

No. 653,709.

Patented July 17, 1900.

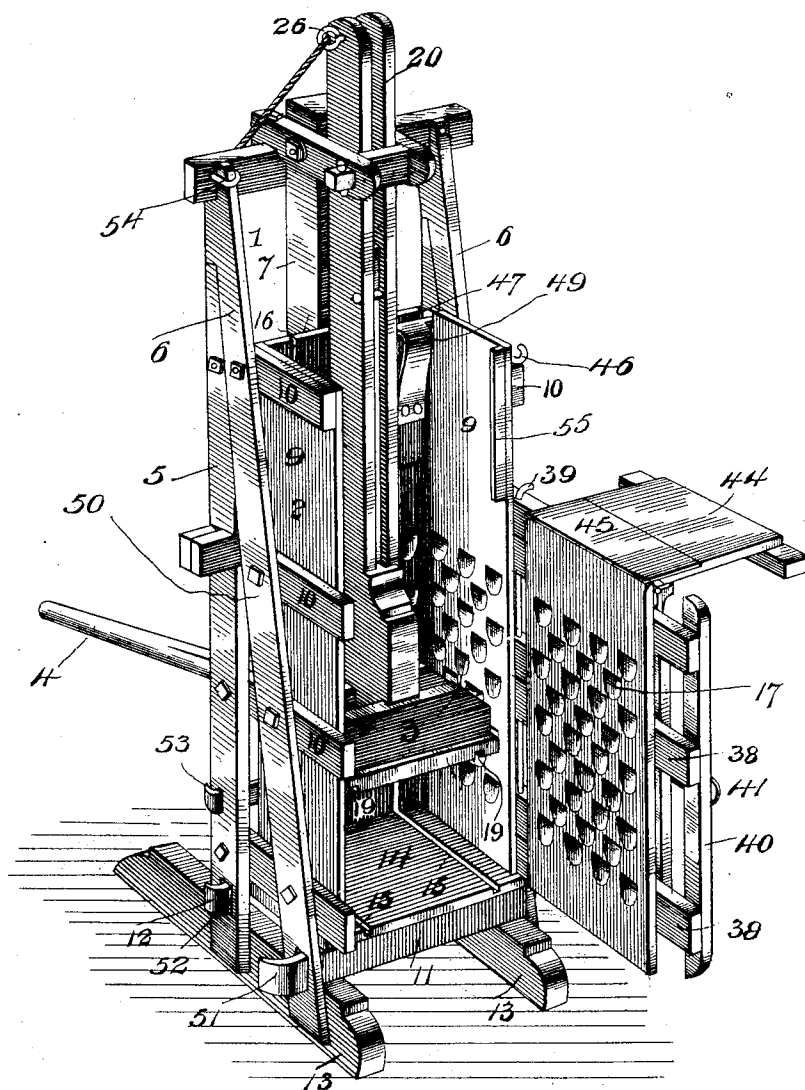
J. J. STOPPLE.
BALING PRESS.

(Application filed Dec. 20, 1899.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.



