

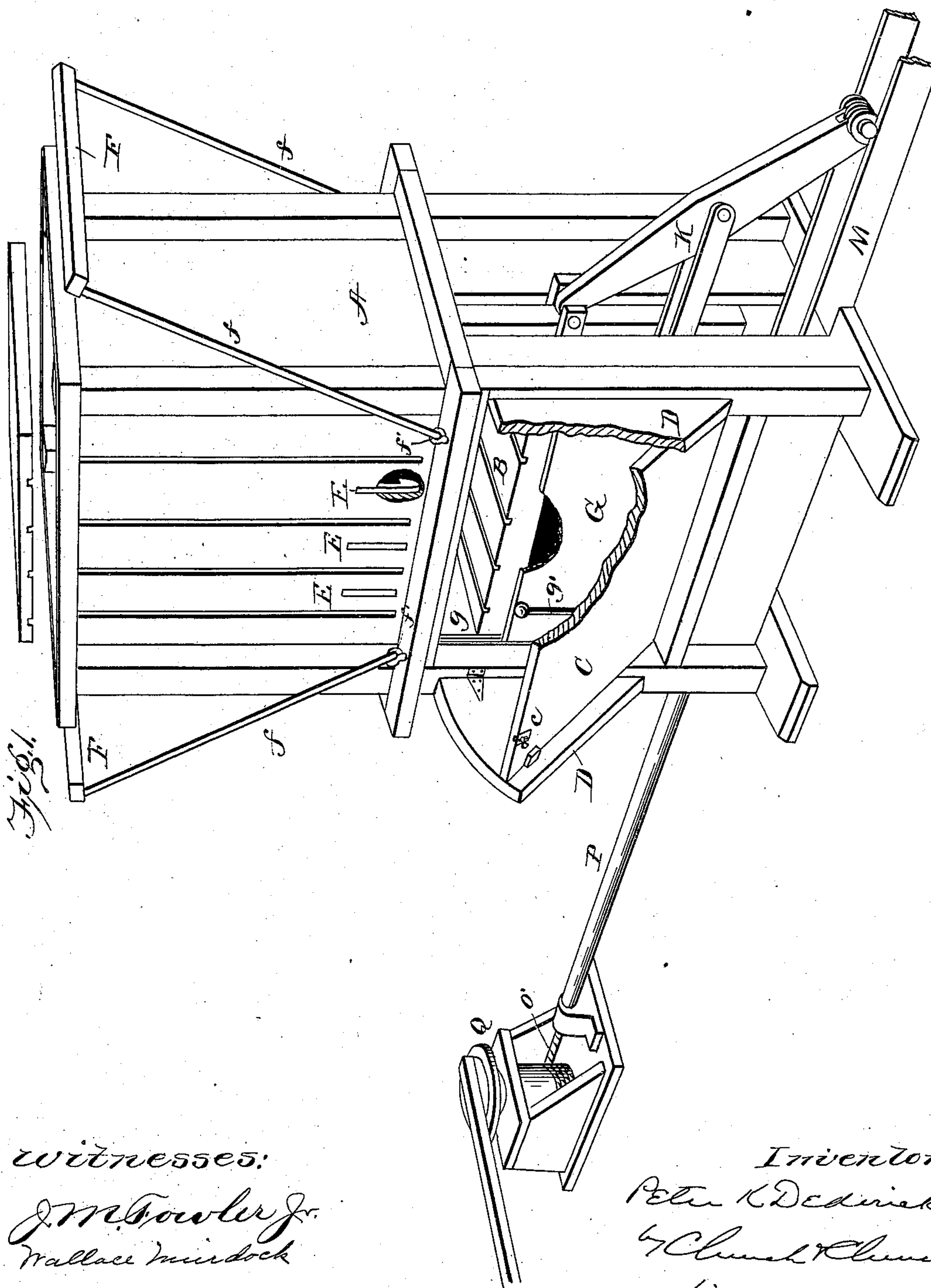
(No Model.)

3 Sheets—Sheet 1.

P. K. DEDERICK.
BALING PRESS.

No. 603,264.

Patented May 3, 1898.



witnesses:

J. M. Fowler Jr.
Wallace Murdoch

Inventor:

Peter K. Dederick
by Church & Church
his Attorneys.

