(No Model.) 2 Sheets—Sheet 1.

J. R. & A. W. BIGHAM.

HAY PRESS.

No. 387,039. Patented July 31, 1888.

Fig. 1.

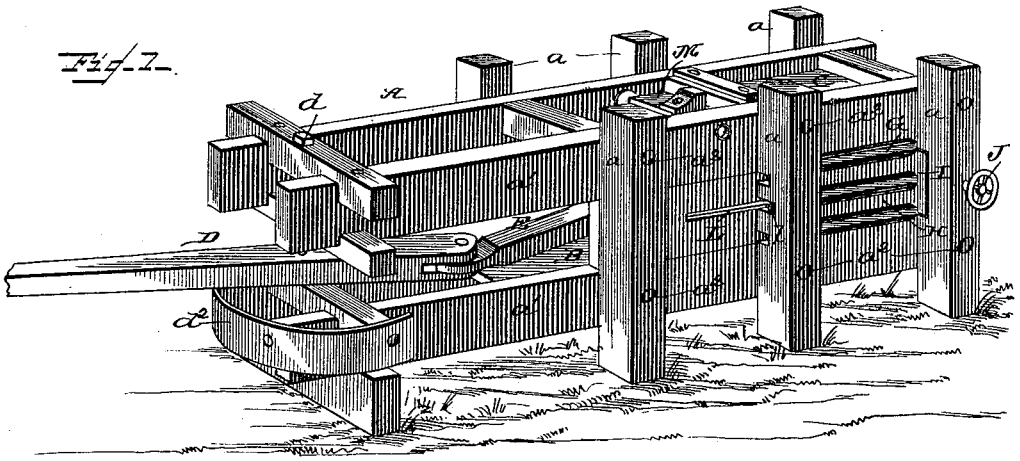


Fig. 2.

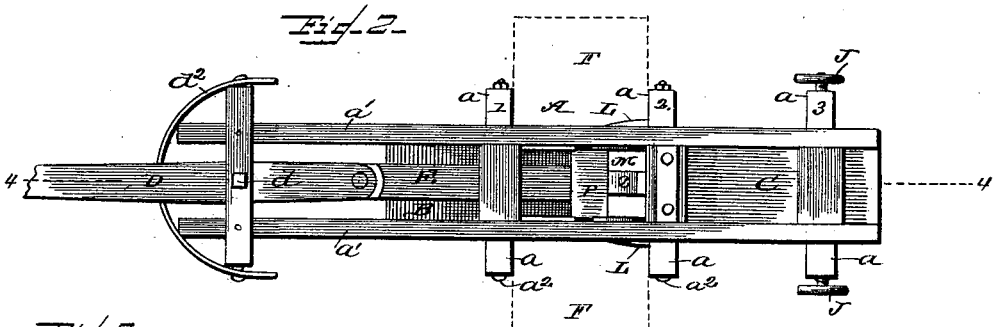
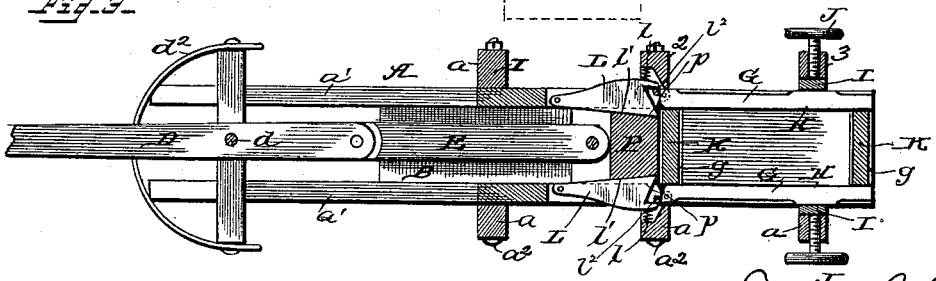


