(No Model.)

M. S. COLEMAN.

HAY AND COTTON PRESS.

No. 354,304. Patented Dec. 14, 1886.

Fig. 1.

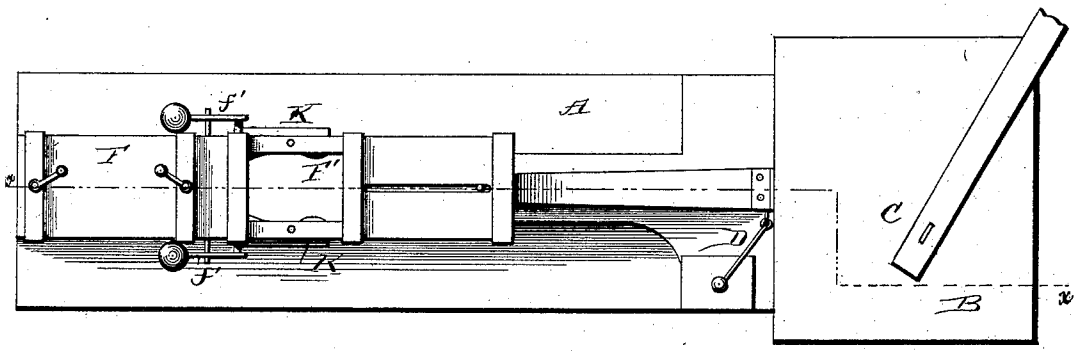


Fig. 2.

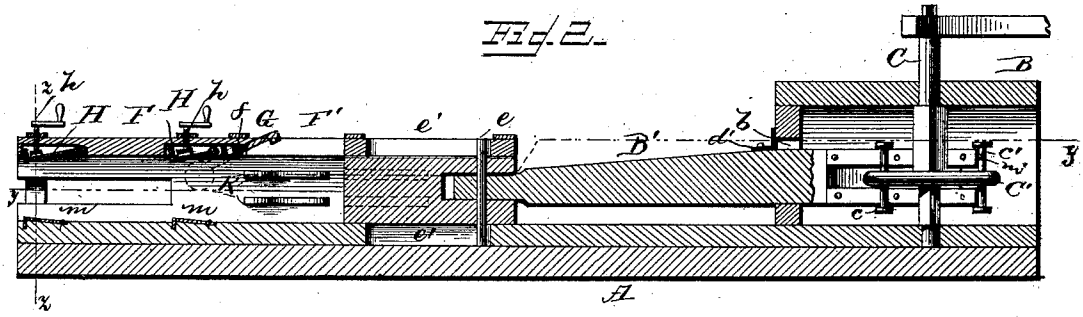


Fig. 3.

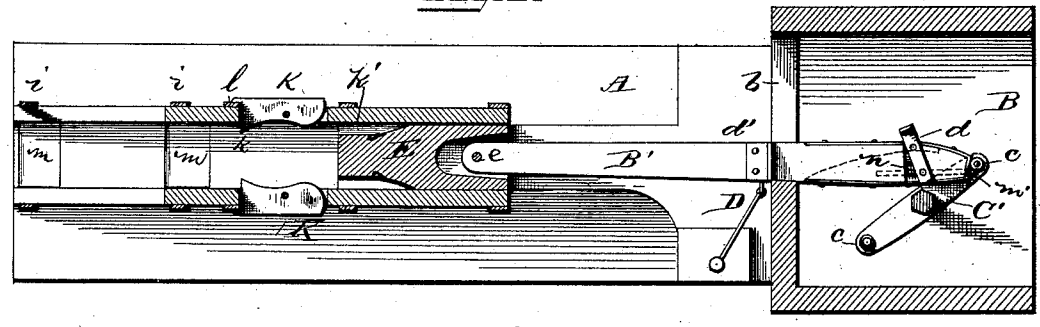
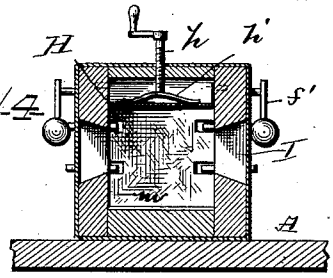


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

MINOR S. COLEMAN, OF COTOPAXI, COLORADO.

HAY AND COTTON PRESS.

SPECIFICATION forming part of Letters Patent No. 354,304, dated December 14, 1886.

Application filed December 10, 1885. Serial No. 185,294. (No model.)

To all whom it may concern:

Be it known that I, MINOR S. COLEMAN, a citizen of the United States of America, residing at Cotopaxi, in the county of Fremont and State of Colorado, have invented certain new and useful Improvements in Hay and Cotton 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in baling-presses; and it consists in the construction and combination of the parts, as will be hereinafter fully set forth, and specifically pointed out in the claims.

In the accompanying drawings, which illustrate my invention, Figure 1 is a plan view of a baling-press and its operating mechanism, and constructed in accordance with my invention. Fig. 2 is a longitudinal section taken through the line *x x* of Fig. 1. Fig. 3 is a horizontal longitudinal section taken through the line *y y* of Fig. 2, and Fig. 4 is a vertical section taken through the line *z z* of Fig. 1.

A represents a base or platform to which my improved baling-press is attached, the end B being provided with a box having an opening, *b*, in its vertical side nearest the baling-press, through which the pitman passes, the follower being attached to the forward end of the same.

