

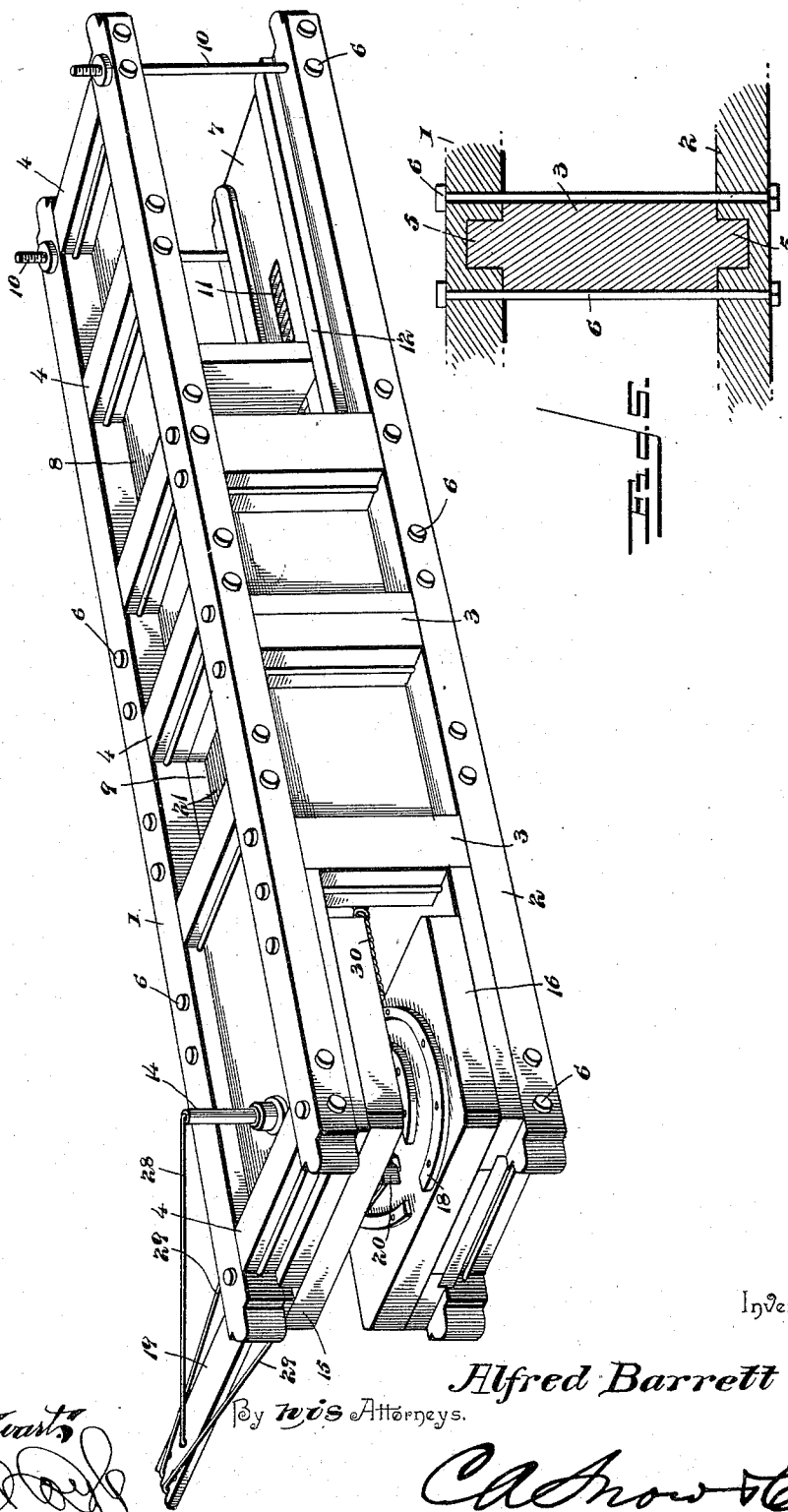
(No Model.)

2 Sheets—Sheet 1.

A. BARRETT.
BALING PRESS.

No. 565,666.

Patented Aug. 11, 1896.



Inventor

Alfred Barrett

By *W. S. Attorneys.*

Cash & Co.