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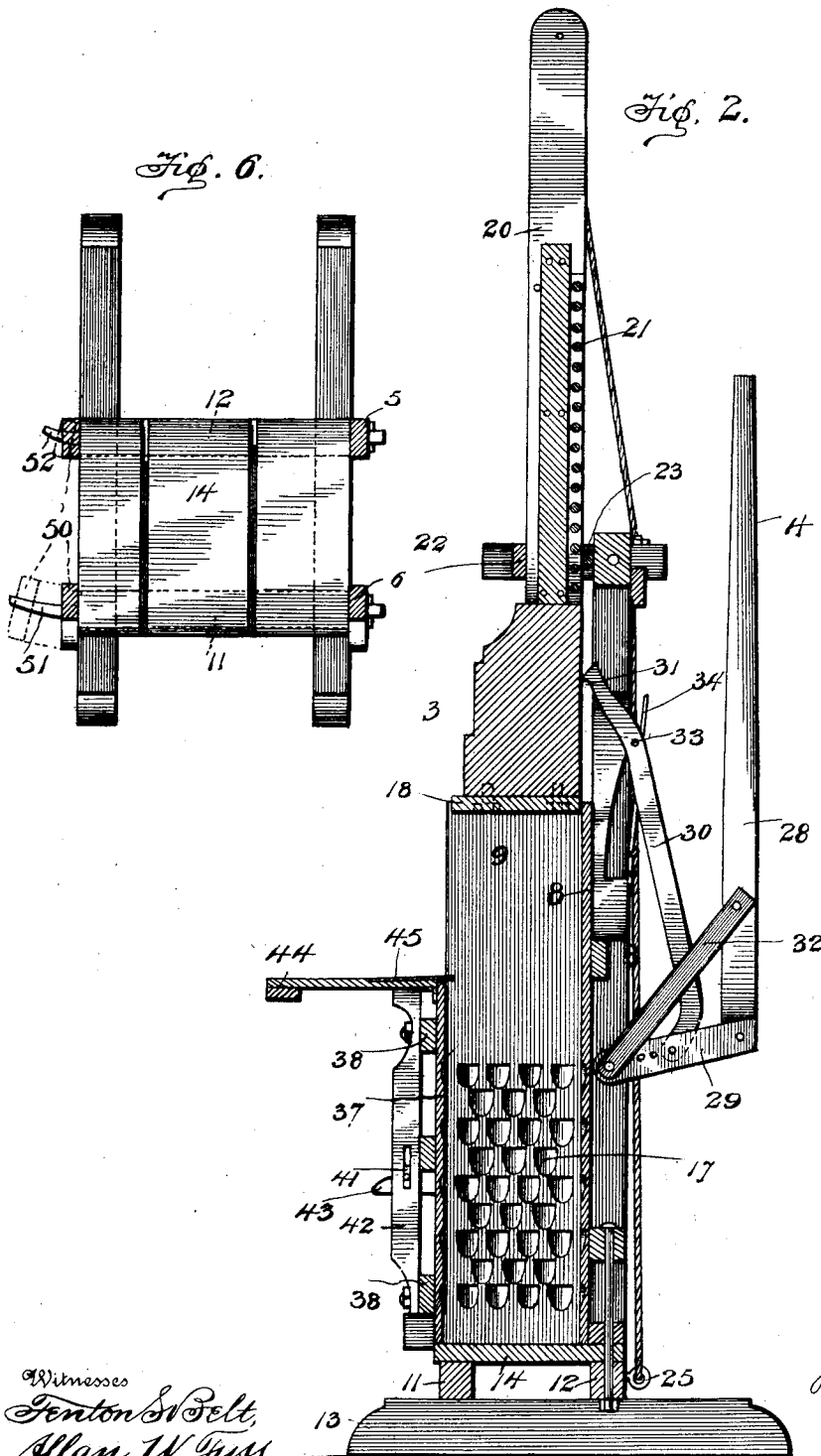
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3 Sheets—Sheet 2.