Fig. 3.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

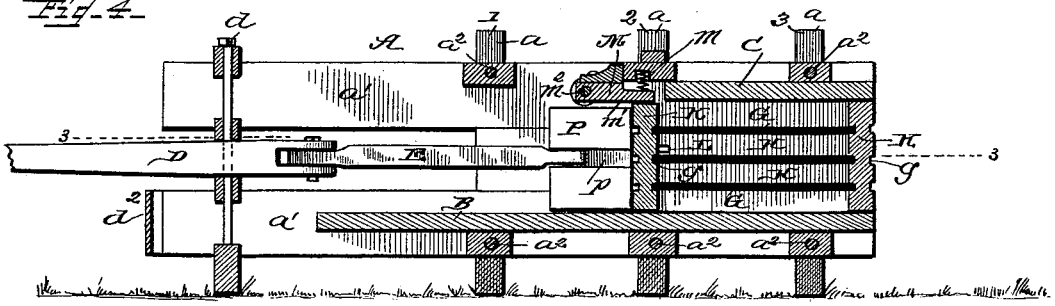


Fig. 5.

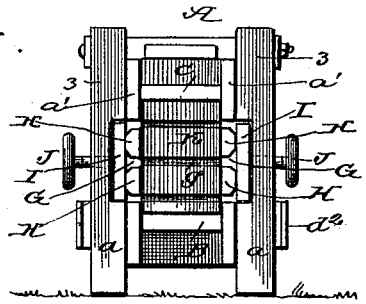


Fig. 6.

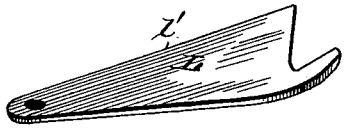


Fig. 7.

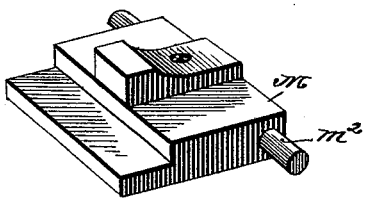
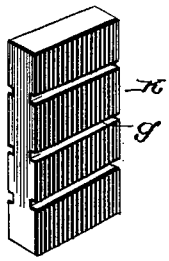


Fig. 8.



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UNITED STATES PATENT OFFICE.

JOSHUA R. BIGHAM AND AMBROSE W. BIGHAM, OF TERRELL, TEXAS.

HAY-PRESS.

SPECIFICATION forming part of Letters Patent No. 387,039, dated July 31, 1888.

Application filed March 27, 1888. Serial No. 268,704. (No model.)

To all whom it may concern:

Be it known that we, JOSHUA R. BIGHAM and AMBROSE W. BIGHAM, citizens of the United States, residing at Terrell, in the county of Kaufman and State of Texas, have invented certain new and useful Improvements in Hay-Presses; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to hay-presses of that class in which the hay, straw, fodder, or other material to be pressed is fed from the top into a rigid frame-work, and subsequently pressed longitudinally therein by means of a plunger actuated by a lever; and it has for its object to produce a simple and effective machine of the character described, which shall possess advantages in point of durability, cheapness of manufacture, and general efficiency. We attain this object by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a general perspective view of our device. Fig. 2 is a plan view thereof. Fig. 3 is a horizontal longitudinal section on the line 3 3 of Fig. 4. Fig. 4 is a vertical longitudinal section on the line 4 4 of Fig. 2. Fig. 5 is an end view looking from the right-hand end of Fig. 1. Fig. 6 is an enlarged detail perspective view of one of the side catches. Fig. 7 is a similar view of the top catch. Fig. 8 is a perspective view of one of the end pieces.

Similar parts in the different figures of the drawings are denoted by the same letters of reference.

A indicates the main frame of our device, comprising a number of uprights, *a*, and a number of longitudinal beams, *a'*, the whole properly secured by transverse bolts a^2. This frame is of a suitable length, and has a bottom, B, extending throughout most of its length, and a top, C, somewhat shorter, these parts being firmly secured in place by said transverse bolts a^2.

