(No Model.) 2 Sheets—Sheet 1.

B. G. COX.

HAY PRESS.

No. 457,705. Patented Aug. 11, 1891.

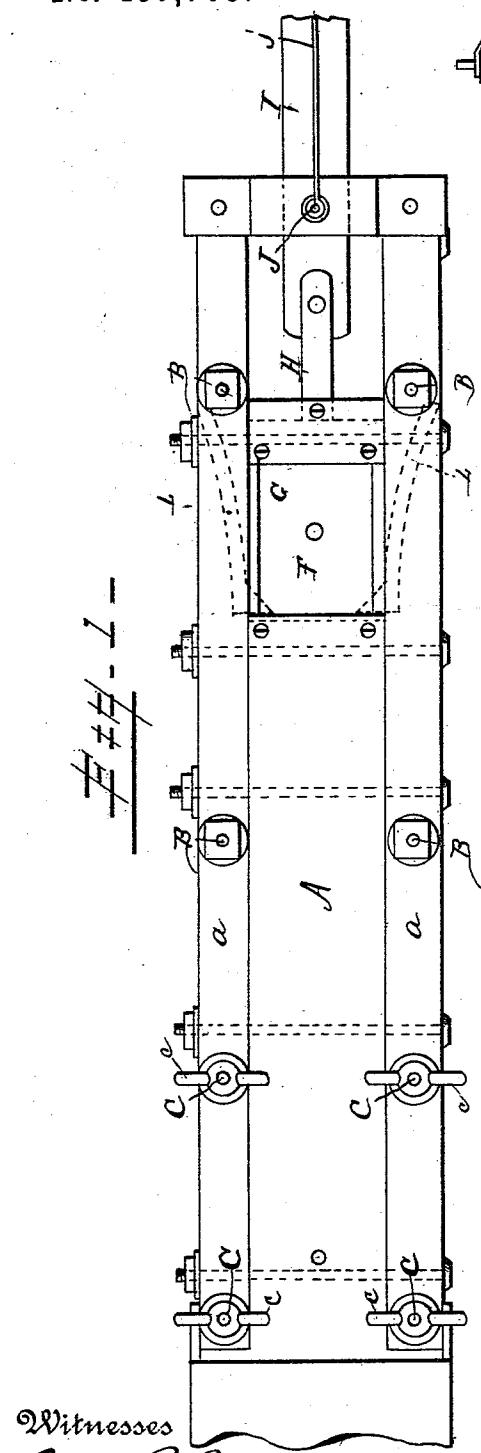


Fig. 1.

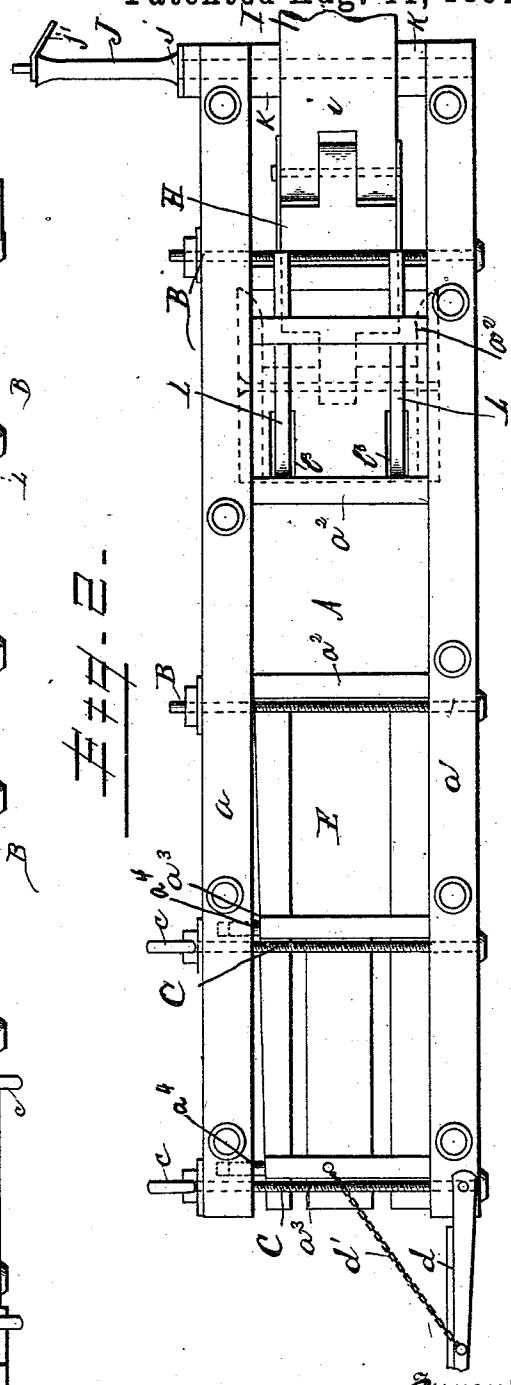


Fig. 2.

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(No Model.) 2 Sheets—Sheet 2.