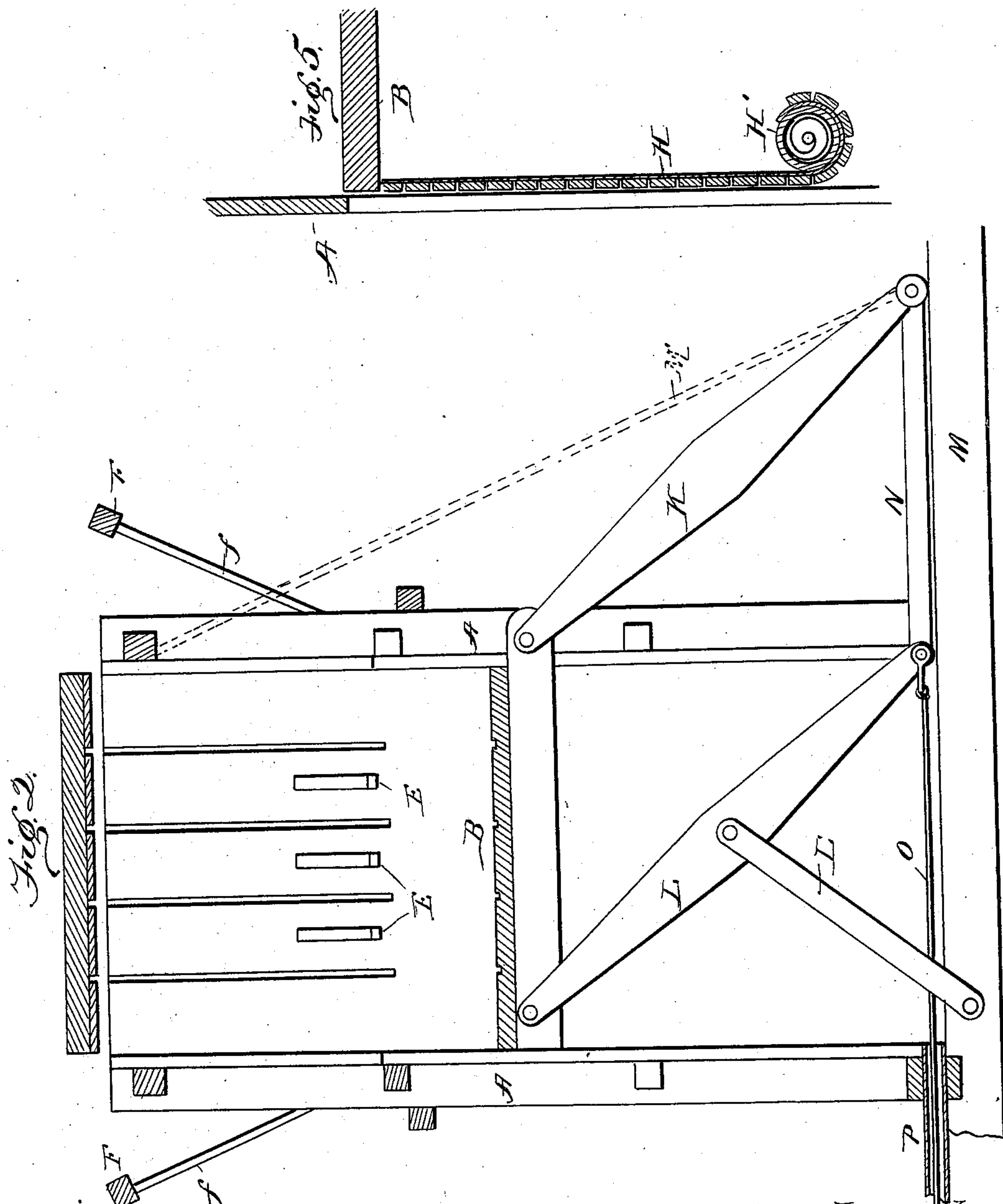
(No Model.)

3 Sheets—Sheet 2.

P. K. DEDERICK.
BALING PRESS.

No. 603,264.

Patented May 3, 1898.



Witnesses:
J. M. Fowles
Wallace Murdock

Inventor:
Peter K. Dederick
by Charles K. Church
his Attorneys.