At one end of the frame, (in this instance the left-hand end,) upon a vertical bar, *d*, is pivoted a swing power-lever, D, to the outer longer arm of which the power is applied, either by hand, horse-power, steam, or other means, to effect the pressing of the hay. A suitable curved track, d^2, is provided some distance from the bar *d* for supporting the longer arm. Sliding longitudinally within the frame A is a plunger, P, which receives its motion from the short arm of the power-lever D through a pitman or connecting rod, E, pivoted at its opposite ends to the power-lever and plunger, respectively. It will be understood that when the power-lever stands in alignment with the frame the plunger will be projected within said frame toward the right-hand end thereof, and when said power-lever is moved to either side the plunger will be withdrawn toward the left. The path and distance of motion of the plunger are from the upright marked 1 to that marked 2, and between these uprights the top of the frame is open, a suitable table, F, being provided opposite thereto for facilitating the loading of the hay into the press.

Between uprights 1 and 2 the sides of the frame are solid; but between uprights 2 and 3 a number of longitudinal slots, G, are provided, for the purpose of inserting binding-wires after the hay has been pressed, as will be readily understood. The bars H of the sides (between which the slots G are left) are hinged to upright 2 and connected with opposite upright, 3, by a vertical bar, I, against which screws having hand-wheels J in the uprights 3 are adapted to be screwed for pressing the hay laterally.

K are end pieces, one of which is secured between the free ends of bars H in any suitable manner, provided it be removable, and another of which is passed down into the open top of the frame between uprights 1 and 2. The hay is then fed into this open space in advance of the latter end piece until the space within is completely filled. The power-lever is then operated and the plunger forced inward thereby, whereby the hay is compressed between the two end pieces. The hand-wheels J are then turned, thereby further compressing the hay, and the bale may then be wired through the slots G, as above described, the end pieces being also provided with slots *g* for this purpose. After wiring, the right-hand end piece is removed and the finished bale withdrawn.

For holding the inner end piece against the

expansive force of the compressed hay, we provide side catches, L, pivoted upon vertical pivots in the side of the frame, pressed inwardly by springs *l*, and having faces *l'* projecting inwardly into the frame, against which the end piece, K, will catch, as will be obvious. A stop, *l²*, is provided, as shown, upon each side of the press to limit the movement of the catches L. At the upper part of the frame we also provide a top catch, M, pressed downwardly by spring *m*, and having a face, *m'*, adapted to engage the upper end or edge of the end piece to assist in preventing its being pressed back by the expansive force of the hay. The top catch, M, is pivoted on pins *m²* passing through holes in the sides of the frame. The faces of the side catches, L, and of the top catch, M, are on the same vertical plane and at a point slightly beyond which the face of the plunger P passes at the inner end of its stroke, whereby the inner end piece will be passed by them, and when the plunger is withdrawn will rest against them, the sides of the plunger being cut away at *p* for permitting it to pass the inclined backs of the several catches without depressing them.

What we claim as new is—

1. The combination, with the frame, of pivoted spring-actuated catches, constructed substantially as described, and provided with shoulders adapted to engage stop-pins for limiting the movement of said catches, and a spring-actuated board in the top of the frame, having a flanged free end projecting under one of the cross-beams of the frame for limiting the upward movement of said board, substantially as and for the purpose set forth.

2. The herein described baling-press comprising the frame, a plunger located therein, a pivoted power-lever, a pitman connecting the latter and the plunger, the hinged side bars, the outer end pieces adapted to be secured between said bars by adjustable blocks, the inner end piece, spring-actuated side catches for retaining the same against backward movement and provided with shoulders, pins for limiting the movement of said catches, and the spring-actuated horizontally-disposed top catch, substantially as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

JOSHUA R. BIGHAM.
AMBROSE W. BIGHAM.

Witnesses:
Q. S. BARRETT,
T. L. STANFIELD.