The box B has journaled therein, to one side of the same, a vertical shaft, C, the upper end of which carries an operating-shaft, by means of which power is applied to the follower. The shaft C within the box is provided with a horizontal arm, C′, which is rigidly fixed to the vertical shaft, and each end of this arm is provided with pins or headed bolts *c*, which project equally on each side of the horizontal arm C′, said pins or bolts being adapted to engage with the end of the pitman, so as to press the same forward. The end of the pitman B′ is recessed, so that the ends of the arm C′ beyond the pin *c* can pass into the recess. The end of the pitman against which the pins *c* abut is thoroughly braced by iron straps, and said pitman is provided with an angular plate, *d*′, which strikes against the frame-work and limits its backward movement; and to the forward end of the pitman is pivoted a follower, E, by a bolt, *e*, the upper and lower ends of which move in slotted guides *e*′, and serve to relieve the baling-chamber from the lateral pressure of the follower against it. The pitman has also attached to it immediately forward of the frame-work a pivoted arm, D, one end of which is pivoted to a support provided for it, and is pivoted in such a manner as to guide or cause the end of the pitman to describe a part of a circle corresponding to the part of the circle described by the pins *c c* in their revolution on the arm C′. The operation of this arm D is to guide the pitman in its backward movement to a position so as to cause the pins *c c* to abut against the end of the pitman B′ at each stroke, and to hold the pitman while the stroke is being made.

F represents the baling-chamber, said chamber being provided with an opening, F′, through which the hay or other material is fed to the baling-box. The upper part of said baling-box is recessed on its under side within the chamber and adjacent to the feed-chamber. A cross-bar, *f*, extends transversely across said recess, and has secured thereon a plate, G, which extends upward in an inclined direction beyond said chamber. The ends of the cross-bar project beyond the sides of the baling-chamber, and have secured thereto weighted arms *f*′, which normally maintain the plate G in the position shown in Fig. 2. Now, when the hay or other material is fed in through the opening of the baling-chamber preparatory to being compressed by the follower E, the weighted arms can be operated to throw the plate G down upon the hay, so as to fold the projecting parts thereof well in line with the follower.

To increase or diminish the size of the baling-chamber at or adjacent to the points occupied by the end portions of the bale, and thus regulate the compactness or weight of the bale, I provide the chamber with two sets of plates, one set near the forward end and the other just forward of the feed-chamber, being one set of plates on each side of the space, for tying the bale, and at the top and bottom with-

in the chamber. The plate at the bottom may be secured stationary, and with the rear ends or edges even with the bottom of the chamber, and inclining upward so that the forward end or edges project slightly above the bottom of the chamber. Above and opposite these bottom plates, *m*, are placed two other hinged or pivoted plates, H H, within recesses provided for them in the upper part of the press within the chamber, said plates having their rear ends even with the under and inner side of the chamber above, and are provided with adjusting-screws *h h*, the ends of which bear upon transverse springs *h' h'*, which are pivotally attached thereto. By turning these screws *h h* the pivoted plates H H are caused to turn on their pivot, and the forward ends of the plates are caused to incline downward and project into the baling-chamber and diminish the size of the chamber.

The distance between the plates H at the top and the plates *m* at the bottom may be enlarged by turning the screws the reverse and allowing the upper plates to pass into the recesses provided for them.

The arrangement of plates H *m* enables the attendant to decrease the dimension of the baling-chamber during the compressing operation immediately after the latter recedes. By so manipulating the plates the hay contained in the baling-chamber is compressed at each end thereof, thereby reducing the liability of the hay springing out of position upon the withdrawal of the follower.

At the opening F' of the baling-chamber and on each side of the same are two parallel longitudinal slots, within which are pivoted locking-dogs K, the forward ends of which project within the chamber and are beveled or rounded at their rear and forward ends. These dogs are pivoted near the rear ends and the hay or material as it is being compressed forces the forward ends out of the chamber, and at the same time forces the rear ends into the slots in the follower until the forward end of the follower passes the forward ends of the dogs, at which time the rounded or beveled rear ends of the dogs are struck by the inclined surface in the slots of the follower and forces the rear ends of the dogs out of the chamber, and at the same time forces the forward ends into the slots in the follower behind the compressed hay or material, where it is left to hold the compressed material in place after the follower is withdrawn. The follower and pitman are withdrawn or thrown back by the rebound or reaction of the compressed material after it is driven forward by the pins *c c* on the arm C'.

The end of the pitman-rod B' is provided with a longitudinal opening, within which is secured a movable bar, *m'*, which is moved forwardly by a spiral spring, *n*, which encircles the same. This bar or rod *m'* is pivotally attached to the plate *d*, so that when the plates abut against the inner side of the casing or frame B, which takes place when the pitman has completed its stroke, the rod or pin *m'* will be retracted so as not to project beyond the end of the pitman, and will permit the pins *c* on the arm C' to pass over the end of said pitman.

I claim—

1. In combination with a vertical shaft, C, carrying arm C', which projects from each side of the same, and is provided with vertical pins *c*, the pitman B', having a central recess through which the ends of the arms may pass, substantially as shown, and for the purpose set forth.

2. In combination with the shaft C, having a cross-bar, C', rigidly attached thereto, vertical end pins, *c c*, the pitman B', having the stop *d* pivoted thereto and connected at one end to the spring-bar *m'*, so that said spring-bar will be retracted when the stop strikes an obstruction, so as to retract the spring *m'* and permit the pins *c* to pass the same, substantially as shown, and for the purpose set forth.

3. In combination with a pitman-rod, B', stops *d d'*, for its longitudinal movement, one of said stops operating a spring-bar, which projects under the end of the pitman, and a rotary shaft carrying an arm with projecting pins, which abut against the end of the pitman for moving it in one direction, substantially as shown, and for the purpose set forth.

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

MINOR S. COLEMAN.

Witnesses:
ALFRED LEWIS,
F. A. POLSLEY.