

No. 621,494.

Patented Mar. 21, 1899.

J. HILLEBRAND & W. E. WILKE.

BALING PRESS.

(Application filed Sept. 17, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

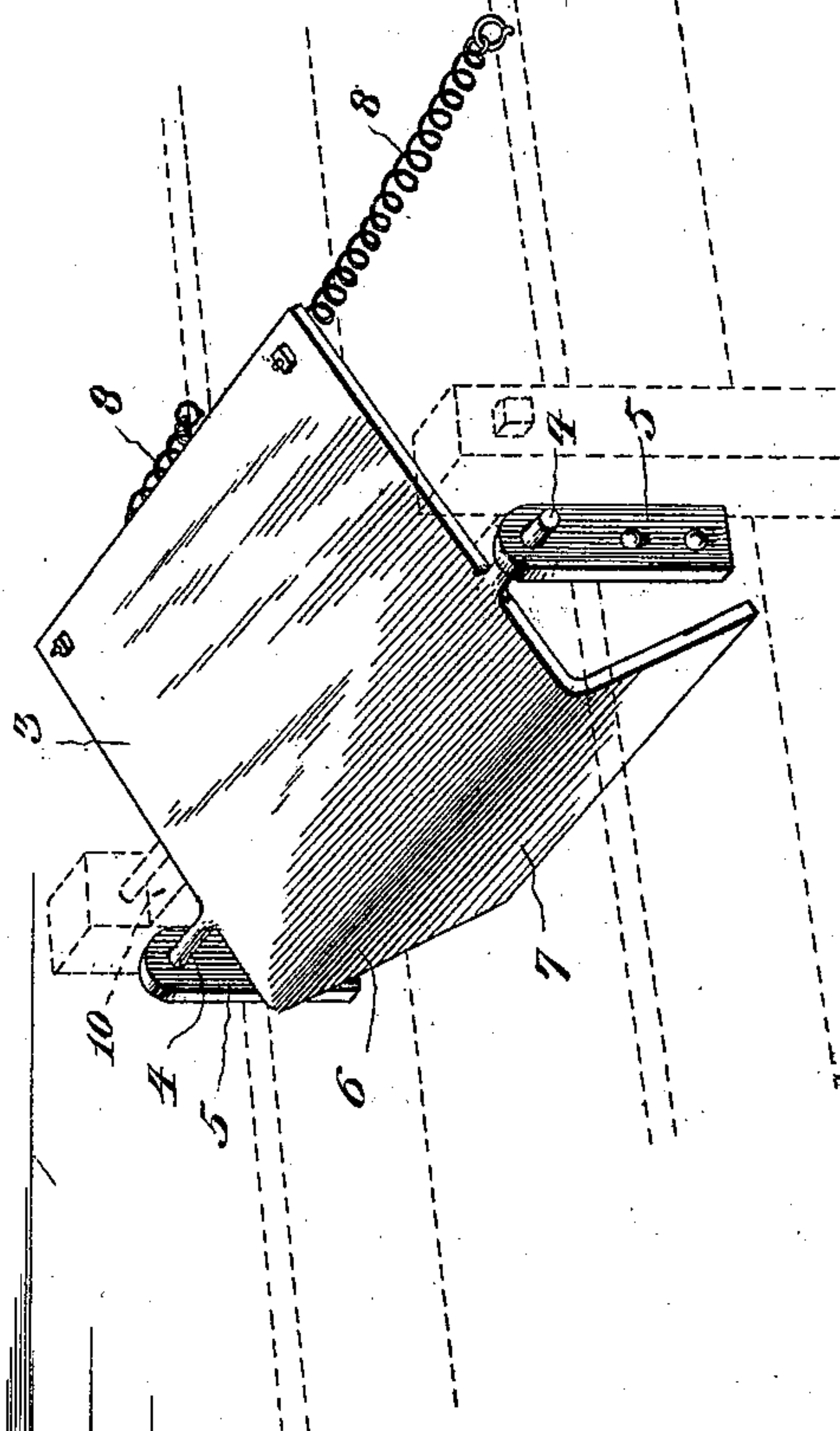
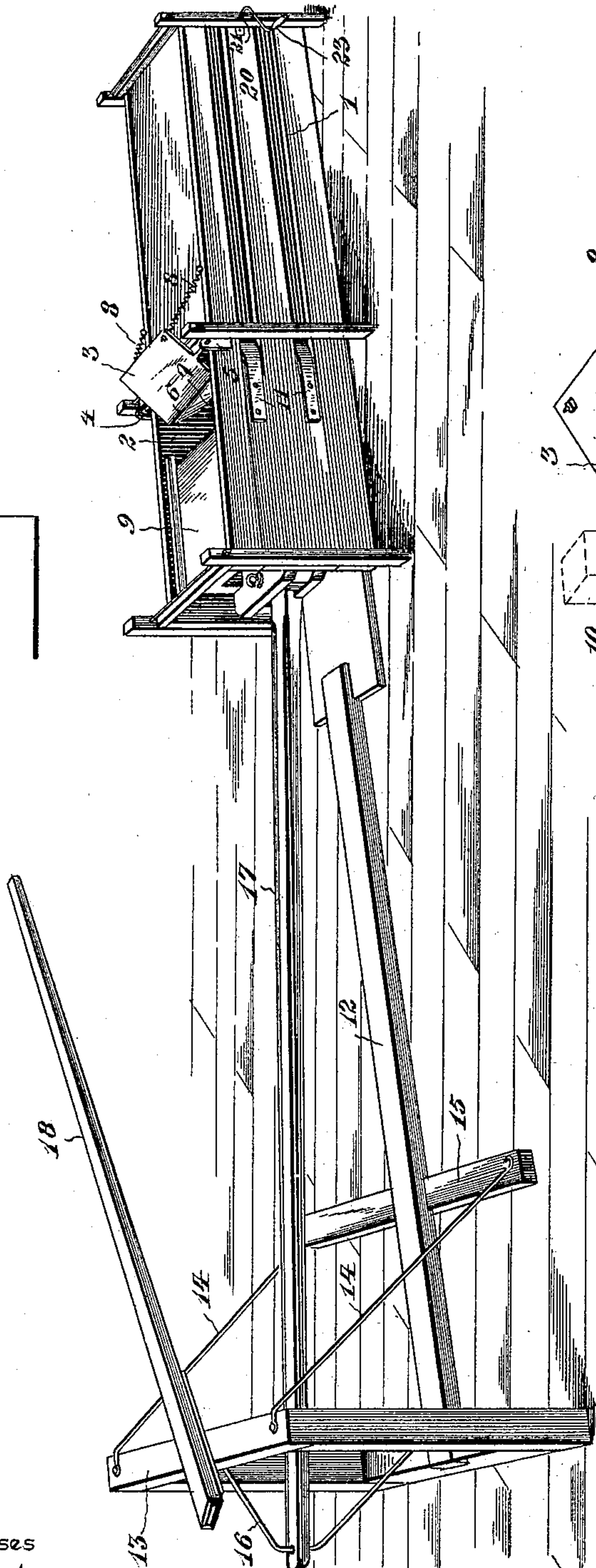
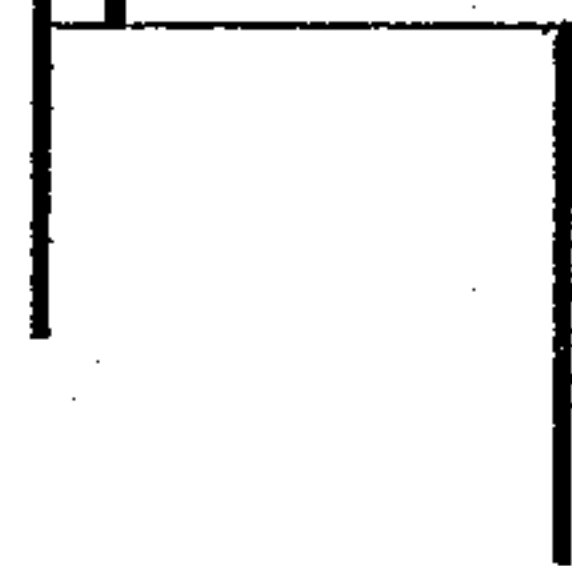