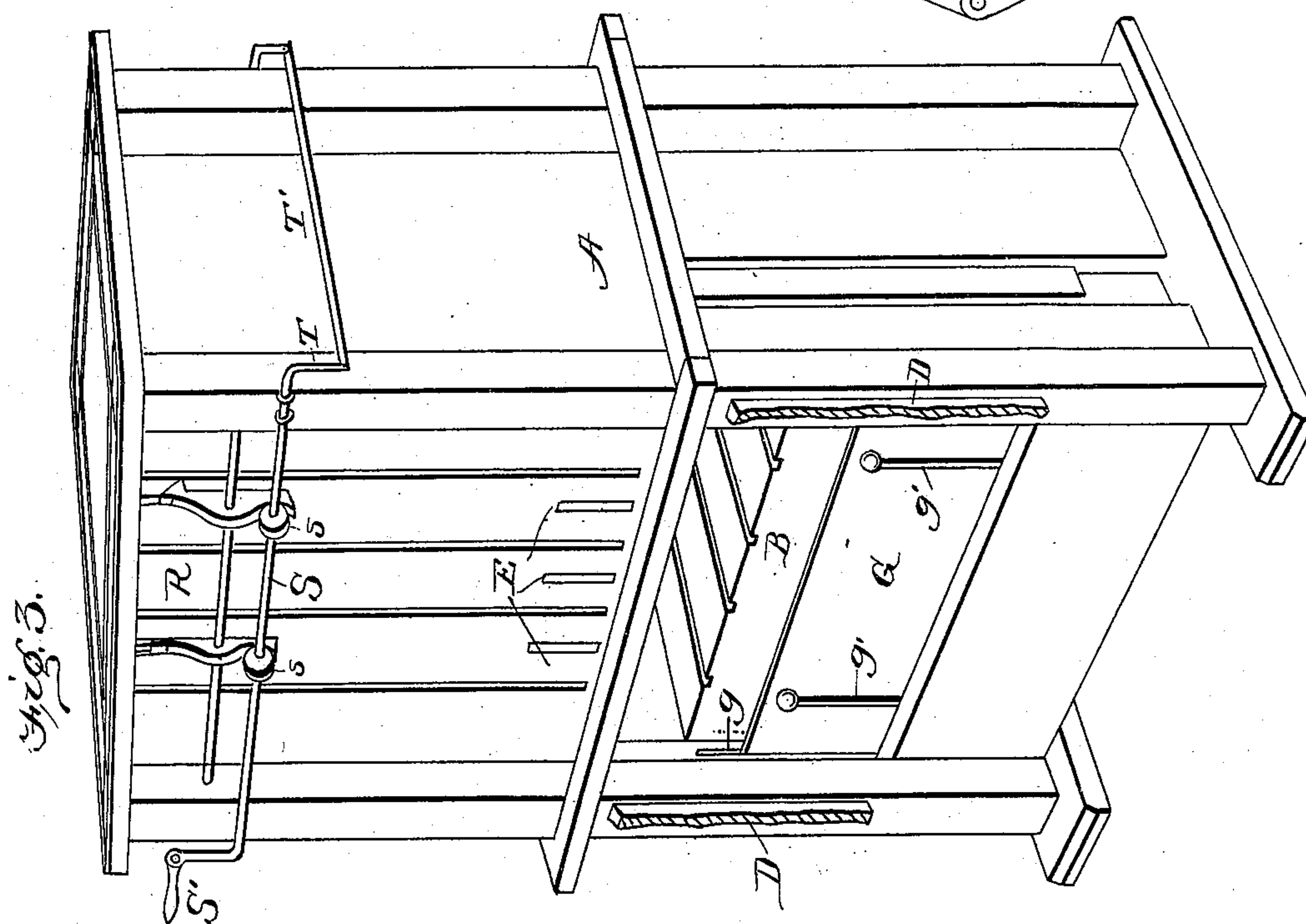
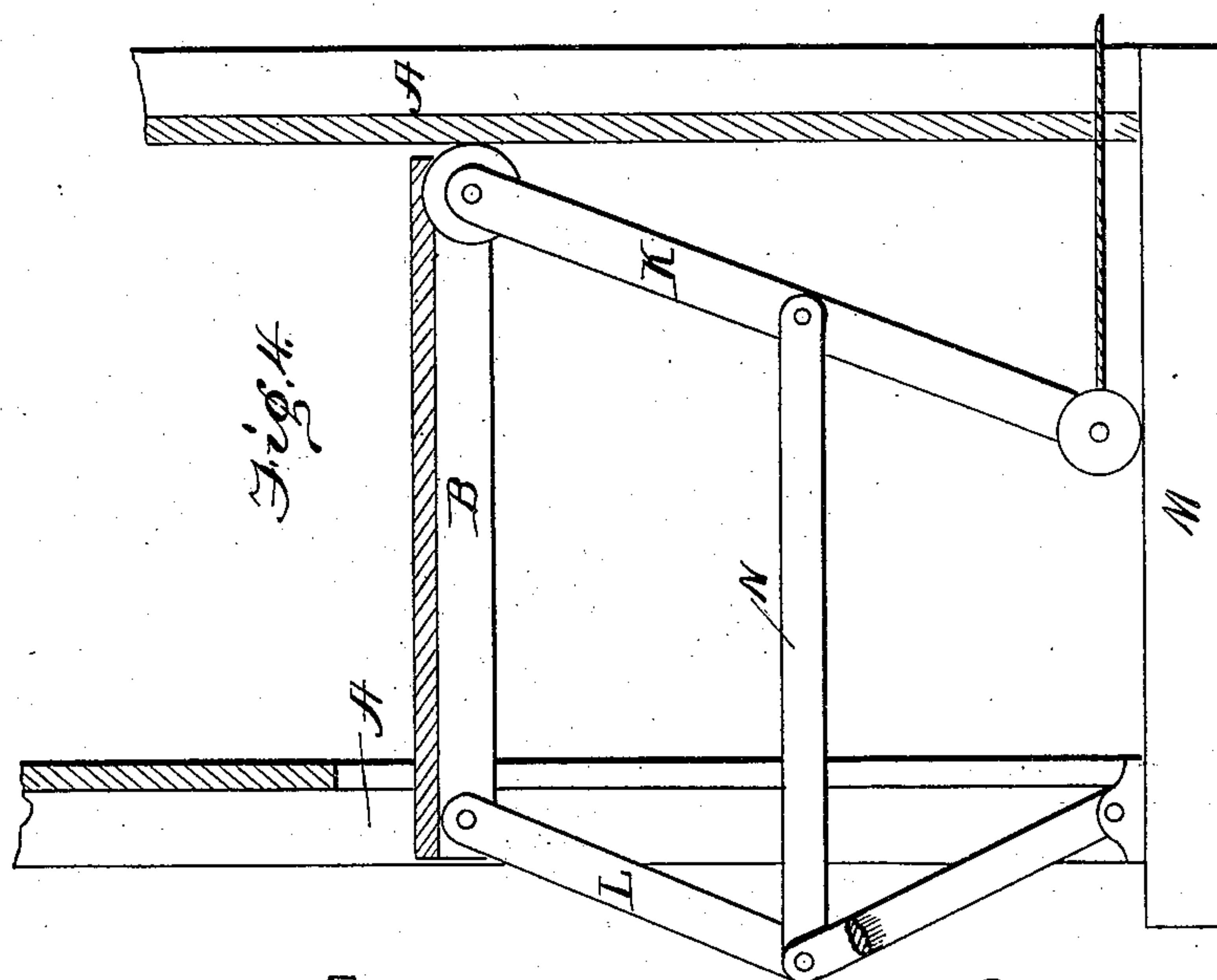
(No Model.)