Witnesses

E. H. Stewart
[Signature]

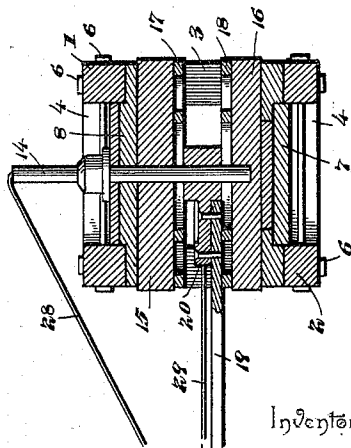
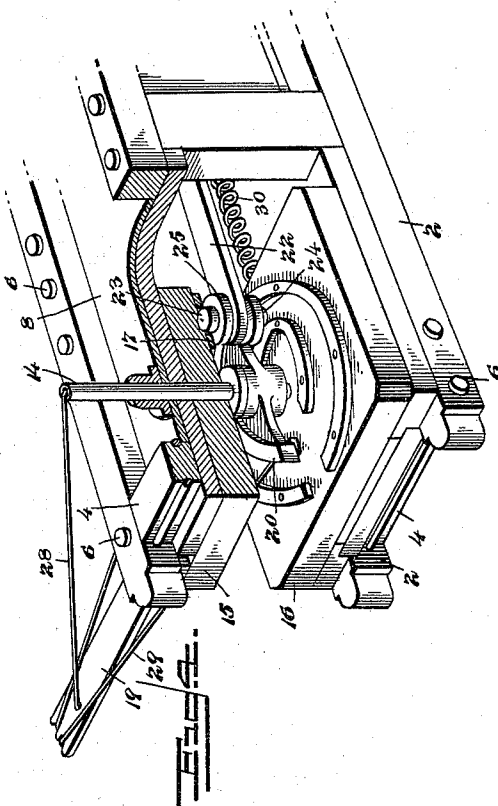
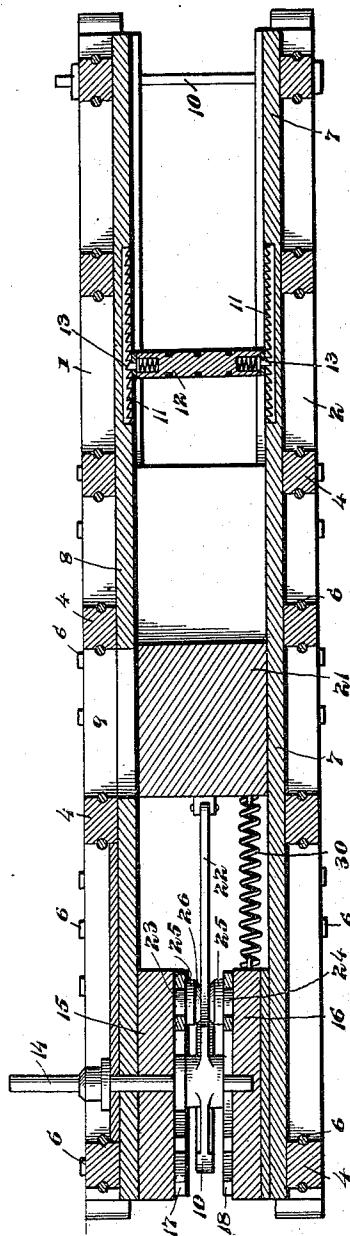
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UNITED STATES PATENT OFFICE.

ALFRED BARRETT, OF PUYALLUP, WASHINGTON, ASSIGNOR OF ONE-HALF
TO LOYAL W. HILL AND GEORGE W. EDGERTON, OF SAME PLACE.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 565,666, dated August 11, 1896.

Application filed May 31, 1895. Serial No. 551,224. (No model.)

To all whom it may concern:

Be it known that I, ALFRED BARRETT, a citizen of the United States, residing at Puyallup, in the county of Pierce and State of Washington, have invented a new and useful Baling-Press, of which the following is a specification.

My invention relates to baling-presses, and has for its object to provide a simple, inexpensive, and efficient construction of baling-chamber, and, furthermore, to provide a strong and durable power for operating a reciprocating plunger.

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 my invention. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a transverse vertical section in the plane of the spindle of the operating-segment. Fig. 4 is a detail view in perspective of one end of the press, partly broken away to show the lower circular guide and the contiguous end of the pitman. Fig. 5 is a detail section showing the means for securing the side standards to the main beams.

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

1 and 2 designate upper and lower parallel beams connected at intervals by uprights 3 and cross-bars 4, the extremities of the uprights and cross-bars being provided with tongues 5, fitting in recesses in the contiguous surfaces of the parallel beams. The beams are held in engagement with the tongues on the extremities of said uprights and cross-bars by means of tie-bolts 6, which are arranged parallel, respectively, with the standards and cross-bars and are let into the contiguous sides of said standards and cross-bars or countersunk, and are fitted with nuts, whereby looseness in the joints of the frame may be taken up. The floor 7 of the baling-chamber is secured to the lower beams and cross-bars and the top 8 thereof to the upper beams and cross-bars, a portion of the top being omitted to form a feed-opening 9, whereby

the material to be baled may be introduced in advance of the plunger.

The standards, which are arranged between the upper and lower beams at opposite sides of the chamber, are omitted at the outlet end of the press and for a distance inward from said outer end, the extremities of the upper and lower beams being connected by tension-bolts 10, whereby the floor and top of the baling-chamber may be caused to converge toward the outlet end to provide for applying the necessary pressure to the bale. Ratchet-bars 11 are let into the top and floor of the baling-chamber to hold the follower-blocks 12 in place during the backward movement of the plunger, said follower-blocks being provided with suitable pawls 13 to engage the ratchet-bars.

