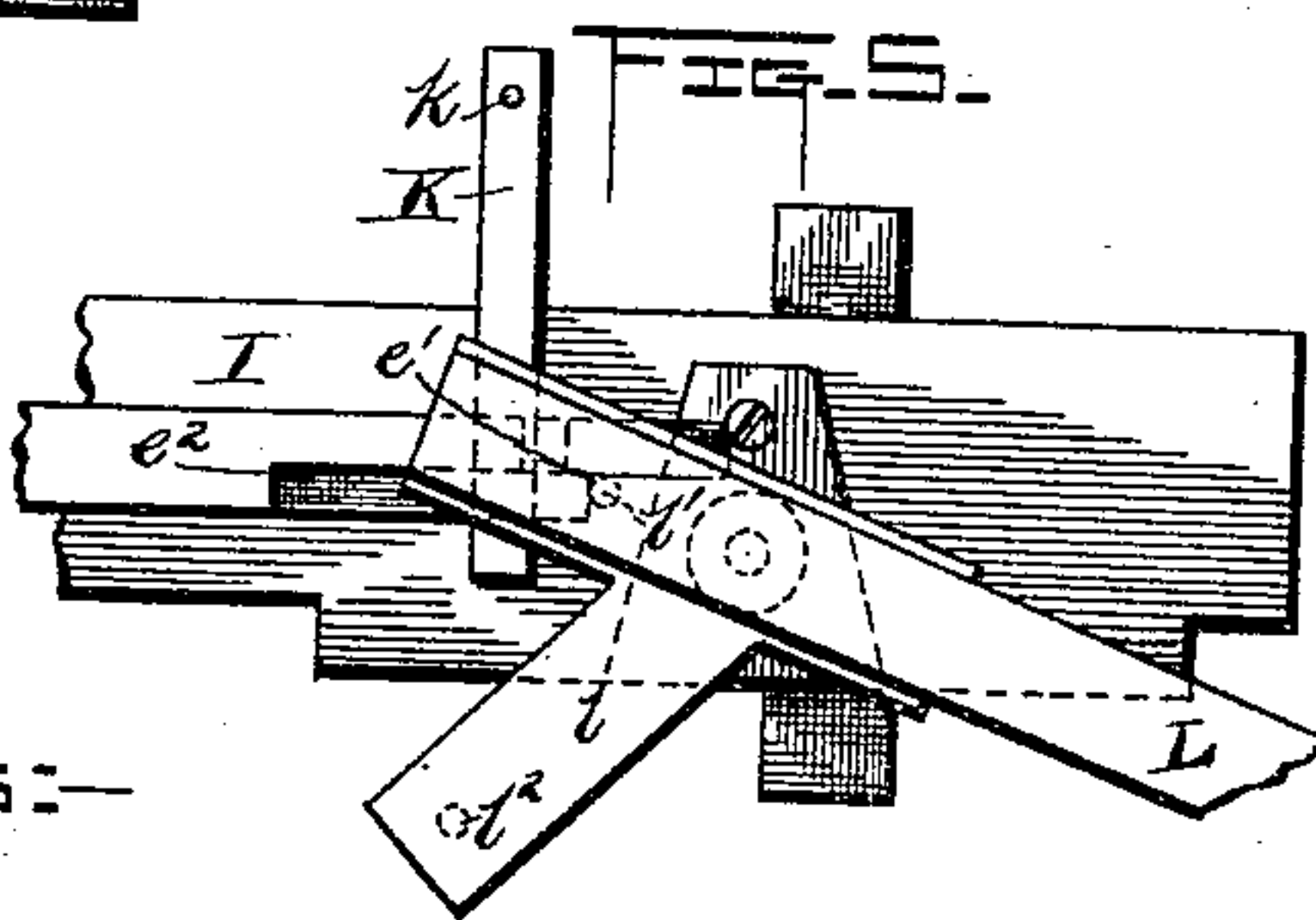