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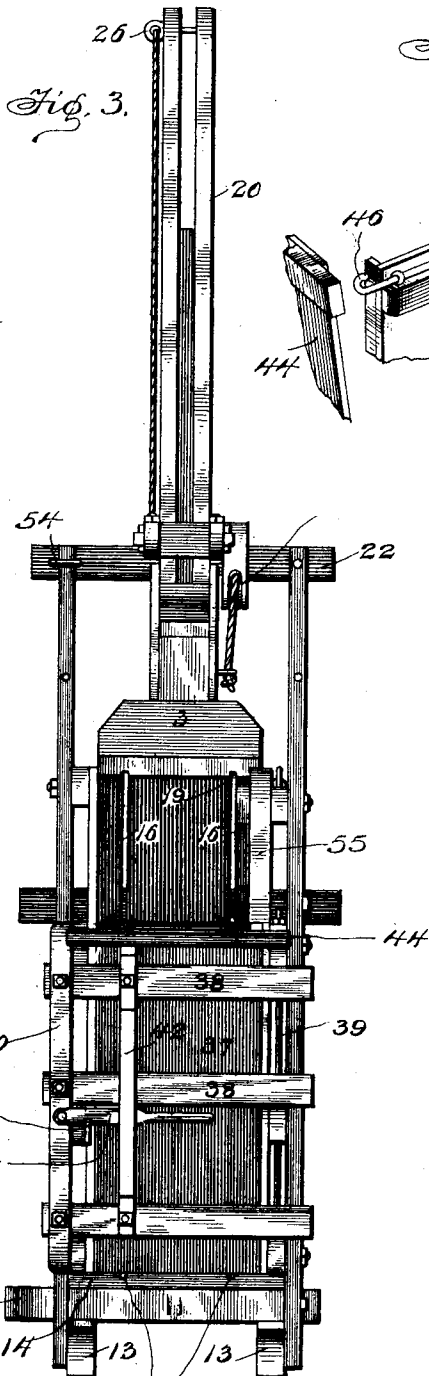
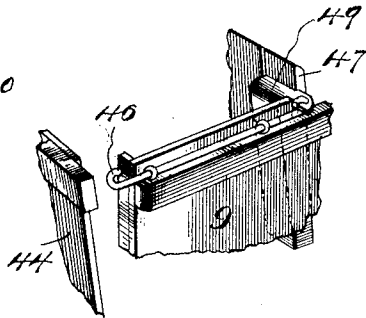
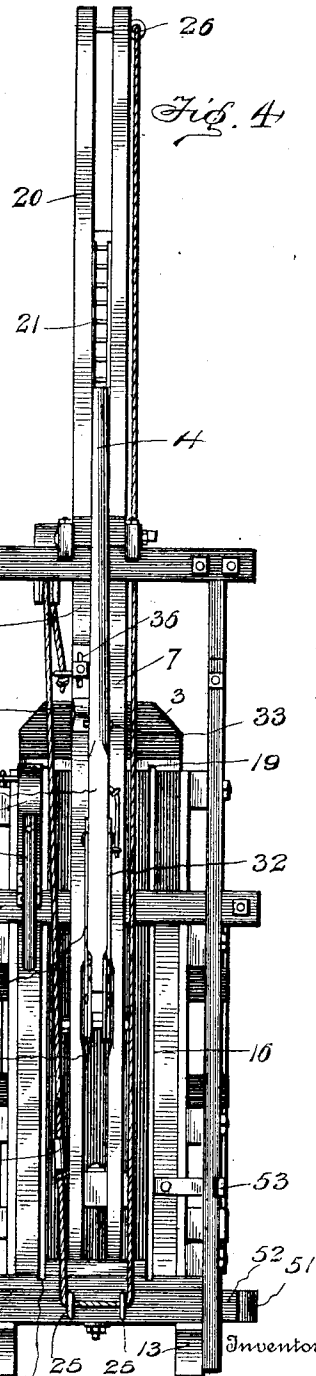


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN J. STOPPLE, OF GOLIAD, TEXAS.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 653,709, dated July 17, 1900.

Application filed December 20, 1899. Serial No. 741,040. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. STOPPLE, a citizen of the United States, residing at Goliad, in the county of Goliad and State of Texas, have invented certain new and useful Improvements in Baling-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.

My invention relates to improvements in baling-presses; and it consists in a press having a suitable frame, a box mounted thereon having a hinged front and a hinged side, a door at the top of the hinged front for supporting the charge to be baled and feeding the same to the box, a plunger mounted in the said box, means for raising the same, and means for automatically dropping the same when the door on the front is closed.