Arranged vertically at the rear end of the baling-chamber and fitting at its upper and lower ends in registering openings in the floor and top thereof is a spindle or arbor 14, and arranged between the planes of the upper and lower beams are the upper and lower parallel tables 15 and 16, spaced apart at their contiguous surfaces and provided, respectively, with upper and lower circular guides 17 and 18. Each guide consists of inner and outer parallel bars concentric with the vertical spindle or arbor, and mounted upon said spindle or arbor between the planes of the guides is the operating sweep or lever 19, provided with a segmental, preferably circular, head 20.

Operating in the baling-chamber is the plunger 21, to which is pivotally connected the pitman 22, and the rear end of this pitman is fitted with upper and lower antifriction-rolls 23 and 24, adapted to operate between the inner and outer bars of the upper and lower guides, respectively, each roll being provided with a horizontal flange 25 to bear against the facing-surfaces of the bars forming the guides when the end of the pitman is vertically vibrated. The end of the pitman is rounded concentrically with the centers of the antifriction-rolls, whereby its extremity is flush, approximately, with the peripheries of the flanges of said rolls, and the segmental head of the operating-lever is provided with shallow rounded seats 26 to engage the rounded extremity of the pitman

and advance it sufficiently to throw it upon the other side of the vertical plane of the axis of the spindle or arbor. Extending from the upwardly-projecting extremity 27 of the spindle or arbor to the outer extremity of the lever is a supporting brace-rod 28, and extending, respectively, from the extremities of the segmental head of the operating-lever to the outer extremity of said lever are the lateral tension-braces 29.

A rebounding spring 30 is attached to the spindle to return it to its initial position after the rear end of the pitman has been thrown by the operating-lever beyond the vertical plane of the axis of the spindle, and it is obvious that inasmuch as the upper and lower guides for the rear end of the pitman are concentric with the spindle or arbor the pressure of the extremities of the head of the lever will be directly in the line of movement of the extremity of the pitman, and hence the waste of energy in the operation of the parts is avoided.

The advantage in using the upper and lower guides is to avoid the necessity of connecting the head of the operating-lever directly to the pitman, inasmuch as the connection between these parts of the press results in ultimate looseness, and hence irregularity of operation, whereas, when the rear end of the pitman is guided positively and the only connection between the same and the head of the operating lever is frictional contact, the operation of the parts remains the same after they have become worn. Furthermore, by the means provided the rear end of the pitman is released or allowed to return to its initial position as soon as it passes the plane of the axis of the spindle, thereby avoiding the cramping of the parts. Furthermore, the operating-lever does not sustain the shock caused by the rebounding plunger, said shock being upon the inwardly-curved rear portions of the guides and upon the hub of the operating-lever, due to the lateral movement of the rear end of the pitman as it reaches the limit of the back stroke.

In order to provide for exposing the rear end of the pitman for repair and similar purposes, I preferably employ a removable spindle 14, which is inserted through the upper side of the frame and is provided at its upper extremity with a socket for the reception of the inner downturned extremity of the brace-rod 28. By detaching the inner end of the rod 28 from said socket in the upper end of the spindle, the spindle is released and may be withdrawn vertically to detach the segmental operating-head 20. The upper and lower guide-strips forming the guides 17 and 18 are cut away at the centers of their rear sides to form outlet-openings through which the upper and lower antifriction-rolls 23 and 24 may be withdrawn longitudinally or in

line with the movement of the plunger. Thus by withdrawing the spindle and re-moving the head 20 the rear end of the pitman may be removed from the guides and exposed beyond the end of the frame for the desired purpose.

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 this invention.

Having described my invention, what I claim is—

1. In a baling-press, the combination of parallel upper and lower tables, a spindle removably seated in vertically-alined openings in said tables, a head mounted for partial rotation upon said spindle between the planes of the inner surfaces of the tables and adapted to be released by withdrawing the spindle, upper and lower guides carried by the contiguous surfaces of the tables and provided at their rear sides with cut-away portions forming outlet-openings, and a rebounding plunger having a pitman provided at its rear end with upper and lower projections fitting to slide in said guides, and adapted when the spindle and head are removed to be exposed or removed through said outlet-openings, the rear end of the pitman being held out of alinement with said outlet-openings by the hub of the head when the latter is in operative position, substantially as specified.

2. In a baling-press, the combination of parallel upper and lower tables provided upon their facing sides with guides cut away to form outlet-openings at their rear sides, a rebounding plunger having a pitman provided at its rear end with projections to operate in said guides, a removable spindle fitted in vertically-alined openings in the upper and lower tables and provided at its upper end with a socket, a head fitted loosely upon the spindle between the planes of the tables and adapted at its extremities to engage the rear end of the pitman to advance it in the guides, a sweep secured to said head, and a brace-rod attached at one end to the pitman near its outer extremity and provided at the other end with a downturned extension fitting removably in the socket in the upper end of the spindle, whereby said brace-rod may be detached from the spindle to allow the vertical removal of the latter from the openings in the tables, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ALFRED BARRETT.

Witnesses:

C. W. STUART,
CHAS. E. HALLENBECK.