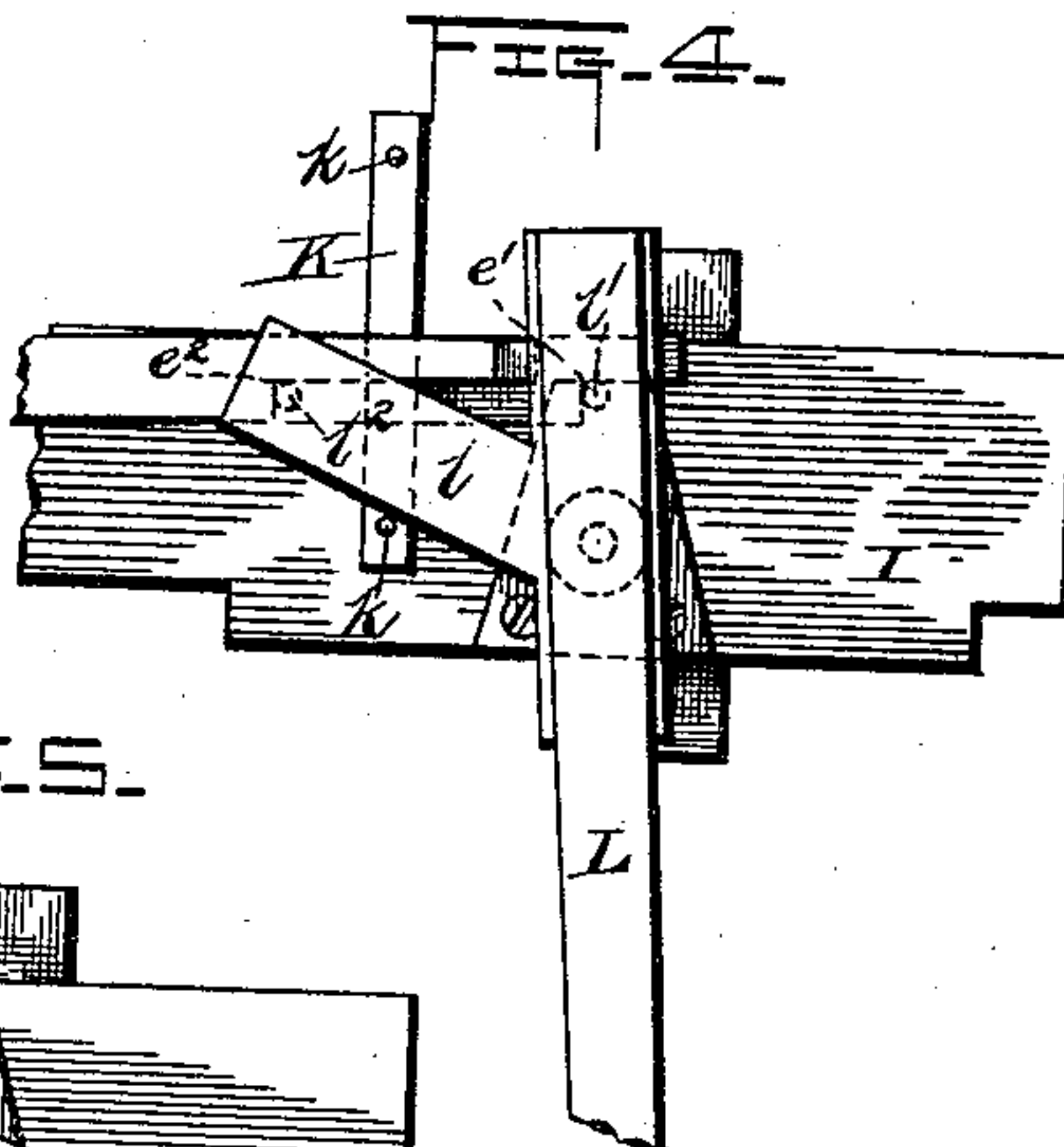
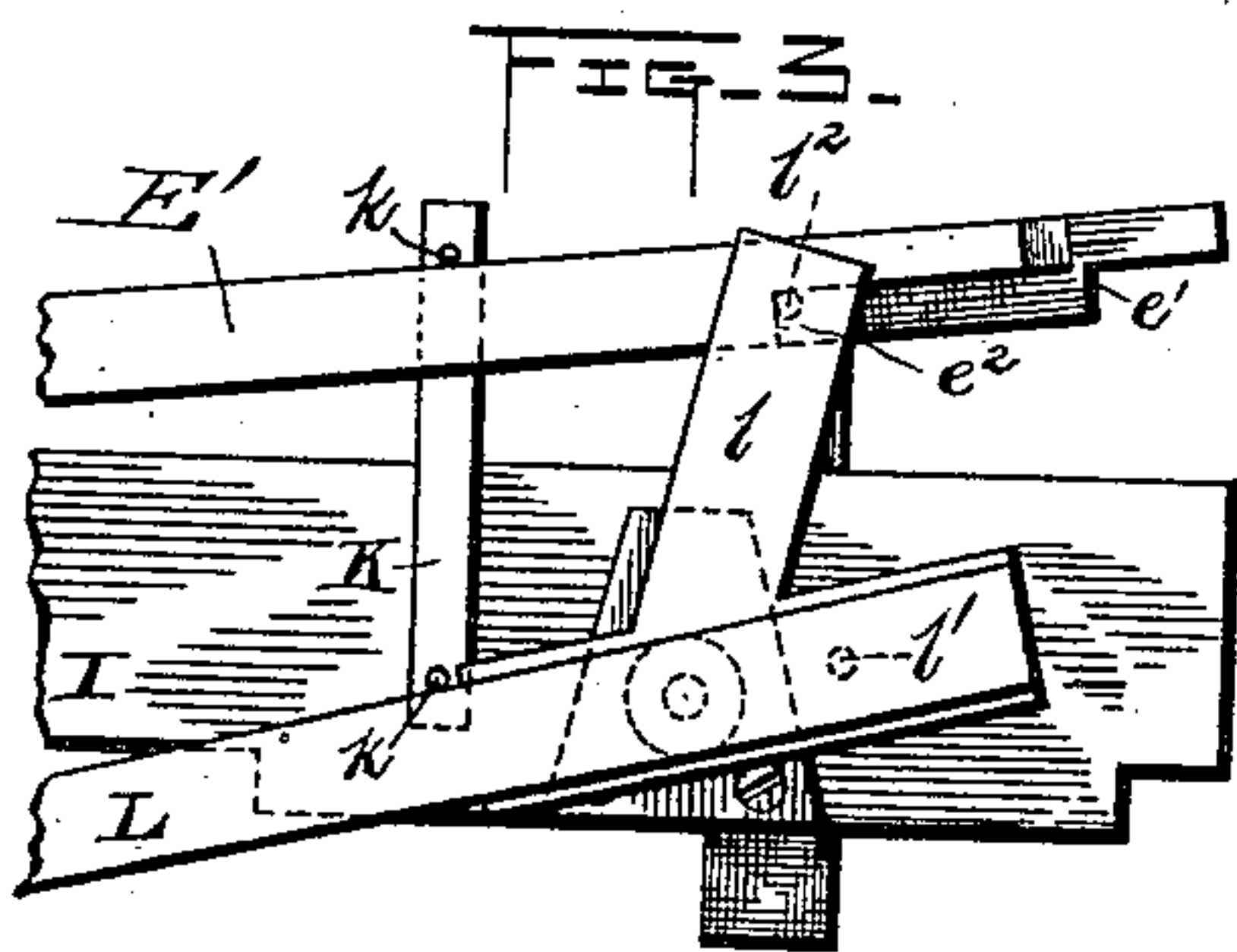