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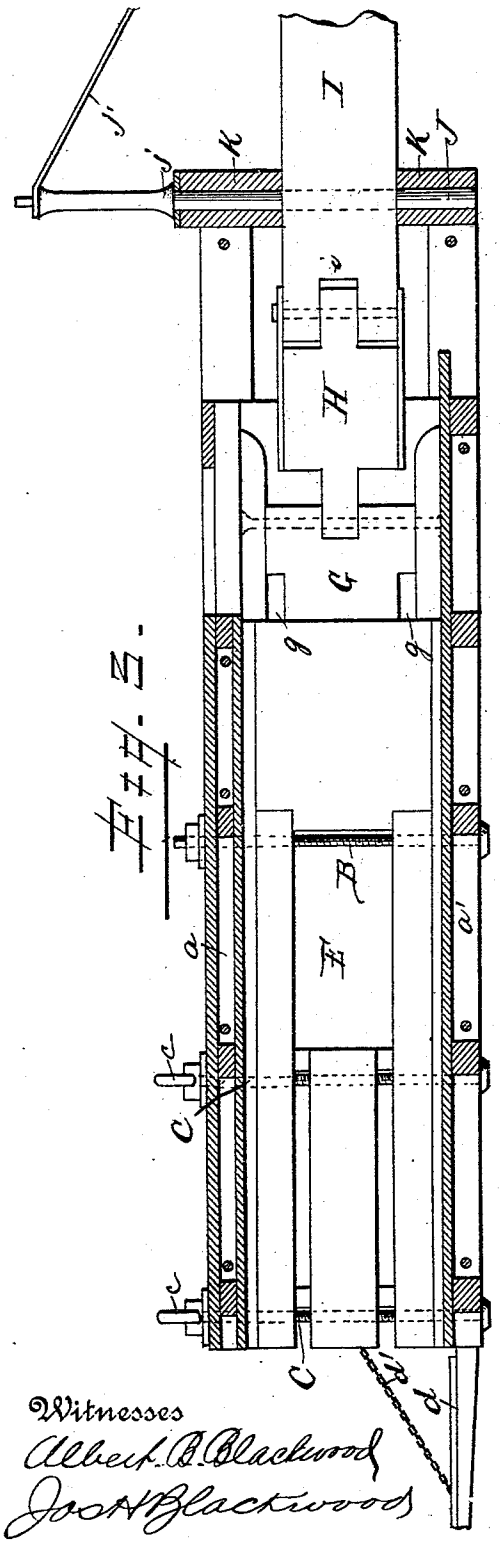


Fig. 3.

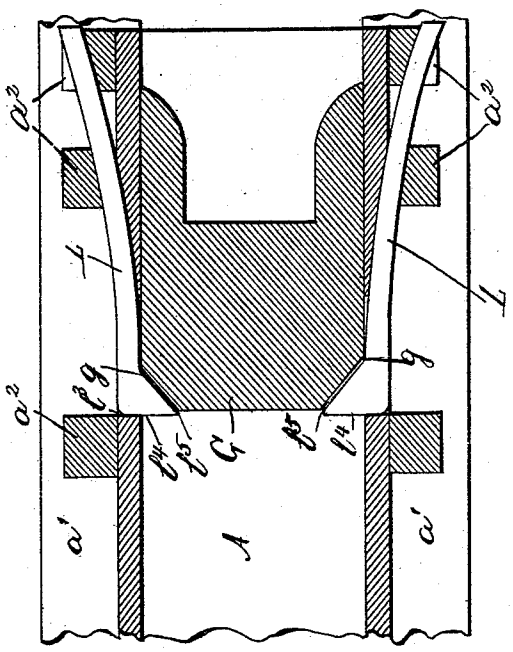


Fig. 4.

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UNITED STATES PATENT OFFICE.

BENJAMIN G. COX, OF TULIP, TEXAS.

HAY-PRESS.

SPECIFICATION forming part of Letters Patent No. 457,705, dated August 11, 1891.

Application filed October 6, 1890. Serial No. 367,282. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN G. COX, a citizen of the United States, residing at Tulip, in the county of Fannin and State of Texas, have invented certain new and useful Improvements in Hay-Presses; and I do 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 the letters of reference marked thereon, which form a part of this specification.

The invention relates to improvements in baling-presses, and is practically adapted to bale hay, the object being to provide simple and efficient means whereby the hay may be held at the rear end of the frame against the pressure of the follower and head-blocks or presser-blocks; and it therefore consists in the construction, arrangement, and novel combination of parts hereinafter described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the accompanying drawings, in which similar letters of reference indicate similar parts, Figure 1 represents a plan view of a baling-press embodying the invention. Fig. 2 represents a side view thereof. Fig. 3 represents a central vertical longitudinal section of said press. Fig. 4 represents a detail horizontal section of the front portion of the press and the follower-block on a scale larger than that of the former figures.

