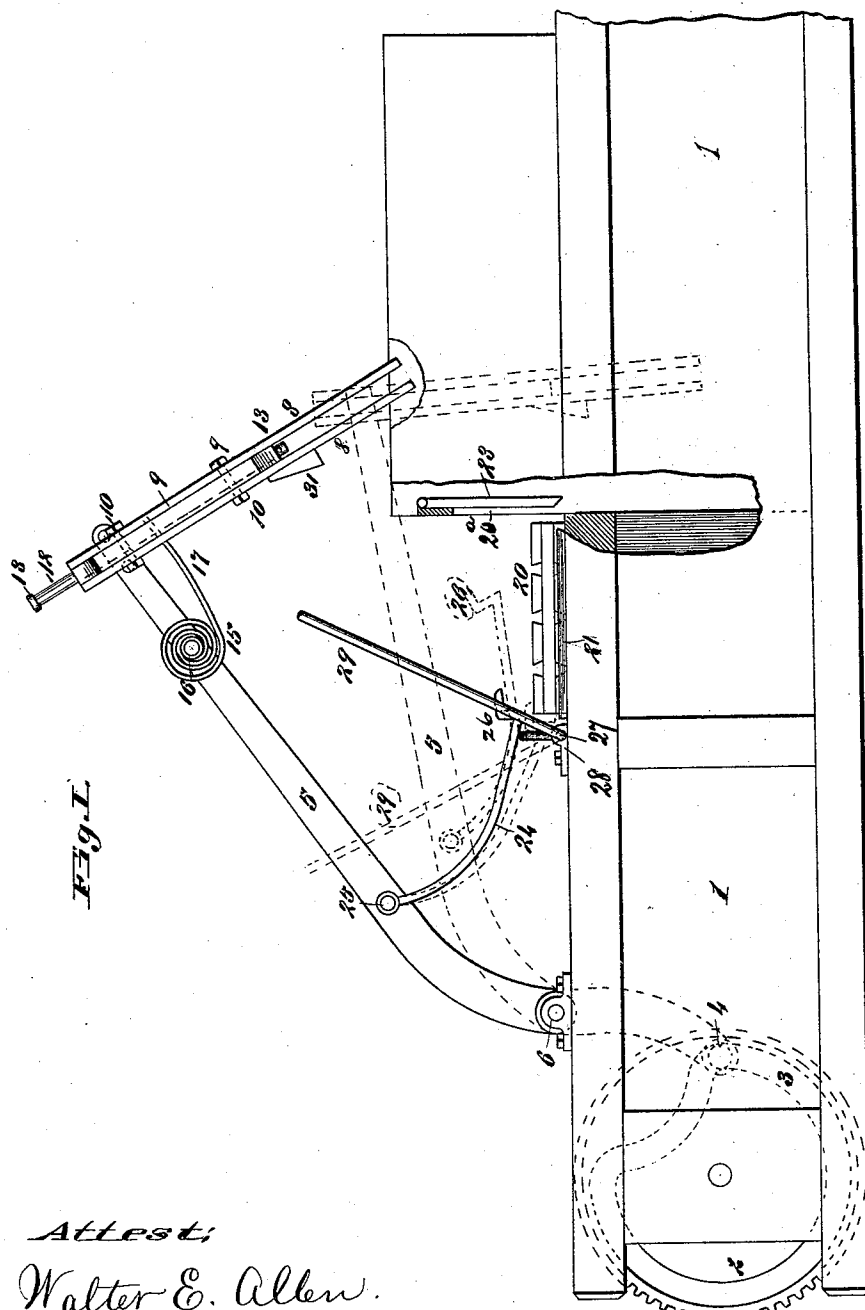


2 Sheets—Sheet 1.

No. 465,520.

Patented Dec. 22, 1891.



Attest;

Walter E. Allen.

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Inventors:
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(No Model.)