Fig. 3.



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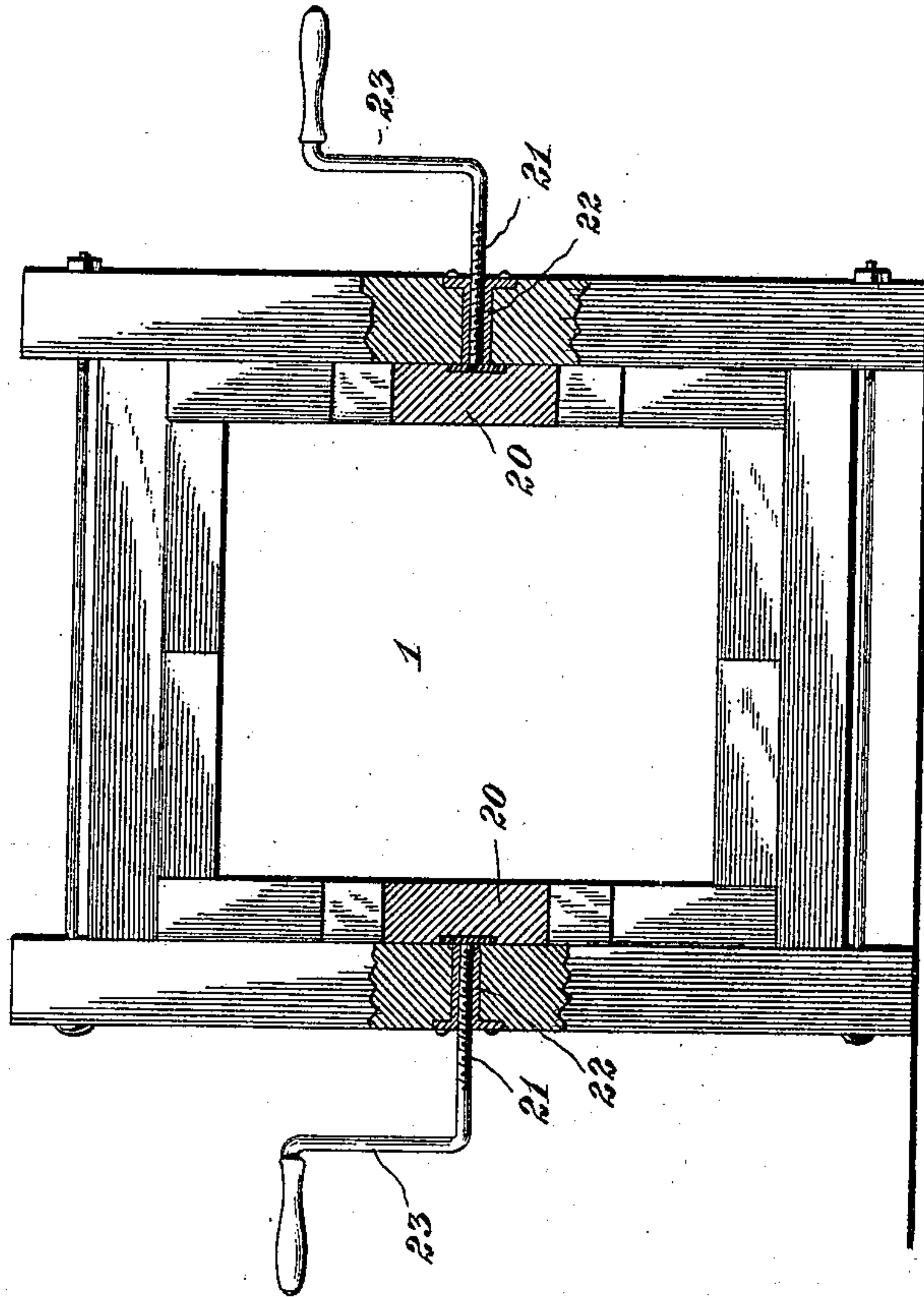
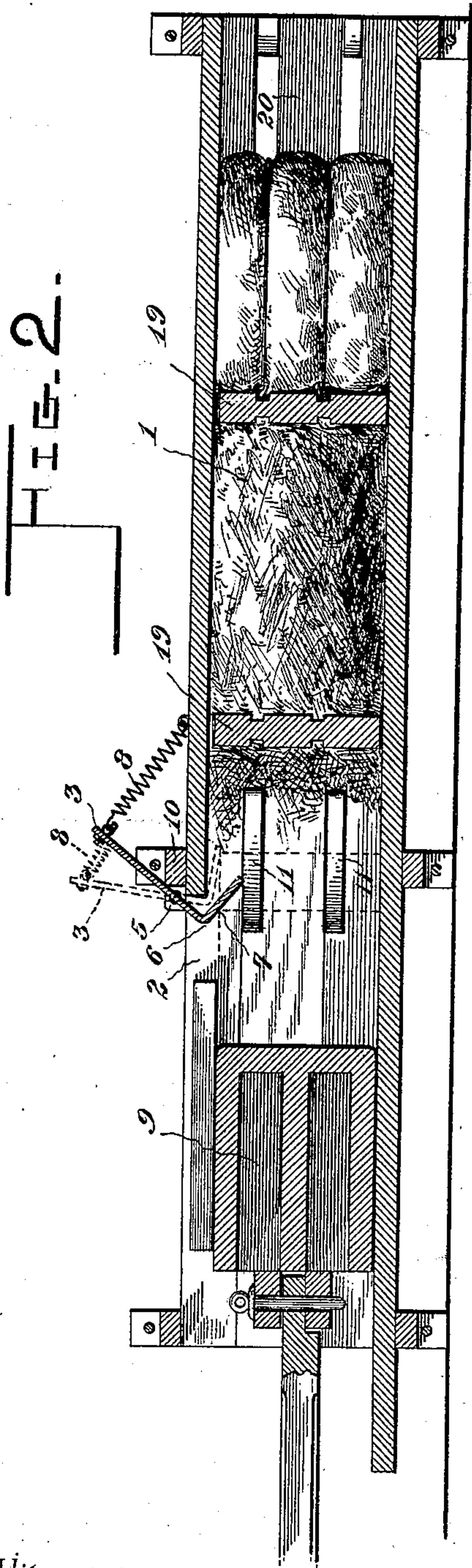
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2 Sheets—Sheet 2.