3 Sheets—Sheet 3.

P. K. DEDERICK.
BALING PRESS.

No. 603,264.

Patented May 3, 1898.



Witnesses:

J. M. Fowler Jr.
Wallace Murdoch

Inventor:

Peter K. Dedrick
by Chene & Chene
his Attorneys;

UNITED STATES PATENT OFFICE.

PETER K. DEDERICK, OF LOUDONVILLE, NEW YORK.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 603,264, dated May 3, 1898.

Application filed July 11, 1895. Serial No. 555,621. (No model.)

To all whom it may concern:

Be it known that I, PETER K. DEDERICK, of Loudonville, in the county of Albany and State of New York, 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 same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

This invention relates to improvements in baling-presses, particularly of the upright type—that is to say, to that type in which the follower is moved vertically and compresses the material to be baled in the upper portion of the press-chamber—although many features of the invention are applicable to other presses.

Referring to the accompanying drawings, Figure 1 is a perspective view of a press constructed in accordance with this invention. Fig. 2 is a vertical sectional view through the same. Fig. 3 is a perspective view of the press-case with the feed-door removed to show the guard for the door-opening and also showing a modified form of retainer for the head. Fig. 4 is a sectional elevation of a modified form of power-levers. Fig. 5 is a detail section of a modified form of guard for the feed-door opening.

Similar letters of reference in the several figures indicate same parts.