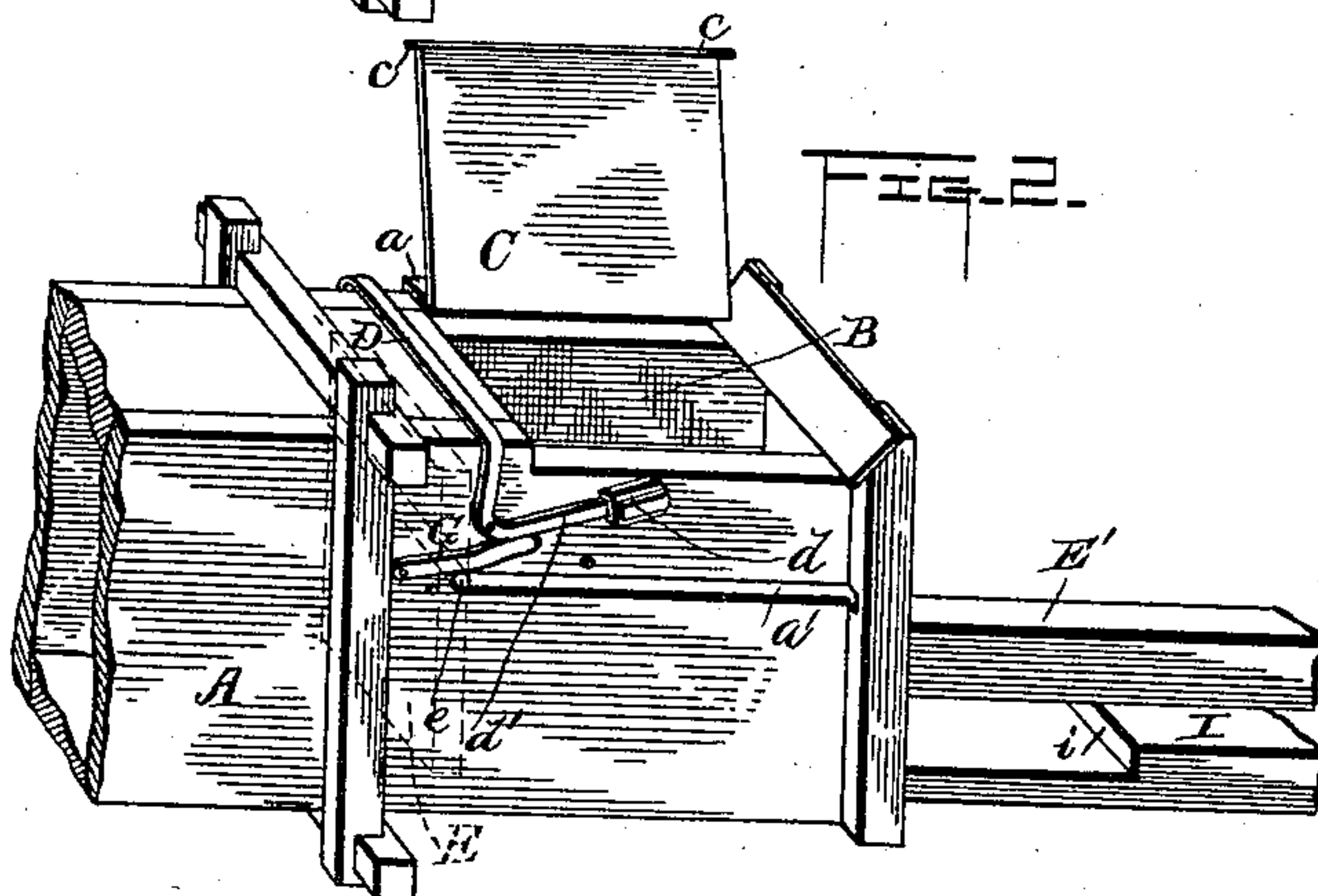