2 Sheets—Sheet 2.

J. W. BROWN & A. A. GEHRT.
FEEDER FOR BALING PRESSES.

No. 465,520.

Patented Dec. 22, 1891.

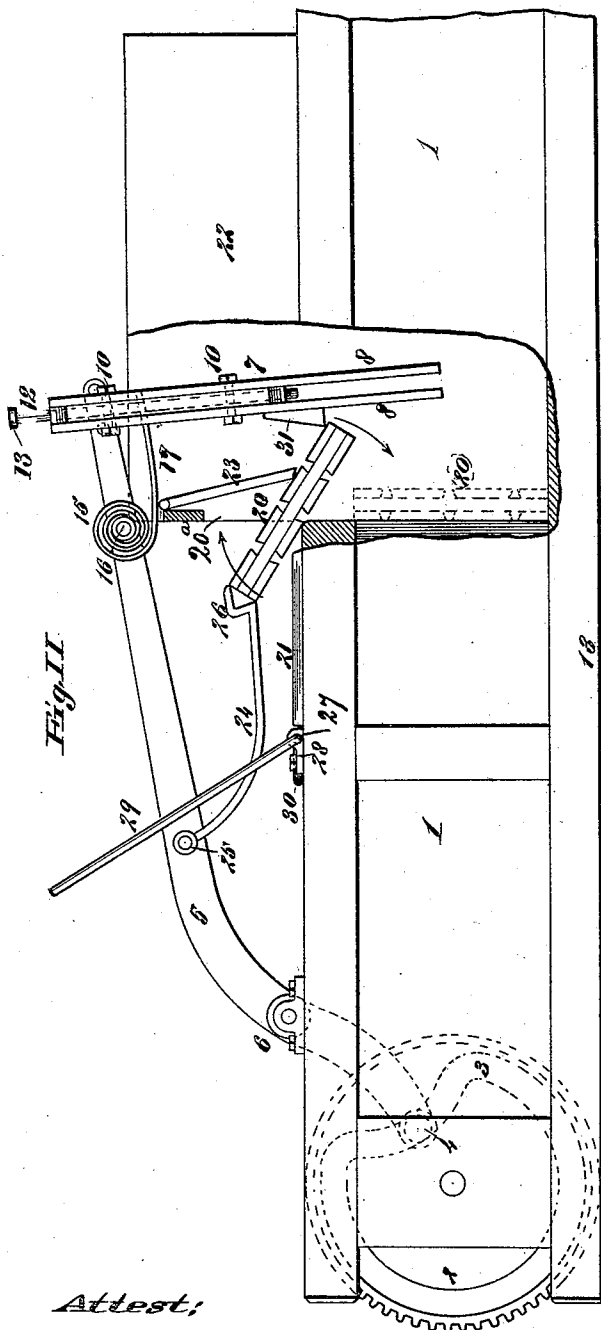


Fig. II.

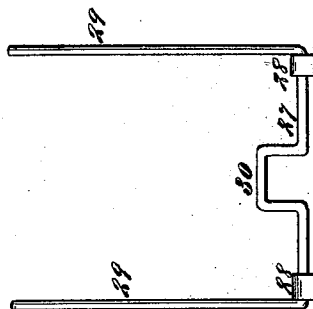


Fig. V.

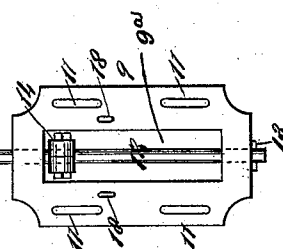


Fig. IV.

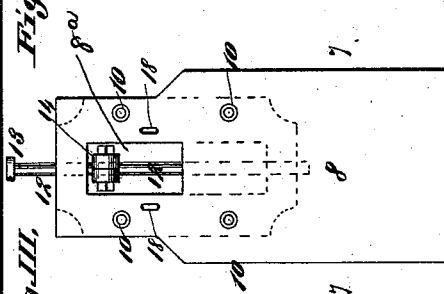


Fig. III.

