No. 648,558. Patented May 1, 1900.

I. H. GARRETT.

HAY PRESS.

(Application filed Sept. 29, 1899.)

(No Model.)

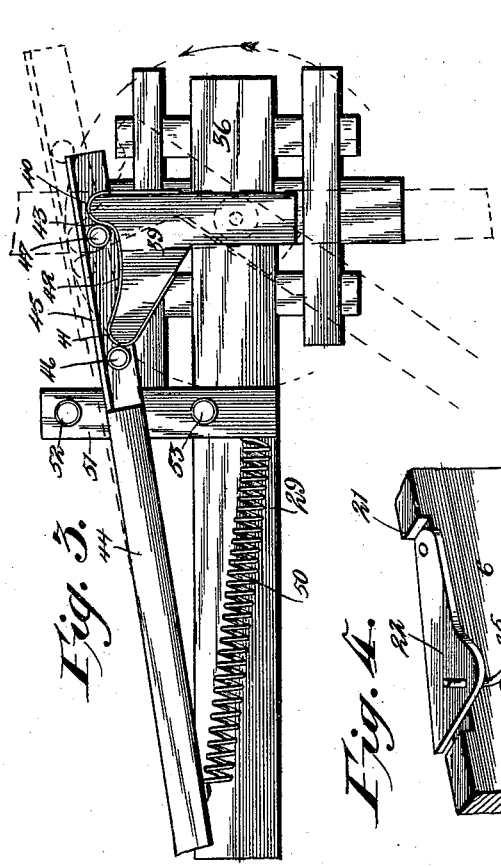

Fig. 3.

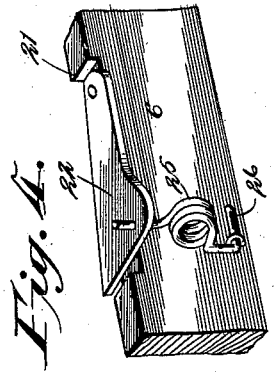

Fig. 4.

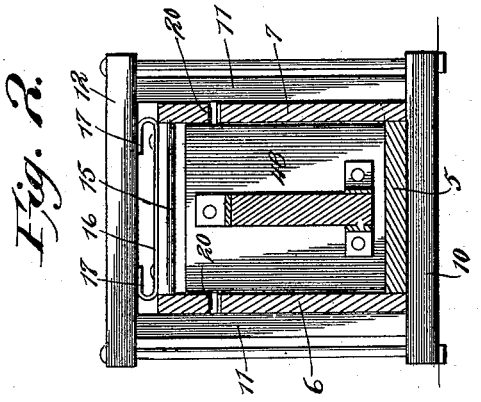

Fig. 2.