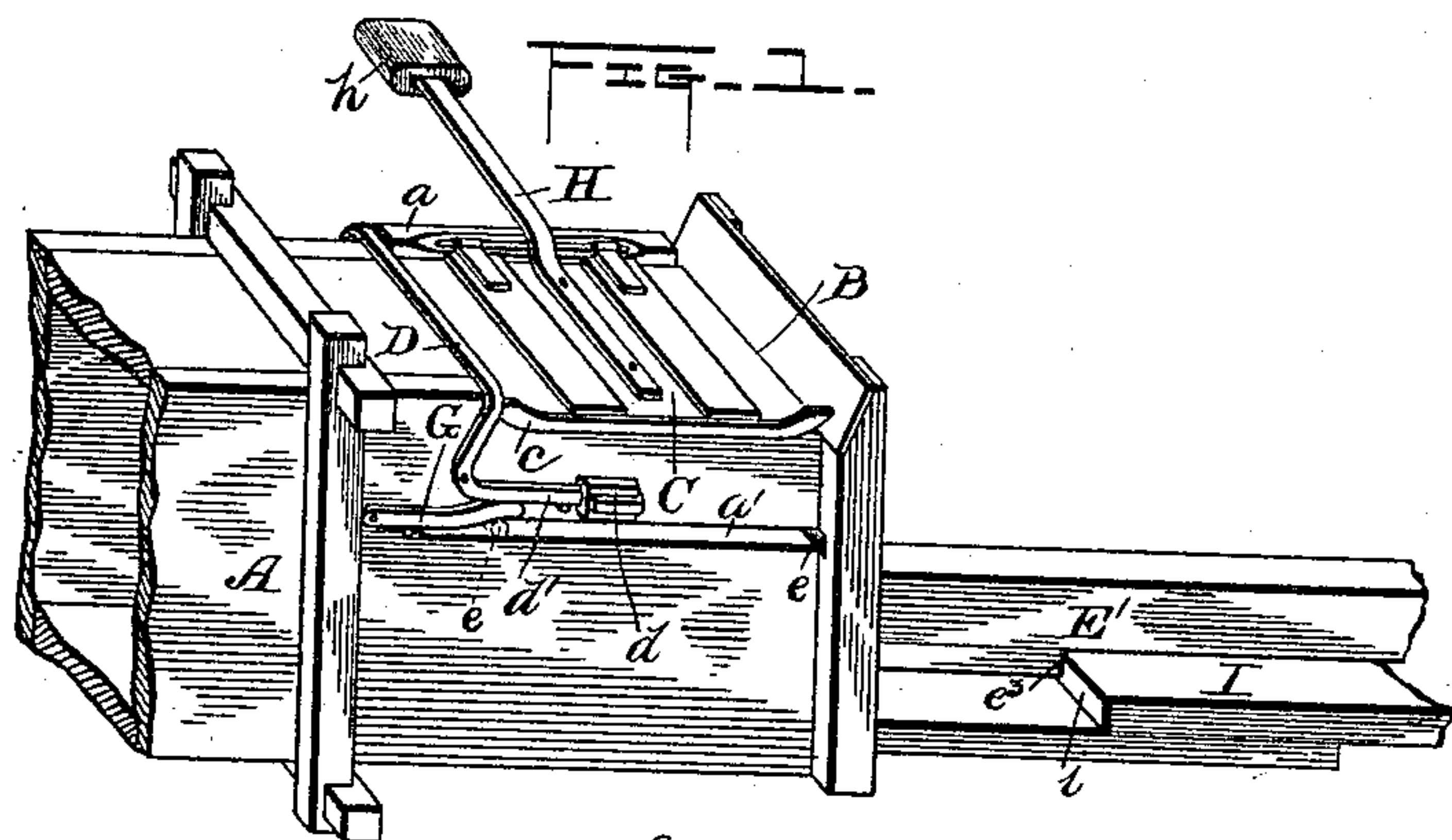