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# UNITED STATES PATENT OFFICE.

JOHN HILLEBRAND AND WILLIAM E. WILKE, OF AUSTIN, TEXAS.

## BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 621,494, dated March 21, 1899.

Application filed September 17, 1898. Serial No. 691,214. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN HILLEBRAND and WILLIAM E. WILKE, citizens of the United States, residing at Austin, in the county of Travis and State of Texas, have invented a new and useful Baling-Press, of which the following is a specification.

Our invention relates to baling-presses particularly adapted for baling hay; and the object in view is to provide a simple and efficient construction and arrangement of parts, including a tucker located near the feed-opening of the baling-chamber for insuring the proper arrangement for tucking of the hay at the upper side of the plunger during the backward movement thereof.

A further object of our invention is to provide improved means for controlling the compactness of the bales as they are advanced through the baling-chamber, and hence for controlling the weights of the bales.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a baling-press constructed in accordance with our invention. Fig. 2 is a longitudinal section of the same. Fig. 3 is an end view, partly in section, of the baling-chamber. Fig. 4 is a detail view in perspective of the tucker.

Similar reference characters indicate corresponding parts in all the figures of the drawings.

1 designates a baling-chamber, of which the upper wall is suitably cut away to form a feed-opening 2, at the front edge of which is located a tucker-plate 3, provided with lateral trunnions 4, mounted in suitable bearings in brackets 5. This tucker-plate is of angular construction, the same being provided at a point below its trunnions 4 with a forward offset, bend, or elbow 6, forming a tucking-leaf 7, which when the tucker-plate is in its normal or upright position (indicated in dotted lines in Fig. 2) extends horizontally and forwardly into the baling-chamber contiguous to the inner surface of the upper wall thereof. The tucker-plate is yieldingly actuated by means of springs 8 or the equiva-

lents thereof, whereby when released it will assume an inclined position. (Shown in full lines in Figs. 1, 2, and 4.)

