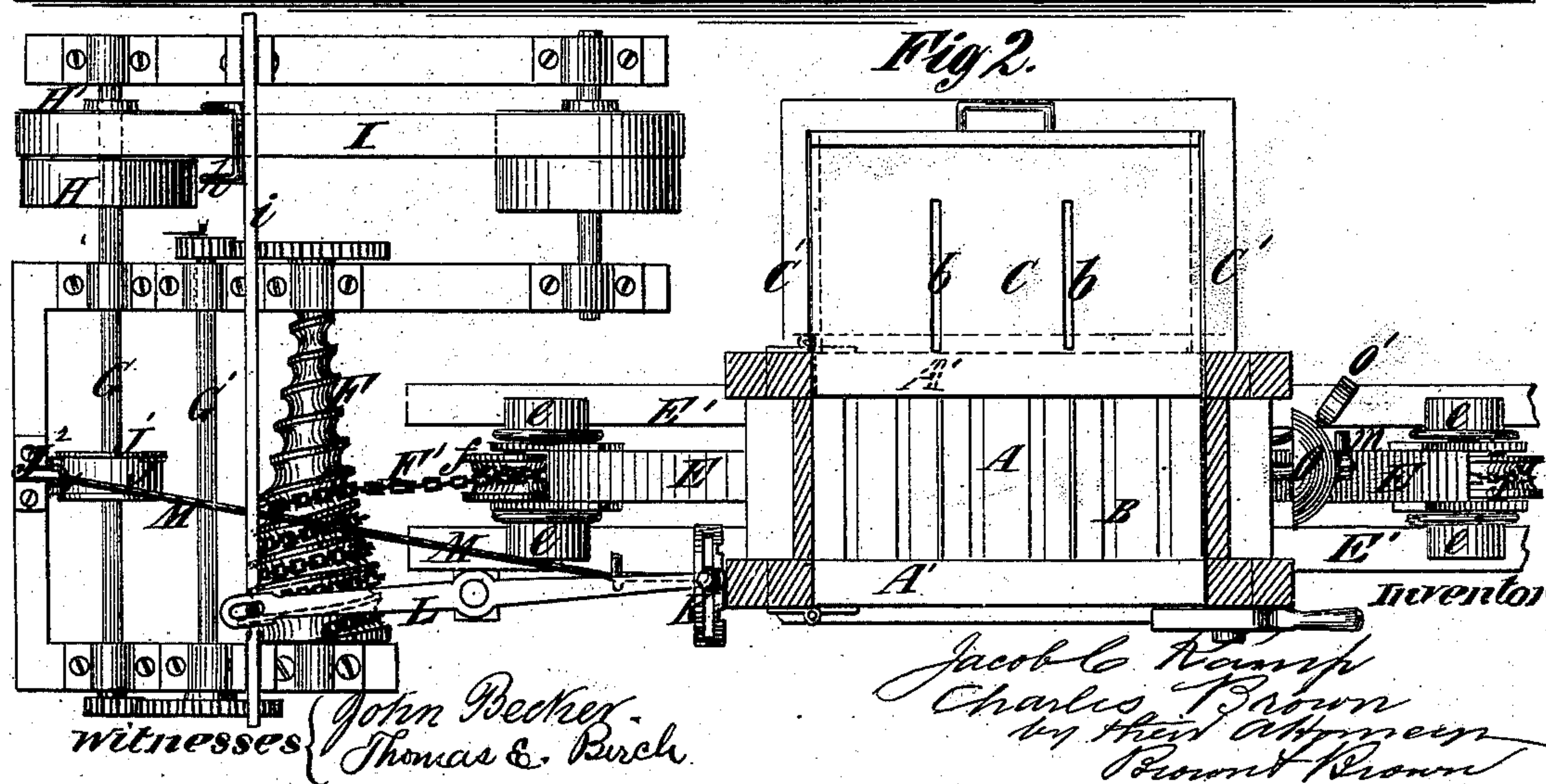