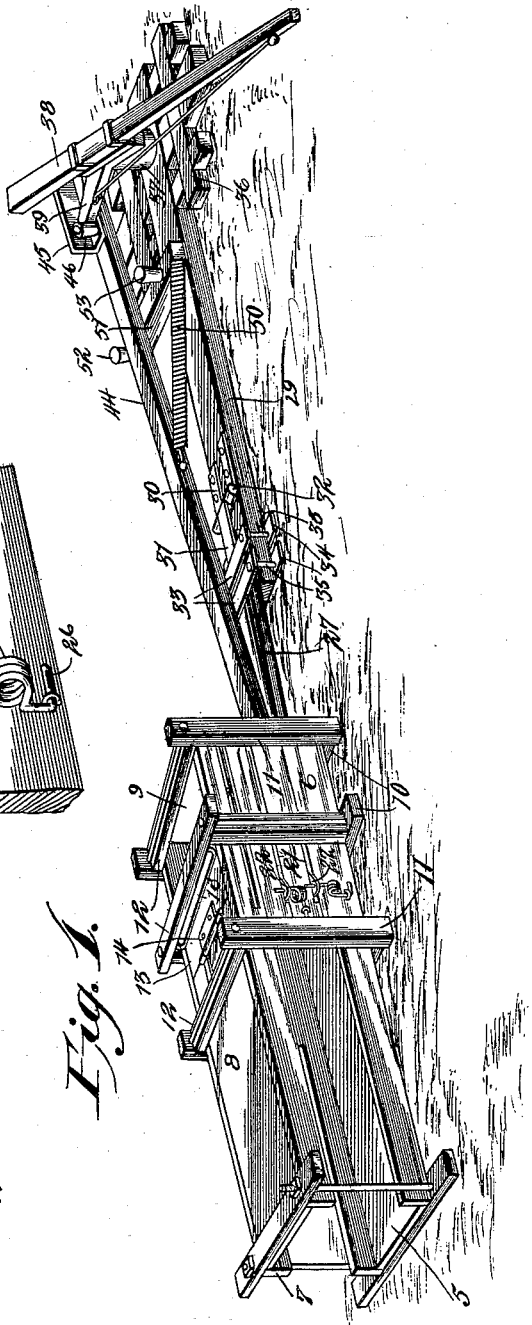

Fig. 1.

Witnesses
C. M. Walker
Geo. H. Chandlee

Irvin H. Garrett Inventor
By his Attorneys,
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

IRVIN H. GARRETT, OF McDADE, TEXAS.

HAY-PRESS.

SPECIFICATION forming part of Letters Patent No. 648,558, dated May 1, 1900.

Application filed September 29, 1899. Serial No. 732,138. (No model.)

To all whom it may concern:

Be it known that I, IRVIN H. GARRETT, residing at McDade, in the county of Bastrop, and in the State of Texas, have invented a new and useful Hay-Baling Machine, of which the following is a specification.

This invention relates to baling-presses, and more particularly to that class adapted for baling hay, straw, &c.; and it has for one object to provide a simple and efficient construction in which a continuous rotation of the baling-lever will act in conjunction with a retractile spring to reciprocate the plunger.

A further object of the invention is to provide a simple and efficient construction of detent for holding the gate after the hay or other material has been compressed and while the piston is retracted.

In the drawings forming a portion of this specification and in which similar numerals of reference designate like and corresponding parts in the several views, Figure 1 is a perspective view showing the complete baling-press. Fig. 2 is a transverse section of the box and the piston with the plunger in its forward position. Fig. 3 is a detail plan view showing the double cam at the end of the operating-lever and illustrating its operation in connection with the plunger-rod. Fig. 4 is a detail perspective showing the yieldable construction of the detents.

Referring now to the drawings, this baling-press comprises a box which includes a bottom 5, sides 6 and 7, and a top 8, the top extending from the rear end of the box forwardly to the hopper 9, which is merely an opening formed by the omission of the cover. A number of cross-pieces 10 are fixed to the bottom and have uprights 11 connected therewith, which in turn are connected at their upper ends by cross-pieces 12, which act to hold the top, bottom, and sides of the box against displacement. The forward end 13 of the top is hinged to the remaining portion by means of a hinge 14, and the forward end of this hinged portion is beveled downwardly and rearwardly, as shown at 15 in Fig. 2. Upon this hinged portion 13 is disposed a spring-strap 16, having its ends bent upwardly and inwardly, as shown at 17, to form springs, which engage the under side of one of the cross-pieces 12. This spring arrangement is adapted to permit upward movement of the hinged portion of the top of the box in order that the hay may be readily pressed into the box. The sides of the box have slots 20 in their forward portions for the reception of the baling-wires in the usual manner, and below these slots 20 are additional and shorter slots 21, in which are disposed detents 22, the rear ends of which project inwardly of the box, so that as the plunger is moved inwardly to compress it will pass along the converging edges of these detents and press them outwardly. Also the gate against the plunger may be pressed beyond the ends of the detent and be held thereby against rearward movement. These detents are yieldably held in their inwardly-projecting positions by means of helical springs 25, the ends of which are bent outwardly in opposite directions and at right angles to the axis of the helix, one of these ends being passed through a perforation in the outwardly-extending portion of the detent and the opposite end being bent laterally, as shown at 26 in Fig. 4, and secured rigidly to the outer surface of the box. These springs thus permit outward movement of the detent and hold them normally in the positions indicated in Fig. 4.