A indicates the press-case, which in the present instance is preferably rectangular and arranged vertically with a normally open upper end adapted to be closed by removable heads, as will presently appear. The upper portion of the press-case constitutes the bale-chamber, and, as shown, it is slotted for the passage of the bands in tying off the bales, and below the portion which constitutes the bale-chamber openings are formed in the sides of the case, through which the material to be baled is fed in above the traverser B.

The feed-opening is adapted to be closed by a feed-door C, hinged at the lower edge and provided with any suitable fastening devices, such as the catch c, for holding it closed, while at the ends segmental wings D are provided, which, together with the door when open, form a hopper into which the material

may be readily fed and the door closed to force it in above the traverser.

At the bottom of the bale-chamber and above the feed-opening on each side the press is provided with retainers E of any ordinary construction for holding the material carried up by the traverser in its elevated position, and in addition suitable retaining means are provided at the top of the case for holding the removable heads to arrest the upward movement of the material being baled. As shown in Figs. 1 and 2, the retaining mechanism or means for the heads consists of swinging yokes formed by the cross-pieces F, carried by the upper ends of rods f, hinged or pivotally connected to the press-case at the lower ends by means of eyebolts f'. The bars f are relatively long and extend well down on each side of the press-case, thus distributing the strain and enabling the yokes to be moved much more freely.

The heads themselves are relatively thick, slotted on the under side, and adapted to be placed in on the traverser through the feed-opening and to be carried up by said traverser until caught and held by the retainers. Then the material to be baled carries them up until arrested by the yokes.

As the traverser passes up beyond the feed-opening, it is desirable to provide some means for preventing the insertion or entrance of any of the material or hay to be baled in beneath the same, and in order to accomplish this and at the same time provide a means which will permit of the feed-door being opened to form the hopper into which the hay may be inserted before the descent of the traverser I form a guard door or curtain attached to the front edge of the traverser and adapted to move up and down therewith. In Figs. 1 and 3 this guard door or curtain is formed by a piece of sheet metal G, working in guides g in the ends of the press and having vertical slots or ways g' in it or upon it for the reception of bolts or pins in the front edge of the traverser, whereby as the traverser rises the bolts or pins engaging the upper ends of the slots or ways will carry the guard up, effectually closing the feed-opening. Then as the traverser moves down the guard may be arrested in its downward movement when its upper edge is below the feed-opening, and

as the traverser continues its downward movement the pins or bolts will move down in the slots or ways, permitting the traverser to drop clear to the bottom of the press-case, an important advantage in this particular class of press.

Instead of the straight sheet-metal guard-door it is obvious that other forms of door or curtain may be employed. For instance, in Fig. 5 a flexible curtain II, formed of strips or slats, is shown, with the spring-roller H' at the bottom of the press-case for rolling the curtain up out of the way as the traverser descends, but at the same time permitting it to pay out or unroll as the traverser ascends to close the feed-opening.

In this press where the material to be baled is fed in at or near the bottom of the press-case it is very important to have a power mechanism which will fold down flat and allow the traverser to drop very low, and with a view to accomplishing this result I have devised a special form of power mechanism and connections consisting, essentially, of two levers or arms pivotally connected to the traverser at the upper end, either both within or one inside and the other outside of the press, as described in my contemporaneous application, Serial No. 480,739, both working in the same direction and adapted to have their lower ends supported by the press case or frame. As shown in Figs. 1 and 2, the arm K is connected to the end of the traverser which projects through the case, while its lower end is supported upon a horizontal track M, attached to and forming a part of the press-frame, or in lieu of said track the lower end of said arm may be carried or supported by the fulcrum-bar M', as indicated in dotted lines in Fig. 2, the effect in either case being practically the same—namely, to allow the lower end of the lever to move in without permitting of much movement up or down. The other lever-arm L, as shown in the figures mentioned, is pivotally connected to the traverser and at an intermediate point is joined to a second lever arm or arms L', pivotally connected to the press-framing, together forming in effect a toggle-joint. The arm K might be located within the press and the arms L outside with the same effect. The arms K and L are connected by a link or links N, and to the lower end of the arm L a rod O is connected, extending out to the capstan. The ordinary pulley or pulleys and a rope for tackling may be substituted for the rod, if desired.

On the side of the press-frame toward which the arms move in raising the traverser and in position to receive the rod O, I attach rigidly a pipe connection P, having the capstan Q at the outer end, thus forming in effect a structure which will maintain the parts in their proper relative position while being operated and at the same time covering the rod and the flexible connection O', to which it is attached at the outer end, and preventing all

danger of the horse becoming entangled in the same.