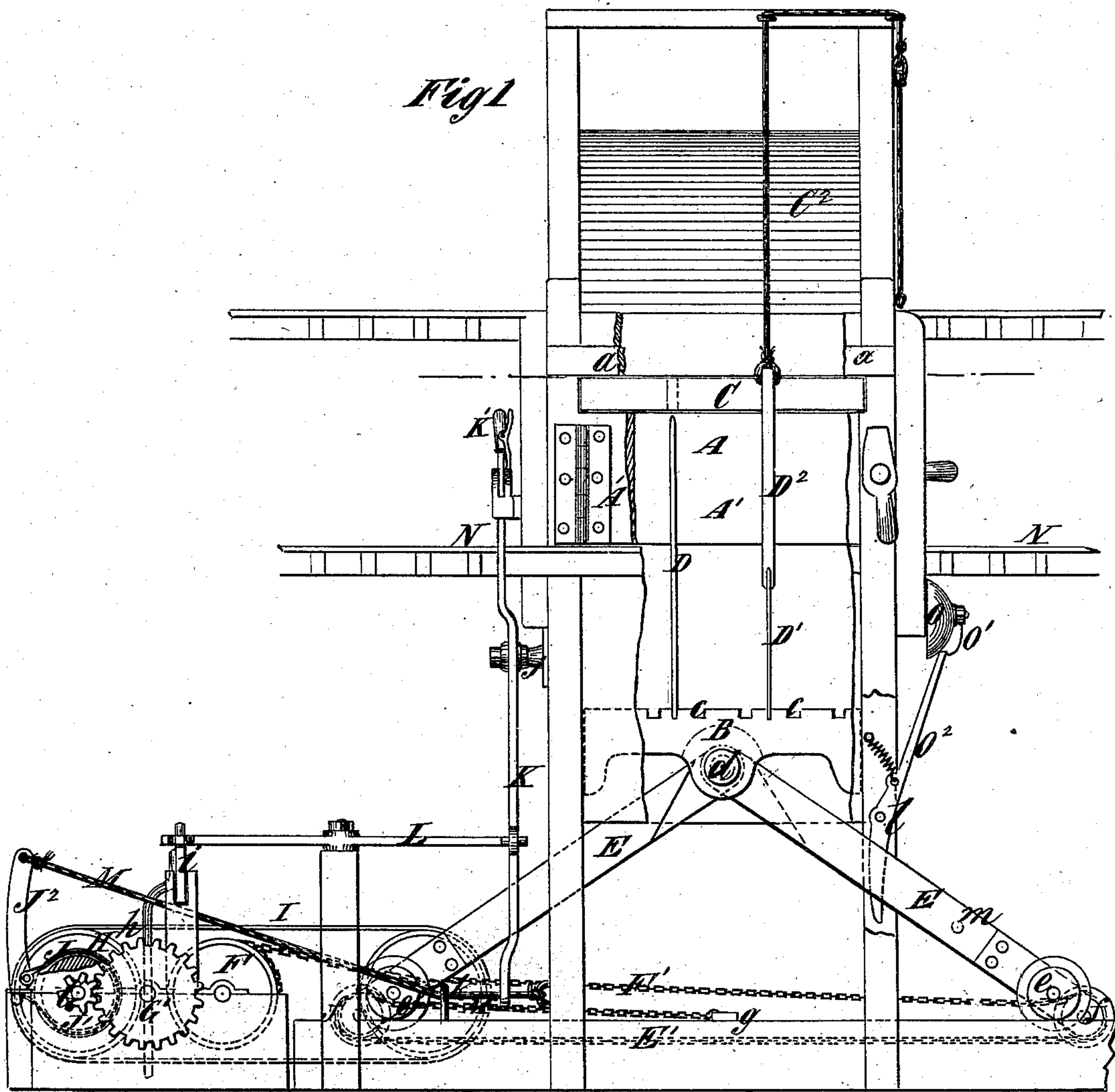