(No Model.)

J. H. GARDNER.  
BALING PRESS.

No. 407,290.

Patented July 16, 1889.



Witnesses:-

Governance.  
W.W. Hale.

QUESTION:-

John H. Gardner,  
By *L. Deane*  
his Attorney.



# UNITED STATES PATENT OFFICE.

JOHN H. GARDNER, OF DALTON, GEORGIA, ASSIGNOR TO J. E. SANDERS  
AND SEID WADDELL, BOTH OF UNION CITY, TENNESSEE.

## BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 407,290, dated July 16, 1889.

Application filed February 23, 1889. Serial No. 300,886. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN H. GARDNER, a citizen of the United States, residing at Dalton, in the county of Whitfield and State of Georgia, have invented certain new and useful Improvements in Baling-Presses; 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.

Figure 1 is a perspective view showing the feed-opening end of the press and the door for closing the opening. Fig. 2 is a like view showing the door open. Fig. 3 is a plan view in detail, showing the construction of the outer end of the pitman and indicating the pins in the sweep to operate it. Fig. 4 is a plan view showing the pitman moved by the pin in the arm of the sweep. Fig. 5 is a like view showing pitman moved entirely down by the pin in the end of the sweep.

This invention relates to baling-presses, and the novelty consists in the automatically-opening door of the feed-aperture in the baling-chamber, and in the construction of all the parts relating thereto, and in the structure of the pitman and driver or sweep, whereby in a simple and effective manner the pitman can be caused to move forward into the baling-chamber, and in the press as an entirety, all as will now be more fully set out and explained, reference being had to the accompanying drawings.

