

No. 652,712.

Patented June 26, 1900.

J. W. BROWN & A. A. GEHRT.

BALING PRESS.

(Application filed Sept. 21, 1898.)

(No Model.)

3 Sheets—Sheet 1.

Fig. I.

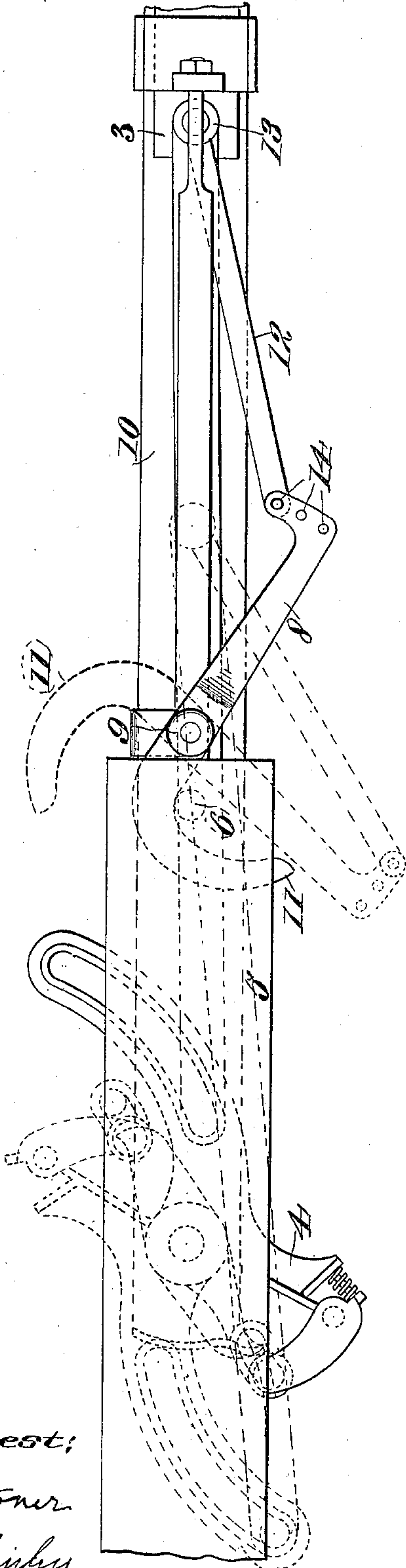


Fig. II.

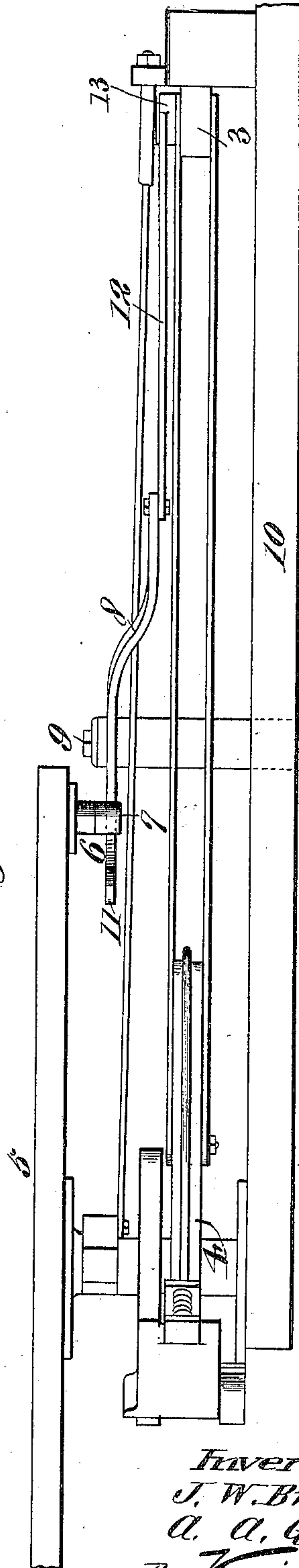
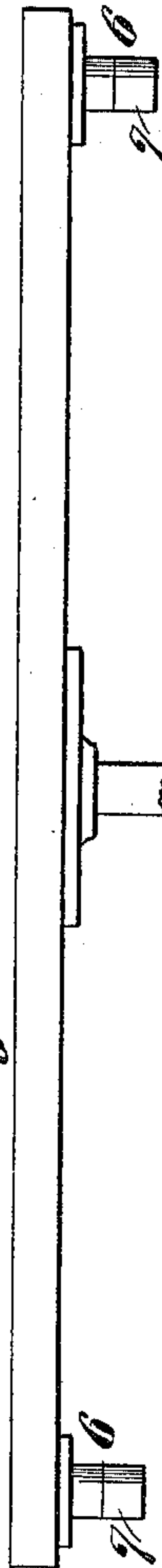


Fig. III.