J. C. KAMP & C. BROWN.
Baling-Press.

No. 224,920.

Patented Feb. 24, 1880.



UNITED STATES PATENT OFFICE.

JACOB C. KAMP AND CHARLES BROWN, OF NEW YORK, ASSIGNORS TO
WILLIAM P. KAMP, OF SAME PLACE, AND JEREMIAH BROWN, OF EAST
HAMBURG, NEW YORK.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 224,920, dated February 24, 1880.

Application filed October 15, 1879.

To all whom it may concern:

Be it known that we, JACOB C. KAMP and CHARLES BROWN, both of the city of New York, in the county and State of New York, have invented certain new and useful Improvements in Baling-Presses, of which the following is a specification.

The object of our invention, which is applicable to presses for baling short-cut hay, straw, or similar material, is to provide in a very convenient manner for dividing the material placed in a press-box so as to form two or more separate bales, which are all pressed and formed simultaneously at one movement of the press-follower.

The object of another part of our invention, which is applicable to baling-presses of various kinds, is to provide for controlling the operations of the same, whereby a press is provided which may be very easily controlled in its operation.

One of our improvements consists in the combination, with a press-box and a follower movable therein, of a vertical partition-plate extending across the press-box, attached to the follower and moving therewith, the depth of said plate being equal to the thickness of the bale to be pressed, and a removable board adapted to fit upon and form a continuation of said plate while the press-box is being filled, the said plate being removed when the operation of pressing is commenced.

Another of our improvements consists in the combination, with such press and windlass, of a shaft through which motion is imparted to said windlass, a brake applied to said shaft, means whereby the said shaft may be made to engage with or be disengaged from its driving mechanism, and a lever which serves to effect the engagement and disengagement of said driving mechanism, and also to apply said brake.

Other improvements consist in details of construction to be hereinafter explained.

In the accompanying drawings, Figure 1 represents a side elevation of a press embodying our invention and its operating mechanism, parts thereof being broken away the better to illustrate our invention; and Fig. 2 represents a plan thereof.

Similar letters of reference designate corresponding parts in both figures.

A designates the press-box, and B the follower, movable vertically therein. The two opposite sides A' of the press-box are hinged, as clearly represented at Fig. 2, to facilitate the removal of the pressed bale.

C designates the head of the press, which, while the press-box is being filled with short-cut hay or other material to be pressed, is moved to one side of the press, as clearly shown in Fig. 2, it being horizontally adjustable in guides C' for that purpose. When the filling of the press-box is completed and the follower about to commence its movement the head C is moved inward under the timbers a, which hold it firmly to resist the upward pressure of the bale.

C² designates an inclined chute or hopper for delivering hay or other material to the press-box.

In order to provide for pressing two or more bales at a time, we divide the press-box by partition-plates, which are firmly fixed in the follower B and move upward with it.

The partition-plate D' here represented is only equal in height to the thickness of a pressed bale, and we employ a removable board, D², adapted to fit upon the top of the partition-plate D' and form an extension thereof while the hay is being placed in the press-box.

When the box has been filled and the hay or other material packed the board D² is removed, leaving a channel or space in the hay, into which the partition D' passes as the follower performs its upward stroke. The follower B is provided with the usual grooves c for the passage of the wire bands for securing the bale. When the pressing is completed the hinged sides are opened and removed.

In this example of our invention the follower of the press is operated by a toggle-joint, the two members or limbs E of which are hinged to the follower at d, and carry wheels or rollers e at their lower ends, which bear upon timbers or rails E', forming a track upon which they work.

F designates a windlass, preferably provided with a spiral groove and made conical or tapering from one end toward the other. From

this windlass a chain, F' , extends around pulleys f at the lower ends of the members or limbs E , and has its end secured to a cross-piece at g .

5 By turning the windlass in one direction the chain is wound thereon, and, acting upon the pulleys f like a block and fall, causes the members or limbs E to approach a vertical line and moves the follower B upward.