Referring to the drawings by letter, A designates the main frame of the press, composed of a suitable top and bottom or floor, the longitudinal side beams *a a*, secured by transverse bolts and nuts to the edges of the top, the longitudinal side beams *a' a'*, secured by similar bolts and nuts to the edges of the bottom or floor of the press, the vertical side posts *a'' a''*, connecting the longitudinal top and bottom beams on each side of the frame in front of the tie-openings, and the vertical side posts *a''' a'''*, connecting said beams in rear of said openings. The side posts *a'' a''* are equal in height and are suitably secured by tenons and mortises or otherwise to the beams they connect, and the upper and lower side beams are held tightly to said posts by vertical bolts B, which engage nuts on their threaded upper ends, as shown. The side posts *a''' a'''* are somewhat shorter than the side posts *a'' a''* and are not of equal height, each one being somewhat shorter than the preceding one in front, and at their upper ends they are provided with tenons *a'''' a''''*, that enter but do not extend upward far enough to fill suitable mortises in the lower sides of the upper longitudinal beams *a*.

C C are vertical bolts binding together the beams *a a'* on each side in rear of the tie-openings, with their heads resting against the lower sides of the lower beams and their threaded upper ends projecting through and above the upper beams, and *c c* are nuts engaging said ends above said upper beams.

It is evident from the above description that the upper and lower beams *a a'* on each side must be parallel from the front of the frame to the tie-openings, as the vertical posts *a'' a''* are of equal height and their shoulders above and below bear, respectively, against said beams, but that in rear of said openings the upper beams can be bent downward toward the lower beams by turning down the nuts *c* on the bolts C, thus decreasing the transverse capacity of the interior of the frame in rear of the tie-openings, so that the hay, moved rearward by the follower and presser blocks, will pack or stick therein and be compressed into a bale by the said follower and blocks. When the bale has been thus formed and tied, the nuts *c* are unscrewed sufficiently to permit the bale to be removed and received upon the table D, the side rails *d* of which are pivoted at their lower or front ends to the rear ends of the beams *a'*, while the table itself may be raised or lowered by means of chains *d'*, attached to its side edges and engaging staples or catches secured to the rear side posts of the frame.

E E are the opposite tie-openings in the sides of the frame between the vertical side posts *a'' a''* and *a''' a'''*, and F is the feed-opening for the hay in the top of the frame, near the front thereof.

G is the follower or follower-block, of ordinary construction, having triangular recesses *g g* in its inner vertical side edges and in a

notch, in the front of which is pivoted a projection on the rear end of the pitman H. The said pitman has a projection on its front end, which is pivoted in a notch in the end of the rear arm *i* of the actuating-lever I, and has secured to its upper and lower sides re-enforcing plates *h h*, through which the pivotal pin also passes. The actuating-lever I is pivoted upon a pin J, having bearings in the upper and lower transverse blocks K K, which respectively connect the front ends of the upper and lower longitudinal beams of the main frame. The pin J has a collar *j* above the upper block K to hold it in place in its bearings, and is preferably extended upward to some height and its upper end connected by a brace-rod *j'* with the end of the outer arm of the actuating-lever.

L L are longitudinal springs having the front ends of their shanks *l*, secured to the front vertical posts *a''* outside of the boarding *l'*, secured between the upper and lower longitudinal beams on each side in front of the tie-openings and provided with triangular heads *l''* on their rear ends, which heads pass into the interior of the main frame through slots *l'''* in the boarding *l'* and have their square or rectangular edges *l''''* rearward and their inclined edges *l'''''* frontward, as shown in Fig. 4. When the follower is at the inner or rear end of its stroke, the said inclined edges *l'''''* rest and fit in the corresponding triangular recesses *g* in the follower. In operation the follower is moved by the actuating-lever and pitman to the outer or front end of its stroke, the hay fed into the opening F, and the follower then moved inward. The stroke of the follower easily drives the hay past the inclined edges *l'''''* of the springs L; but when the follower is retracted the rectangular edges *l''''* prevent it from expanding outward again. A presser-block of the kind used in such presses is then placed in rear of the follower through the feed-opening and driven past the inclined edges *l'''''* of said heads, the springs being forced outward by its passage, but closing the heads inward into the recesses *g* as soon as it has passed, at which time the follower has reached the inner end of its stroke. In the same manner a sufficient number of presser-blocks are introduced to force the hay into the rear end of the frame, which has been reduced in capacity, as described, by the bolts C and nuts *c*, and in which end it is compressed into a bale, as heretofore described.

On account of the simplicity of construction of the main frame and the short time and little labor required to screw and unscrew the nuts *c* on the corresponding bolts C the operation of baling can be carried on very rapidly, and the press has therefore a capacity much exceeding presses of ordinary construction.

Having described my invention, I claim—

In a baling-press, the combination, with the main frame composed of a top and bottom or floor, longitudinal upper side beams secured to the edges of the top, longitudinal side beams secured to the edges of the bottom or floor, vertical side posts of equal height connecting the upper and lower side beams on each side from the front of said frame to the tie-openings therein, and vertical side posts lessening in height rearward in rear of said tie-openings and having reduced upper ends loosely contained within the said upper side beams, of vertical bolts connecting said upper and lower beams on each side in rear of the tie-openings and provided with nuts on their upper threaded ends, by means of which the said upper beams may be depressed, and a follower of suitable construction reciprocating in the front portion of the main frame, substantially as specified.

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

his
B. G. + COX.
mark

Witnesses:
R. L. McLennan,
Chas. G. Nunn.