Extending forwardly from the bottom 5 of the box is an extension 27, to the end of which is hinged a base 29 through the medium of hinge elements 30 and 31, which are mutually connected by means of a removable pintle 32. These portions are further secured and are held rigidly by plates 33, resting upon the upper surface of the extension 27, and additional plates 34 upon the under surface of the base 29, the upper and lower plates being connected in pairs through the medium of bolts 35. Thus a removable clamp is provided to normally embrace the inner overlapped ends of the two-part base extension, so as to rigidly connect such parts during the operation of the press. Moreover, in shipment or storage the plunger and its rod, together with the operating means, may be removed from the base extension and the clamp also removed, so that the outer portion of the extension may be folded inwardly upon the press-box. In practice it is preferable to have the inner part of

the extension much the shorter, so that there may be but a slight projection when the extension is folded.

Upon the outer end of the base 29 is secured a platform 36 of any desired construction, and upon this platform is mounted a bearing-block 37, which receives a trunnion upon the lever 38. This lever is adapted at one end for attachment of a team and at the opposite end and at the under side is fixed a substantially-triangular cam 39, the engaging corners of which are rounded, as shown at 40 and 41, the lower side of this cam being recessed between these corners 40 and 41, as shown at 42, to form a shoulder 43. A brace-rod connects the outer end of this triangular cam with the opposite end of the lever 38. Thus as the lever is rotated the cam will be similarly moved.

The outer end of the plunger-rod 44 employed in this construction is provided with an angle-plate 45, one side of which is fixed to the upper surface of the plunger-rod and the other side of which extends vertically therefrom. Upon the first-named portion of the plate are journaled two rollers 46 and 47. The opposite end of this plunger is provided with a head 48, of usual construction, and which is adapted to pass into the box.

In practice the lever 38 is rotated in the direction indicated by the arrow in Fig. 3, and thus if the plunger-rod be in the position shown in dotted lines in Fig. 3 the rounded corner 41 will first strike the roller 46 and advance the plunger until the roller 47 enters the recess 42, after which the shoulder 43 will engage the roller 47 and the rounded corners 41 will pass from the roller 46. As the lever is continued in its movement it moves the plunger farther until the shoulder 43 is drawn from the roller 47 and the roller passes outwardly and over the rounded corner 40, when the plunger is returned under the influence of a helical spring 50, one end of which is fixed to the plunger-rod and another to a portion of the platform 36. This portion of the platform 36 (shown at 51 in Fig. 3) is provided with stops 52 and 55 in the form of rollers in order that the lateral movement of the plunger-rod may be limited to operative positions. As the plunger moves inwardly and carries the hay therewith the hinged portion 13 moves upwardly at its outer end, due to the engagement therewith of such hay as may extend above the plunger, and this hinged portion thus forms a tapered opening for the box, which permits the hay to be readily pressed into the box by the plunger. When the plunger passes beyond this hinged portion, the spring-plate above described returns the hinged portion to its original position.

The structure above described is operated in the manner well understood by those skilled in the art, the material to be baled being contributed to the box through the hopper, and the lever being then operated to compress the hay which passes outwardly and through the rear end of the box after being bound or tied in the usual manner.

What is claimed is—

1. A baling-press comprising a box having a feed-opening, a top for the box having a hinged portion adjacent the feed-opening and having a beveled edge, uprights at the sides of the box, a cross-piece above the box connecting the uprights, and a spring-plate secured to the hinged portion of the top and having its ends bent upwardly and inwardly and engaging the cross-piece to hold the hinged portion yieldably in a predetermined position.

2. In a baling-press, a press-box, having a two-part base extension, the inner ends of which overlap and are hingedly connected, a removable clamp normally embracing the overlapped ends of the parts of the base extension to rigidly connect the same, a plunger working in the press-box, a plunger-rod, and operating means for the rod and mounted upon the outer portion of the base extension.

3. In a baling-press, a press-box, having a two-part base extension, the inner ends of which overlap and are hingedly connected, a removable clamp comprising opposite plates normally embracing the overlapped ends of the parts of the base extension, and removable fastenings located beyond opposite side edges of the base extension and detachably connecting the plates, a plunger working in the press-box, a plunger-rod, and operating means mounted upon the outer portion of the base extension.

IRVIN H. GARRETT.

Witnesses:
R. E. JENNINGS,
R. H. BARBEE.