It also consists in certain other novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 represents a perspective view of a baling-press constructed in accordance with my invention, the front being opened and the door turned downwardly. Fig. 2 represents a vertical central section through the said press; Fig. 3, a front elevation of the same; Fig. 4, a rear elevation of the said press. Fig. 5 represents a detail view illustrating the means of automatically releasing the plunger; and Fig. 6 is a horizontal sectional view through the said press, showing the manner in which one of the sides is hinged.

1 in the drawings represents a suitable frame; 2, a box mounted thereon; 3, a plunger moving in the said box, and 4 a power-handle for depressing the plunger.

The frame 1 of the press preferably consists of side beams, as 5 5, braced by diagonal pieces or beams 6 6. These pieces are made rigid upon one side of the press, while upon the other side they are loosely connected at the top and bottom, so as to have an outwardly-swinging movement. The rear portion of the press is braced by suitable cross-pieces and vertical pieces, as 7 7, so mounted at the rear of the frame as to hold the plunger-operating mechanism. The box 2 is formed of back

and side pieces 8 and 9, respectively, which are bolted into the framing between the sides thereof and against the back. The side pieces of the baling-press are further strengthened by cross-pieces 10 10, which are securely bolted to the side beams 5 and 6 of the press. Cross-beams 11 and 12 are mounted at the base of the press, resting upon suitable foot-pieces 13 13 and supporting the bottom 14 of the box 2. The bottom 14 is preferably provided with the usual kerfs 15 15 and the back with slots 16 16, so that the usual wires or other binding means may be passed around the bale before it is removed from the box. The inner surface of the box and of the hinged front is preferably formed with a series of notches, as 17, which are formed with square edges facing downwardly, so as to engage the material pressed in the box and prevent the same from springing upwardly when pressure is removed from the top. The plunger 3 is formed with a suitable head 18, provided with kerfs 19 upon its under surface, said head being attached to the bottom of a plunger-rod 20. The rod 20 is preferably formed of two pieces securely fastened together so as to leave a groove or space at the rear thereof, in which is mounted a rack, as 21, adapted to be engaged by the power mechanism, as will be hereinafter described. The top of the plunger passes through a horizontal frame 22, which is secured to the back upright pieces 7 7 of the press. Interposed between the plunger-rod and the said back pieces is an antifriction-roller 23, which allows the said plunger to move up and down with less friction. A rope or cable is secured to the plunger-head in any suitable manner at one end and passes upwardly and over a pulley 24, secured to the frame 22. The rope then passes downwardly and through eyes 25 25, secured to the base of the press, the free end of the said rope being carried upwardly again and secured to an eye 26 at the top of the plunger-rod. A suitable handhold, as 27, is secured to the rope or cable, so that it may be grasped when it is desired to raise the plunger. Pivotaly mounted between the back posts 7 7 of the frame is a power-lever 4, having a straight portion 28 and a bent portion 29 at its lower end extending almost at right angles to the hand-engaging portion thereof.

