating frame I by the eccentrics bearing against the sectors J' J', and bringing them into the position they assume in red lines in fig. 2.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination and arrangement of the double-acting toggle-levers E E' and F F' with the follower-frame D and the reciprocating frame I, substantially in the manner herein described, and for the purpose specified.
2. The combination and arrangement of the sectors J J and J' J', rocking-shafts H H', shaft K, and eccentric-wheels L L, in relation to each other and to the reciprocating frame I, toggle-levers E E' and F F', substantially as herein described, and for the purpose specified.

In testimony that the above is my invention, I have hereunto set my hand and affixed my seal, this 18th day of March, 1868.

ENOCH THOMAS. [L. s.]

Witnesses:

STEPHEN USTICK,  
JOHN WHITE.