In the drawings, A denotes the baling-chamber, which may be of any usual or ordinary construction, having at its upper side the usual feed-aperture B into the casing or chamber, and at the rear side of the aperture B is secured the piece *a*, to which the door C is hinged in such a manner that when the door is turned up or opened it swings wholly clear of the opening. When the chamber has been filled and the door closed—that is, brought down upon the feed-aperture—the curved end of the piece *c* on its front edge strikes the bail D, which is pivoted on each side of the chamber or case, and so as to have free swinging movement, and thus the bail is thrown back and allows the complete closure of the door. When the door is thus fully closed, the counter-balance or weight *d* on the end of the arm

*d'* of the bail causes the bail to come over the side edge of the door, and thus the door is locked or held closed. The door is opened by means of the stud *e* on the side of the platen E, which stud has back-and-forth play in the slots *a'* in the sides of the case as the platen is moved by the pitman E'. This stud in the forward movement of the platen impinges against the under side of the outer end of the arm G, which arm is pivoted to the outside of the case and so that its end comes above and nearly parallel to the end of the slot *a'*. The action of the stud as it moves inward under the said arm causes it to lift up the weighted end of the bail, which releases the bail from the door. At this moment the weight *h*, attached to the end of bent arm H, which arm is secured to the upper face of the door and projects to the rear side of the casing, acts to open the door and swing it entirely clear of the aperture in the chamber. The door and operative mechanism can be adapted to work on either side of the box.

The movement of the pitman or shaft E' is accomplished in the following way: The outer end of the pitman is shouldered or notched at *e'* and *e''*. The pitman has horizontal movement over the sill or base I of the press within the space between studs *k k* at the respective ends of piece K, which is bolted at right angles to the base near its outer end.

The end of the sweep or driver L is pivoted, as usual, to the outer end of the base. This end of the sweep has an arm *l*, and in the under side of and at or near the respective ends of the sweep and the arm is fixed a pin or stud *l'* and *l''*. When the pitman or plunger-rod is out, as in Fig. 3, and the driver is now being turned round, the stud *l''* on the arm of the driver engages in the notch *e''* in the pitman, and this causes the rod to move down until the stud *l'* engages with the notch *e'* near the end of the pitman, simultaneously with which the stud *l''* is disengaged from the notch *e''*. The continued movement of the driver causes the pitman to be moved down as far as desired, and when the stud *l'* slips out of the notch *e'* the pitman is free to move back under the rebound and is again ready for the driver end and arm to act upon it.

The sill or base is so made as to form a



shoulder on its upper side at *i* at a point sufficiently far from the baling-chamber to regulate the distance the pitman should move in the rebound, and the pitman is correspond-  
 5 ingly shouldered on the under side at *e*<sup>3</sup>. In the rebound the shoulder *e*<sup>3</sup> will strike against the shoulder *i* and so limit the outward movement of the pitman.

I am fully aware of the fact that variously-  
 10 constituted cams have been used to effect the same purpose for which this driver is constructed and other similar complex mechanism; but each and all, so far as I know, have so many parts or attachments upon which it de-  
 5 pends for efficient operation that they are therefore very liable to breakage and to get out of order just at the moment when the work is pressing, and are not easily repairable. My construction is very simple and very durable  
 20 and not at all liable to get out of order, except after long and faithful usage it has become worn out.

Having now described my invention, I claim—

25 1. In a baling-press, the baling-chamber and the door C attached thereto, adapted when open to swing clear of the feed-aperture

and having on its front edge the piece *c*, combined with the weighted locking-bail, substantially as shown and described. 30

2. In combination with the baling-chamber slotted at *a*, the weighted locking-bail D, the door C, having a piece *c* on its front edge, the pivoted arm G, and the platen having the studs moving in said slots *a*, substantially as and for the purposes set forth. 35

3. In a baling-press, the pitman E', carrying platen E and having notches *e'* *e*<sup>2</sup> in its end, combined with the piece K, having studs *k* at its respective ends, and the sweep L, 40 having arm *l*, each having a pin or stud at or near its end to engage, respectively, with said notches *e'* *e*<sup>2</sup>, substantially as and for the purposes set forth.

4. The combination of casing A, slotted at *a'*, 45 the door C, the weighted bail, and the arm G with the platen E, studs *e*, and pitman E', operated as set forth.

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

JOHN H. GARDNER.

Witnesses:

W. A. MILES,

J. M. SANDERS.