10 Motion is imparted to the windlass in this instance by a driving-shaft, G , acting through an intermediate shaft, G' , and proper gearing, and we have represented the shaft G as provided with fast and loose pulleys H H' , over
15 which a belt, I , passes, a belt-shifter, h , and horizontally-adjustable bar i being employed to shift the belt from one to the other of the pulleys.

When the belt I is shifted onto the loose
20 pulley H' to stop the follower after it has completed its upward stroke, the weight of the follower and connections, as well as the elasticity of the compressed bale, would cause the follower to instantly descend.

25 In order to hold the follower in its upward position until the bale or bales are secured we employ a brake, (here represented as a strap-brake,) J , acting upon a pulley, J' , upon the driving-shaft G , and actuated by a lever, J^2 .

For the purpose of simultaneously effecting the shifting of the belt I onto the loose pulley H' and applying the brake J , we have represented a lever, K , pivoted at j to the side
35 of the press, and acting upon a horizontally-oscillating lever, L , to shift the bar i and belt-shifter h .

Passing through the lower end of the lever K and an eye or lug, k , is a wire, cord, rope,
40 or other flexible connection, M , rigidly secured at one end, and at the other fastened to the brake-lever J^2 . By shifting the lever K the belt is shifted to the loose pulley, and by the connection M at the same time being deflected
45 the brake is applied to hold the shaft G against rotating in the reverse direction.

As here represented, the belt-shifter h is made considerably wider than the width of the belt, so as to permit the lever K to be shifted
50 sufficiently to permit the lowering of the follower B without shifting the belt again onto the fast pulley.

The lever K is preferably so arranged that its handle K' is within reach of the baler, who
55 stands on the floor N , and from his position he can stop and start the follower, apply and release the brake, and control all the operations of the driving mechanism of the press.

We have represented a bell, O , attached to
60 the press-frame, and a hammer, O' , on the end of a lever, O^2 , which is pivoted at l . A pin, m , is inserted in one of the members or limbs

E , and as the latter is moved the pin acts on the end of the lever O^2 , strikes the bell, and gives the baler warning to stop the move- 65
ment of the follower. This audible alarm is desirable, as the baler stands on the floor N , above the working parts of the press.

By our invention we produce a press particularly adapted for making two or more bales 70
at once, and one very powerful in its operation, and which may be readily controlled and operated.

By the arrangement of the lever K and its connection with the brake and belt-shifter the 75
labor of one man is dispensed with, and the operation of the press brought entirely under the control of the baler, who stands in front of the hinged door A' .

We are aware that presses have been here- 80
tofore constructed in which the follower has attached to it a fixed partition-plate moving with it, and therefore we do not claim, broadly, such fixed partition-plate.

What we claim as our invention, and desire 85
to secure by Letters Patent, is—

1. The combination, with a press-box and a follower movable therein, of a vertical partition-plate, extending across the press-box, at-
90 tached to the follower and moving therewith, the depth of said plate being equal to the thickness of the bale to be pressed, and a removable board adapted to fit upon and form a continuation of said plate while the press-box is being filled, substantially as specified. 95

2. The combination, with a press-follower, of a toggle-joint for actuating the same, a windlass and chain for operating said toggle-joint, a shaft through which motion is im-
100 parted to said windlass, a brake applied to said shaft, means whereby the said shaft may be made to engage with or be disengaged from its driving mechanism, and a lever which serves to effect the engagement and disengagement of said driving mechanism, and also
105 to apply said brake, substantially as specified.

3. The combination, with a press, of the lever K , arranged contiguously to the side there-
of, and connected with the lever L , for effecting the engagement of the shaft G with and its
110 disengagement from its driving mechanism, and with the flexible connection M , for applying a brake to said shaft, substantially as specified.

4. The combination, with the press, of the 115
bell O , the lever O^2 , for sounding said bell, and the member or limb E , furnished with a pin, m , for tripping said lever, substantially as specified.

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CHARLES BROWN.

Witnesses:

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T. J. KEANE.