In coöperation with the tucker-plate above indicated is a plunger 9, mounted for reciprocation in the baling-chamber and adapted when advanced to come in contact at its front end with the leaf 7 of the tucker-plate and turn the latter from the position indicated in full lines in Fig. 2 to that shown in dotted lines in the same figure, wherein said leaf occupies a position between the upper side of the plunger and the top wall of the baling-chamber. Thus during the advance movement of the plunger the tucker-plate by the contact of said plunger with the leaf 7 is folded, and as the plunger recedes the tucker-plate is allowed to approach its extended position (shown in full lines in Fig. 2) gradually. In other words, as the plunger recedes and its front end passes in rear of the front edge of the leaf 7 said leaf begins to descend in front of the plunger, and the downward extension of the leaf 7 continues during the recedence of the plunger until the tucker-plate is checked by contact with a stop-bar 10, arranged transversely in the path thereof. This gradual depression of the front edge of the leaf 7 insures the engagement of the upper portions and loose ends of the hay and at the same time depresses said loose ends toward the center of the bale, whereby when the next load is introduced and forced into place by the plunger said loose ends are caught and held in the bale to prevent their projection beyond its surface. This leaf 7 may be made of different lengths; but it should be of sufficient length to insure this downward folding of the loose ends of the hay or other material which is being baled, the upper edge of the plunger-face being so disposed as to strike the leaf 7 at an intermediate point or in front of the elbow or bend 6, as indicated by dotted lines in Fig. 2. Holders or yielding stops 11 may be employed at the side walls of the baling-chamber to perform a function analogous to that of the tucker-plate, said holders or stops consisting of spring-plates extending forwardly and bent inwardly, whereby as the plunger advances the free ends of the holders are pressed outwardly and as the plunger recedes said front ends return inwardly



to press the loose ends of the hay toward the center of the bale.

In the construction illustrated a beam 12 extends rearwardly from the baling-chamber, and at its extremity is erected a frame 13, braced by rods 14, extending forwardly and downwardly to a cross-piece 15, secured to the beam 12 at an intermediate point, and mounted in vertically-alined bearings in said frame 13 is a crank-shaft 16, to the crank of which is connected the rear end of the pitman 17. A sweep 18 of the ordinary or any preferred construction is attached to the upper end of the crank-shaft to provide for communicating rotary motion thereto.

In connection with the apparatus above described we employ the usual follower-blocks 19 for separating the bales, and in order that the desired frictional contact with the bale and the follower-blocks may be attained to afford the desired resistance to the advance movement of the bales, and thus insure the desired compactness of the bales, we preferably arrange side members or bars 20 of the baling-chamber to yield inwardly at their front ends. In other words, we preferably arrange inwardly-yielding side-wall sections 20, having free front ends adapted to be arranged in different relative positions to exert transverse pressure and a gradually-increasing pressure upon the bales as they proceed through the baling-chamber in the operation of forming successive bales. In operative relation with each of these yielding side-wall sections is disposed an adjusting device consisting of a feed-screw 21, threaded in a fixed nut or guide 22 and provided with an operating-crank 23. By turning the crank in one direction or the other the yielding side-wall sections may be moved either inwardly or outwardly, the latter movement being due to the resilience of the material of which said sections are constructed.

From the above description it will be seen that we have provided a simple, compact, and efficient construction and arrangement of parts capable of performing the several functions of a baling-press positively and satisfactorily, and, furthermore, that various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having described our invention, what we claim is—

1. In a baling-press, the combination with a baling-chamber and reciprocatory plunger, of a pivotal tucker-plate yieldingly held in one position and provided at its inner extremity with a forwardly-extending leaf, disposed approximately at right angles to the radius of movement of the tucker-plate and in the path of the plunger, substantially as specified.

2. In a baling-press, the combination with a baling-chamber and reciprocatory plunger, of a pivotal tucker-plate yieldingly held in one of its positions and provided in a plane below its fulcrum with a forwardly-extending leaf arranged approximately at right angles to the radius of movement of the tucker-plate and in the path of the plunger, substantially as specified.

3. In a baling-press, the combination with a baling-chamber and a reciprocatory plunger, of a flat pivotal tucker-plate yieldingly held in one of its positions and provided in a plane below its fulcrum with a forwardly-extending leaf disposed perpendicular to the plane of the body portion of the plate and normally projecting forward and downward into the baling-chamber in the path of the plunger, and means for limiting the backward movement of the tucker-plate to maintain an intermediate point of said leaf in the path of the upper edge of the plunger and the front edge thereof below the plane of the upper edge of the plunger, substantially as specified.

4. In a baling-press, a cross-sectionally-L-shaped tucker-plate having its approximately horizontal leaf disposed in the path of the press-plunger, and located at its front edge below the horizontal plane of the upper side of the plunger, and adapted to descend gradually at its free front edge as the plunger recedes to press the loose ends of the baled material toward the center of the baling-chamber, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JOHN HILLEBRAND.  
W. E. WILKE.

Witnesses:

C. E. JONES,  
WASH GREEN.