The said bent lower end portion is preferably formed of two parallel plates, between which is pivoted a pawl, as 30, the upper end of the said pawl being hooked, as at 31, to engage the teeth of the rack 21, and the lower pivoted end of the pawl may be adjusted by changing its pivot-pin to different holes formed in the plates 29 of the said lever to increase or diminish its leverage upon the plunger-rod 20. The lever 28 is braced at its lower end by brace-pieces 32 32. The pawl 30 carries a cross-pin, as 33, near its hooked end, which pin is engaged at one end by a spring, as 34, which thus normally holds the pawl against the plunger-rod. The other end of the pin 33 is adapted to engage an inclined plate or piece 35, secured to one of the vertical posts 7, near the upper end thereof. When the hand operating-lever 28 is raised, the pin 33, traveling upwardly on this inclined plate, will force the pawl 30 outwardly and disengage the same from the teeth of the plunger-rod. This piece 35 may be adjustably secured to the post 7 by means of a bolt 36, which engages a slot in the said plate, as seen in Fig. 4 of the drawings. When it is desired to raise the plunger, it is merely necessary to grasp the handle on the cable and pull on the same, when the plunger will be hoisted to its highest position and retained there by a catch, which will be hereinafter more fully described. When the plunger is released from said catch, it will drop upon the contents of the baling-box, and then by grasping the lever 4 and forcing it downwardly the pawl 30 will engage the rack 20 of the plunger-rod and pull it downwardly on the material in the box, thus compressing it. The plunger can thus be brought down upon the contents of the baling-press with great power, the shape of the lever 28 being such that the power increases the farther the said lever is depressed. The pivot front of the baling-press forms a door by which the material baled may be removed from the press when desired. The front of the press 37 is strengthened by means of cross-pieces 38 38, which project sufficiently to one side to engage a vertical rod 39, which forms a hinge for the said front, said rod also passing through the lateral strengthening-pieces 10 of the sides of the baling-press. The other ends of the cross-pieces 38 are joined by a connecting-piece 40, said piece serving when the door is closed to engage the ends of the cross-braces 10 on the moving side of the press and hold the said side securely closed. A latch-lever 41 is pivoted upon the connecting-brace 40 and extends through a slot formed in the vertical piece 42, mounted on the hinged front. The said lever 41 is adapted to engage a catch 43, secured to the side 9 of the baling-box. To the upper end of the pivoted front is secured a pivoted charging-door 44, its lower edge being provided with a plate 45 upon its innersurface, which closes the joints between the parts when the door is closed. When the

charging-door 44 is opened, it is adapted to rest upon the upper end of the vertical brace-piece 42 and to be supported thereby, so as to form a platform while the material is being inserted into the press. A cross-piece is secured to the upper end of the said door for bracing the same, and one of its projecting ends, as 44^a, is adapted to strike a rod 46, which is connected at its rear end to a pivoted latch 47 at the rear of the baling-box. The latch 47 is pivoted at its lower end to the framing 1 and is provided at the back with a spring 48, which normally tends to throw the upper end of the latch forward into the chamber of the press. The latch is formed with a square-shouldered portion, as 49, at its upper end, upon which the plunger 3 will rest when it is raised to its highest point. The rod 46 is mounted in keepers upon the baling-box and is adapted to reciprocate therein, and when the charging-door is closed it is struck by the projecting end of the cross-bar on said door and forced rearwardly, so as to push the latch 47 from beneath the plunger, permitting the same to drop upon the contents of the baling-box. When the plunger is raised, the spring 48 will operate to throw the latch beneath the plunger automatically, so as to retain the said plunger in its upper position. Sometimes difficulty is found in extracting the baled material from the baling-box, and to prevent any chance of such difficulty I preferably form one side of the baling-box so that it may be opened slightly. For this purpose this side 50 of the box is formed so as to move upon segmental portions 51 and 52 of the bottom beams 11 11. The side beam 5 of the side 50 is hinged, as at 53, near its lower end and at 54 at its upper end, so that it may be easily turned to a slight degree.

In using the press the side and the front are securely closed by means of the latch 41. The hand operating-lever is raised, so as to force the pin in the pawl against the plate 35, and thereby lift the said pawl out of engagement with the rack on the plunger. The rope is next grasped and the plunger raised to its upper position, in which it is held by means of the latch 47. A rib portion 55 at the upper end of the fixed side of the box prevents the plunger from being forced forward by the latch 47 when the said plunger reaches the upper end of the box. The material to be baled is next placed upon the charging-door and pushed into the box. When sufficient material has been placed in the box to form one charge, the door is closed, thereby releasing the latch 47 by means of the rod 46, and the plunger is thus permitted to fall upon the charge in the box. The hand-lever 28 is then depressed and the charge forced downwardly under power in the said box. The charges may be placed in the baling-box in this manner until the bale of the proper size is formed, when the front may be opened, and after tying the bale in the usual manner it may be removed from the press. The charg-

ing-box not only serves the purpose of forming a platform, but when it is raised guides all the stray pieces of material into the box.