Attest:

J. Stoner
W. Finley

Inventors,
J. W. Brown,
A. A. Gehrt,
By Wright, Brod

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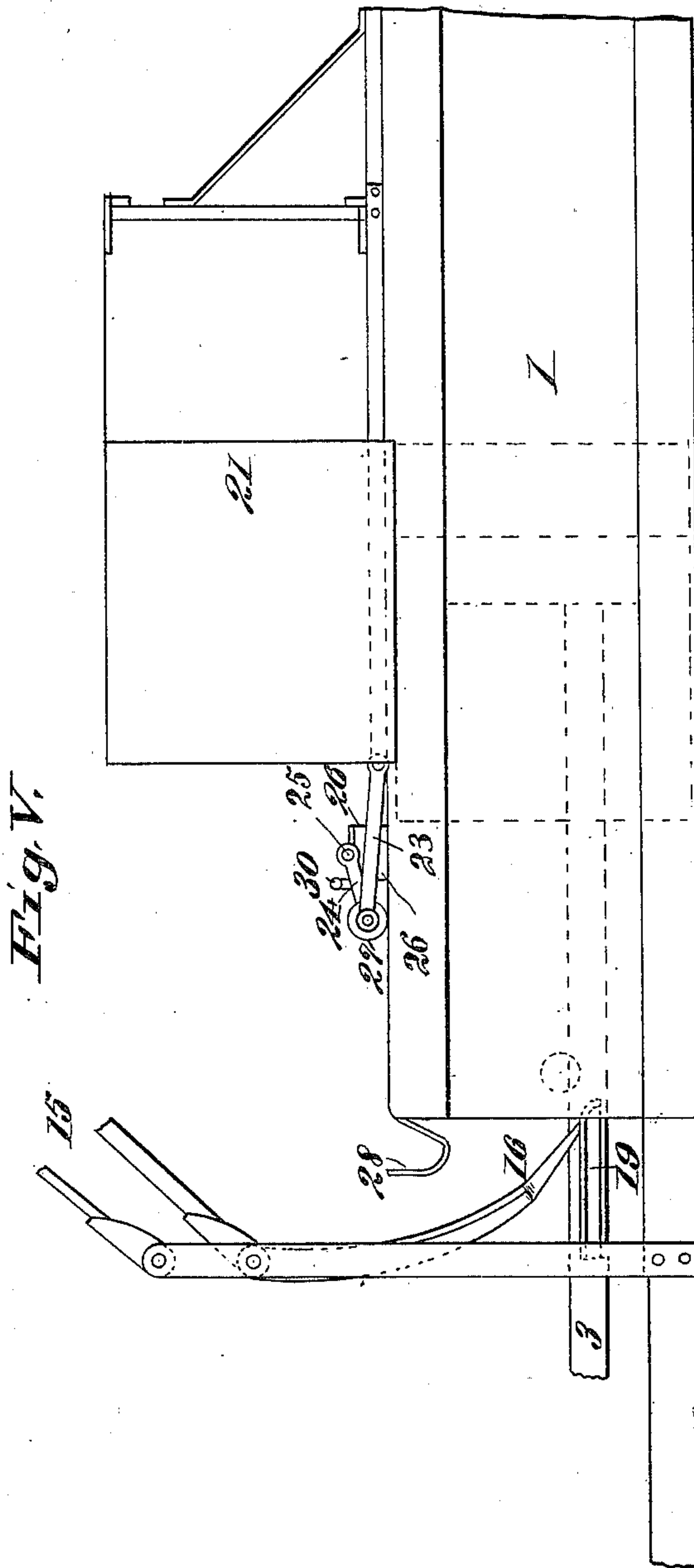
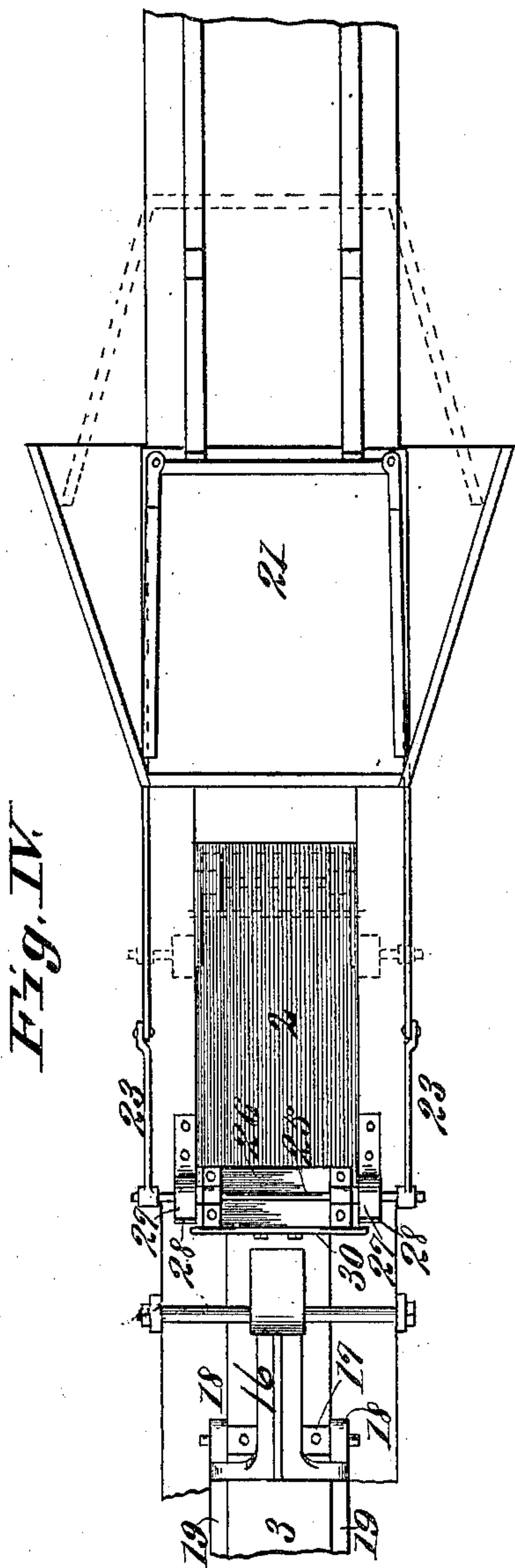
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3 Sheets—Sheet 2.