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UNITED STATES PATENT OFFICE.

JOHN W. BROWN AND ALBERT A. GEHRT, OF QUINCY, ILLINOIS, ASSIGNORS
TO THE COLLINS PLOW COMPANY, OF SAME PLACE.

FEEDER FOR BALING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 465,520, dated December 22, 1891.

Application filed July 28, 1891. Serial No. 400,924. (No model.)

To all whom it may concern:

Be it known that we, JOHN W. BROWN and ALBERT A. GEHRT, both of Quincy, in the county of Adams and State of Illinois, have invented a certain new and useful Improvement in Baling-Presses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

Our invention relates to certain improvements in baling-presses; and it consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a side elevation, part broken away and showing the feed end of a baling-press provided with our improvements. Fig. II is a similar view showing the parts in a different position from that shown in Fig. I. Fig. III is an elevation of the feeder. Fig. IV is an elevation of the adjustable plate located within the feeder. Fig. V is a top view of the crank-shaft, which lifts the push-arm of the division-boards out of the path of the boards.

Referring to the drawings, 1 represents the body of the press.

2 represents a gear-wheel, which may be utilized for transmitting the power to the plunger or traverser; but as no invention is claimed in this specification on this part of the press, and as this wheel may be especially provided to operate the feeder, we have shown no connection between this wheel and the traverser. This wheel is provided with a cam-groove 3 to receive a projection (which may be in the form of a friction-roller) 4 on the end of a lever 5, pivoted at 6 to the body of the press.

7 represents a feeder mounted on the lever 5 and composed, preferably, of two boards or pieces 8, each having a slot 8^a, and between which fits a plate 9, having a slot 9^a registering with the slots 8^a, and to which the boards are held by bolts 10, passing through slots 11 in the plate. The bolts hold the boards firmly to the plate; but through means of the slots 11 the boards may be shifted up or down relatively to the plate by loosening the bolts and then tightening them again after the boards have been adjusted.

12 represents a pin which passes freely

through the plate 9, and which has a head or pin 13 at each end to limit its movement through the plate. The lever 5 has a fixed connection with the pin 12 within the central slots 8^a and 9^a, forming a rigid support for the feeder, as shown at 14, Figs. III and IV.

15 represents springs connected to the lever 5 at 16, and which have extended ends 17, which pass through slots 18 in the boards 8 and plate 9. There is one spring on each side of the lever 5. Only one of them is shown; but the other is a duplicate of the one shown and directly opposite it. The tendency of the springs is to force the feeder (composed of the boards 8 and plate 9) downward, so as to hold it normally with the lower end of the plate 9 against the head or pin 13 in the lower end of the pin 12. During the operation of the press if an unusual strain is brought upon the feeder—as, for instance, if a too large amount of material is fed at one time, or if some foreign matter should accidentally get into the press—the springs 15 will yield and the pin 12 will move downwardly in the plate 9; or, in other words, the feeder will be allowed to yield to this unusual strain, while the movement of the lever continues, and thus the breakage of the feeder or arms is guarded against.

20 represents the division-boards. These, in the operation of the press, are placed on top of the body just back of the feed-opening of the baling-chamber, as shown clearly in Fig. I, and they may be held in their proper position and guided in their movement by strips 21, secured to the top of the body of the press. The rear end of the condensing-box 22 of the press is made with a board-opening 20^a, closed by a cover in the form of a hinged door 23, which swings inwardly, as shown in Fig. II, as the division-boards are inserted.

24 represents an arm secured to the lever 5 by a pivot-pin 25, and, if desired, there may be two of the arms, one on each side of the lever. The free end of the arm is provided with a head 26 for engaging the division-boards from behind and shoving them forward into the press as the lever 5 descends.

In the operation of a baling-press the feeder necessarily makes a number of movements

between the insertion of each division-board, and to permit a division-board to be put in place on top of the press right after one has been inserted, and at the same time prevent the arm 24 from moving this board forward until the proper time, we secure a shaft 27 to the top of the press by means of suitable boxes 28. This shaft has extended ends 29, turned upwardly, and by which it may be moved.