The object of employing a flexible connection is obvious, inasmuch as the power mechanism shown is a capstan of ordinary construction around which the connection is wound.

In lieu of the yokes described for retaining the heads in the end of the press it is obvious that spring-pressed retainers, such as illustrated in Fig. 3 at R, may be employed, and in order to release the same when it is desired to remove the head and bale I provide shafts S, having cams s working on the near ends of the retainers, and a handle S' for rotating the shaft. The shafts on each side may be connected across one end by crank-arms T and a rod T', so as to be moved simultaneously. So, too, instead of employing power-arms, as described, I may support the lower end of arm K on the track and dispense with the extended arm of lever L, as shown in Fig. 4, and connect them at the center or at an intermediate point by a link N, it being essential that the levers should both operate or move in the same direction, the lower end of arm K moving on the track M underneath and between the arms of L.

In operation the traverser, having been dropped to the bottom of the case and head, is inserted through the feed-opening and the traverser elevated until the head passes above the retainers. Then the traverser is lowered, and the hay previously placed in the hopper, together with as much more as will enter the press-case, is then pushed in through the feed-opening and the feed-door closed. Then the traverser is elevated, forcing the hay up, together with the head, which will rest on the top of the hay until arrested by the yokes. Then the traverser is lowered again, the hay being held up by the retainer, and the operation repeated, this operation constituting what is known as "repeating" and results in the formation of a bale composed of a few large longitudinal sections. When a sufficient quantity of the hay has been forced into the bale-chamber, it is tied off into a bale by means of bands passed through the slots in the top of the traverser and bottom of the head. The bale having been tied off, the yokes are moved away from over the head, and the head, or, if desired, a duplicate head, is put in place over the traverser and forced up, the operation being then repeated until the bale can be removed, assuming that it has not been taken out before, when the yokes are again swung in place over the head and another bale formed, as just described.

Having thus described my invention, what I claim as new is—

1. In a baling upright press, the combination with the press-case, having the open upper end, a feed-opening in the side wall, at or near the bottom of the same, the removable head with means of retaining the same in the open upper end of the press-case of the recip-

rocatory traverser working in the press-case, and the guard-door connected directly therewith, and having a movement relative thereto and bridging or closing the feed-opening when the traverser is elevated, substantially as described.

2. In a baling-press, the combination with the press-case, having the open upper end, a feed-opening in the side wall at or near the bottom of the same, and the removable head with means for retaining the same in the open upper end of the press-case, of the reciprocatory traverser working in the press-case, and the door-section loosely connected therewith, and bridging or closing the feed-opening when the traverser is elevated, whereby the traverser is permitted to drop to the bottom of the press-case, substantially as described.

3. In a baling-press, the combination with the press-case having the open upper end, a feed-opening in the side wall, at or near the bottom of the same, and a removable head with means for retaining the same in the open upper end of the press-case, of a reciprocatory traverser working in the press-case, the door formed by the substantially flat piece of sheet metal working in guides in the press-case, and loosely connected with the traverser, whereby it is adapted to close the feed-opening when the traverser is elevated, and to permit of a movement of the traverser when the door is arrested; substantially as described.

4. In a baling-press, the combination with the vertical press-case having the feed-opening in the side wall, at or near the bottom, the feed-door for closing said opening, hinged

at the lower edge to constitute a hopper when open, of the traverser reciprocating within the case, and a guard-door section loosely connected with the traverser for closing the feed-opening when the traverser is elevated, whereby the hopper may be filled without regard to the position of the traverser; substantially as described.

5. In a press, the press-frame and traverser adapted to work therein, of a straight power-arm pivotally connected to the traverser at one end and supported by the press-frame at the extreme opposite end, a toggle-lever pivotally connected with the traverser at one end and pivotally connected with the press-case at the opposite end, a link or links connecting the straight lever and toggle-lever for simultaneous movement in the same direction and the power applied in line with the lower end of the straight arm; substantially as described.

6. In a baling-press, the combination with the press-frame having the track in the lower portion thereof and the reciprocatory traverser working in the press-frame, of the toggle-lever pivotally connected to one end of the traverser and frame, the straight power-arm pivotally connected to the opposite end of the traverser and resting on the track at the opposite end and a link or links connecting said straight arm and toggle-lever for simultaneous movement in the same direction; substantially as described.

PETER K. DEDERICK.

Witnesses:

W. A. SKINKLE,

R. J. VAN SCHOONHOVEN.