Attest;

Stanley Stoner

W. Finley

Inventors,

J. W. Brown,

A. A. Gehrt

By Wright, Bro attys

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J. W. BROWN & A. A. GEHRT.

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3 Sheets—Sheet 3.

Atty's

UNITED STATES PATENT OFFICE.

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

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 652,712, dated June 26, 1900.

Application filed September 21, 1896. Serial No. 606,501. (No model.)

To all whom it may concern:

Be it known that we, JOHN W. BROWN and ALBERT A. GEHRT, citizens of the United States, residing at 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
10 part of this specification.

Our invention relates to certain improvements in presses for baling hay, straw, excelsior, and the like; and our invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a detail top or plan view illustrating the device for withdrawing the plunger by a positive motion through means of the sweep. Fig. II is a side view of the same. Fig. III is an edge view of the sweep-head. Fig. IV is a detail top view showing the central part of the press and illustrating particularly the part of the mechanism for holding the movable part of the condenser in its contracted or inner position while the feeder
25 forces the material into the baling-chamber. Fig. V is a side view of same, but showing the condenser open instead of closed. Fig. VI is a view, part in elevation and part in section, illustrating the features shown in Fig. IV, with the parts in the position shown in Fig. IV. Fig. VII is an enlarged vertical section taken on line VII VII, Fig. VI. Fig. VIII is an enlarged view looking at the parts
35 in front of the dotted line VIII VIII, Fig. VI.

Referring to the drawings, 1 represents the baling-chamber of the press, and 2 the plunger or follower.

3 represents the pitman of the plunger, which is connected at its outer end to a power device 4—such, for instance, as is shown in our Patent No. 468,638, dated February 9, 1892.

5 represents the cross-head of the sweep of the power device. Depending from near each end of this cross-head is a projection 6, that may be provided with a friction-roller 7.

8 represents a lever pivoted on a post 9, projecting upward from the main sill 10 of the press. This lever has a hook-shaped outer end 11, and the inner end of the lever is connected by a link 12 to the pitman 3, as shown

at 13. The inner end of the lever has a series of holes 14 to receive the bolt or pin that connects the lever to the link 12, so that the throw of the parts may be adjusted. The
55 outer hooked end of the lever is when the plunger is in its inner position in the path of movement of the projections 6, depending from the sweep-head. When the plunger is in its forward position, the lever 8 and link 12 are
60 in the position shown in full lines, Fig. I. Just as the power mechanism releases the plunger, permitting the latter to recede, one of the projections 6 is ready to engage the hooked end of the lever 8, and as the sweep
65 continues to move around the projections 6 will engage the hooked end of the lever unless the plunger has been thrown all the way back by the expansion of the material being baled. When the plunger is in its
70 inner position, the lever 8 and link 12 are in the position shown by dotted lines, Fig. I, and should the plunger be thrown only part way back by the expansion of the material being baled the projection on the cross-head
75 will come against the hooked end of the lever and pull the plunger the rest of the way back, so that with this arrangement the sweep will act to either pull the plunger all the way
80 back in case it is not forced back any part of its movement by the expansion of the compressed material or the sweep will act to pull the plunger back that portion of its movement which is not affected by the expansion
85 of the compressed material, and thus the entire rearward movement of the plunger is assured at every operation of the press.