10 The shaft is also provided with a crank 30, as shown clearly in Fig. V. To throw the arm 24 out of action, the shaft is moved to turn the crank 30 to a vertical position, which will lift the arm 24 out of the path of the division-board, so that as the lever 5 moves back and forth the arm 24 will move over the division-boards and will not engage them. When it is desired to insert a division-board, the shaft 27 is moved to turn the crank 30 downward to a horizontal position, and the arm 24 will then be lowered from the position shown in full lines, Fig. I, to the position shown in dotted lines and will engage the division-board from the rear as the lever 5 descends and force the division-board into the press through the door-opening 20^a and under the door 23, as shown in Fig. II. As the division-board enters, its inner end is caught by a projection 31 on the feeder 7, which tilts the division-board to a vertical position, and it then falls by gravity into the chamber of the press in its proper position. The division-boards are thus inserted automatically, while the time of their insertion is under the control of the operator of the press, who has simply to move the shaft 27 and place another division-board on the press when the last one has been moved off, as explained.

We claim as our invention—

40 1. In a baling-press, the combination of a suitable lever, a feeder, and a rigid support between the feeder and lever, on which the latter is adapted to slide when it meets with an obstruction, substantially as set forth.

45 2. In a baling-press, the combination of a suitable lever, a feeder, and a yielding connection between the feeder and the lever, consisting, essentially, of a pin united to the lever and working in the feeder, and a spring connected to the lever and engaging the feeder, substantially as set forth.

50 3. In a baling-press, the combination of a lever, a feeder, a rigid support secured to the lever on which the feeder is adapted to slide when it meets with an obstruction, and a spring connected to the lever and engaging the feeder, substantially as and for the purpose set forth.

55 4. In a baling-press, the combination of a lever, a feeder, and a spring located between the lever and the feeder, the feeder consisting of a board or strip, a plate to which the board or strip is secured, and a pin loosely

fitting in said plate and to which said lever is secured, substantially as and for the purpose set forth. 65

5. In a baling-press, the combination of a lever, a feeder, and a spring, said feeder consisting of a board or strip, a plate to which the board or strip is secured by slot-and-bolt connection, a pin fitting in said plate and connected to said lever and having upper and lower slots 13, and said spring being connected to the lever and engaging said feeder by its free end, substantially as and for the purpose set forth. 75

6. In a baling-press, the combination of a lever, means for moving the lever, and an arm pivoted to the lever for forcing the division-boards into the press as the lever descends, substantially as set forth. 80

7. In a baling-press, the combination of the lever, an arm pivoted to the lever for forcing the division-boards into the press, and a crank-shaft for moving said arm out of the path of the division-boards, substantially as and for the purpose set forth. 85

8. In a baling-press having a condensing-chamber with a hinged end, and a feeder having a projection 31, a lever for moving said feeder, and an arm secured to the lever and adapted to engage the division-boards and force them into the press through the hinged end of the condensing-box to cause them to be engaged by the projection on the feeder, substantially as and for the purpose set forth. 95

9. The combination of the body having a feed-opening; and a swinging door located at the back of the feed-opening, under which the division-boards are passed, substantially as described. 100

10. The combination of the body having a feed-opening and a board-opening located at the back of the feed-opening, and a swinging door providing a cover to the board-opening, substantially as described. 105

11. The combination of the body having guide-strips thereon and a feed-opening, and a swinging door located at the back of the feed-opening, under which the division-boards are passed from between the guide-strips, substantially as described. 110

12. The combination of the body having a feed-opening, a swinging door located at the back of the feed-opening, under which the division-boards are passed, a lever, and a feeder having a projection for tilting the division-boards downward, substantially as described. 115

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In presence of—

GEO. W. ELICK,
WM. N. BROWN.