It will be apparent from the above description that my improved baling-press is of superior construction and that it enables a person to compress material by hand-power in an effective manner.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A baling - press comprising a suitable frame, a box mounted thereon having a hinged front, a charging-door pivoted to the top of the hinged front, a plunger moving in the said box, means for holding the plunger in its upper position, and means for releasing the said plunger automatically, by closing the charging-door, substantially as described.

2. A baling - press comprising a suitable frame, a box mounted thereon having a pivoted front, a charging-door hinged to the upper end thereof, a brace on the front adapted to support the hinged door in a horizontal position, whereby the same will form a platform when charging the press, a latch for holding the hinged front closed, a plunger moving in the box, means for supporting the plunger in its upper position, and means for automatically dropping the same by closing the charging-door, substantially as described.

3. A baling - press comprising a suitable frame, a box mounted therein, a hinged front upon the said box, a hinged side and standard mounted on the frame, the said standard being hinged at the top and the bottom of the press-frame so that the whole side of the press swings, a catch secured to the hinged side and a latch mounted on the hinged front for engaging the said catch, the structure being such that when the hinged front is closed, both the front and the side will be locked in their closed positions and when the latch is closed, both the front and the side may be opened to discharge the baled material, substantially as described.

4. A baling - press comprising a suitable frame, a box mounted thereon, a charging-door on the front of the box, a plunger moving in said box, a cable secured to the said plunger and passing over a pulley, whereby the plunger may be raised to its uppermost position, a latch for supporting the plunger in its upper position, means for automatically releasing the said latch, said means being operated by closing the charging-door, and means for applying power to the plunger for pressing the material to be baled, substantially as described.

5. A baling - press comprising a suitable frame, a box mounted therein, a plunger moving in the said box, a rack secured to the said

plunger, a rope secured to one end of the said plunger and passing over a pulley, the other end of the said rope passing through suitable guiding-eyes and secured to the top of the plunger, whereby all slack in the rope will be taken up no matter what the position of the plunger, and a lever carrying a pawl for engaging the said rack, whereby power may be applied to the plunger for compressing the material to be baled, substantially as described.

6. A baling - press comprising a suitable frame, a box mounted thereon, a plunger moving in the said box, a pivoted latch mounted at the upper end of the said box and adapted to engage the plunger for supporting the same in its upper position, a pivoted charging-door on the front of the box, a rod secured to the said latch and adapted to be struck by the charging-door when closed for automatically releasing the plunger from the latch and permitting the same to drop, and means for raising the said plunger again, substantially as described.

7. A baling - press comprising a suitable frame, a baling-box mounted therein, a plunger moving in said box, a pivoted lever mounted upon the back of the frame, a hooked pawl operated by the said lever, a rack upon the plunger-rod adapted to be engaged by the hooked end of the said pawl so as to pull the plunger rod downwardly when the lever is depressed, and a spring for holding the pawl normally in engagement with the said rack, substantially as described.

8. A baling - press comprising a suitable frame, a box mounted therein, a plunger moving in the said box, a rack upon the said plunger, a power-lever mounted upon the rear of the frame, said lever having a bent portion at its pivoted end, a pawl adjustably pivoted at the lower end of the said lever, a pin secured to the upper end of the pawl, an inclined plate adapted to engage the said pin and lift the pawl out of engagement with the rack when the lever is in its upper position, a spring also adapted to engage the said pin for holding the pawl normally in engagement with the rack, the structure being such that when the lever is uppermost, the pawl will not engage the rack but when the lever is pulled downwardly, the pawl will engage the rack and apply force to the plunger, as the lever descends with increasing power, substantially as described.

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

JOHN J. STOPPLE.

Witnesses:

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