15 represents the feeder of the press, which may be of ordinary construction—such, for instance, as that shown in our Patent No. 551,302, dated December 10, 1895.

16 represents an arm made fast to the feeder and projecting downwardly from the pivot or one of the pivots of the feeder. This arm is preferably curved, as shown in Fig. VI, and it is preferably forked at its lower end, as shown in Fig. VII.

Secured to the pitman by means of a cross-piece 17 (see Fig. IV) are two rollers 18, and secured, preferably, to the side edges of the
100 pitman are strips 19, the inner ends of the strips stopping short of the rollers 18, leav-

ing a space, as shown at 20, Fig. VI, between the two. As the plunger advances the strips 19 will come against the lower end of the arm 16 and cause the feeder to be raised from the position shown in full lines, Fig. VI, to the position shown in dotted lines. This upward movement of the feeder is effected almost as soon as the plates 19 strike the arm 16, so that the movement is rapid and the feeder is out of the way before it can be struck by the plunger, and after the feeder is raised it is held suspended during the further forward movement of the plunger by the arm 16, riding on the upper faces of the strips 19. As the plunger recedes and just before it reaches the limit of its backward movement the rollers 18 strike the arm 16 and produce the downward movement of the feeder, as shown in Fig. VI. The feeder is thus moved by a positive action in both directions, and being thus moved by the plunger itself and being permitted to move only as the plunger moves its action is positive with relation to the plunger, with which it coöperates in forcing the material into the baling-chamber to be operated upon by the plunger.

21 represents the condenser of the press. We have shown the form of condenser set forth in our Patent No. 551,302 last mentioned. To the side strips 22 of the movable part of the condenser, which correspond to the strips 55 of said patent, there is connected a pair of links 23. (See Figs. IV and V.) The outer ends of these links are connected to the cranks 24 of a shaft 25, journaled in a block 26, that is made fast to the plunger 2 of the press. The outer ends of the cranks 24 carry rollers 27. At the end of the baling-chamber of the press are U-shaped plates or pockets 28, into which the rollers 27 drop when the condenser is closed up, as shown in Figs. IV and VI. The rollers 27 ride on top of the press until they reach the pockets 28 and then drop into the pockets and hold the condenser in its closed position, suspending its movement until the feeder has had time to force the material into the baling-chamber. After the feeder has forced the material into the baling-chamber the condenser is opened

up by the movement of the plunger, which now begins to advance, and as the movable part of the condenser moves back the rollers 27 move along the top of the press from the position shown in Fig. IV to the position shown in Fig. V and by dotted lines in Fig. IV.

To prevent the rollers 27 being raised materially higher than the top of the press, we secure a plate 30 (see Fig. VIII) to the block 26, the ends of which project out over the cranks 24 of the rock-shaft 25 and against which the cranks will strike before the rollers 27 move much above the top of the press as they leave the pockets 28.

We claim as our invention—

1. In a baling-press, the combination of a plunger, a feeder having an arm 16, provided with a curved lower end, plates secured to the edge of the pitman of the plunger, and which are adapted to engage said arm as the plunger advances, and rollers secured to said pitman slightly in advance of said plates, which are adapted to engage said arm as the plunger recedes, substantially as set forth.

2. In a baling-press, the combination of a condenser, a crank-shaft connected by links to the movable part of the condenser, a sliding block to which the crank-shaft is journaled, and rollers carried by the cranks of said shaft and which are adapted to drop into pockets 28 at the end of the baling-chamber and hold the movable part of the condenser in its closed position, substantially as set forth.

3. In a baling-press, the combination of a condenser, a crank-shaft, a sliding block to which said shaft is journaled, rollers 27 carried by the cranks of said shaft, links 23 connecting said shaft to the movable part of the condenser, pockets 28 into which said rollers are adapted to move, and a plate 30 carried by said sliding block, substantially as and for the purpose set forth.

JOHN W. BROWN.
ALBERT A. GEHRT.

In presence of—
GEORGE W. ELICK,
E. S. THOMAS.