

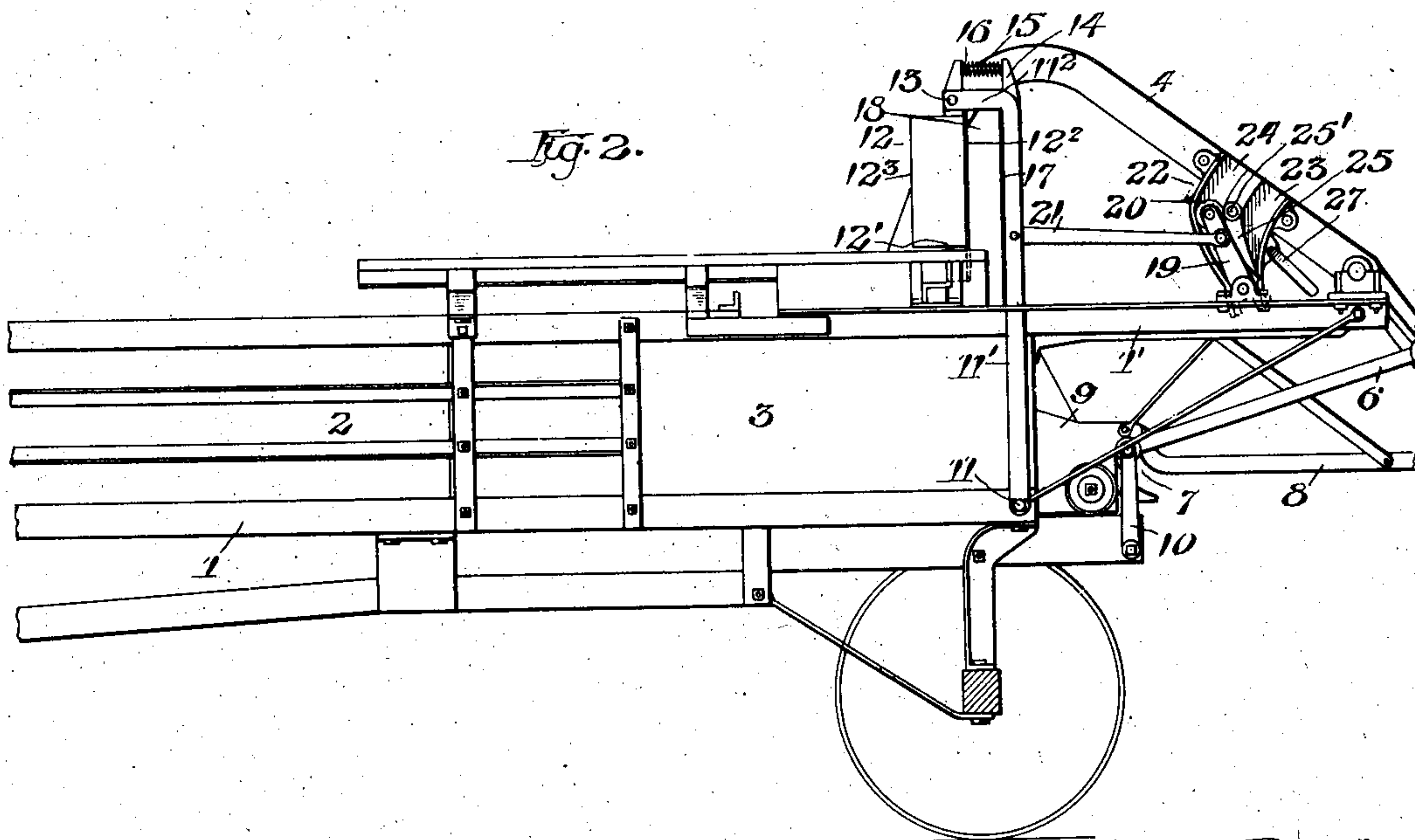
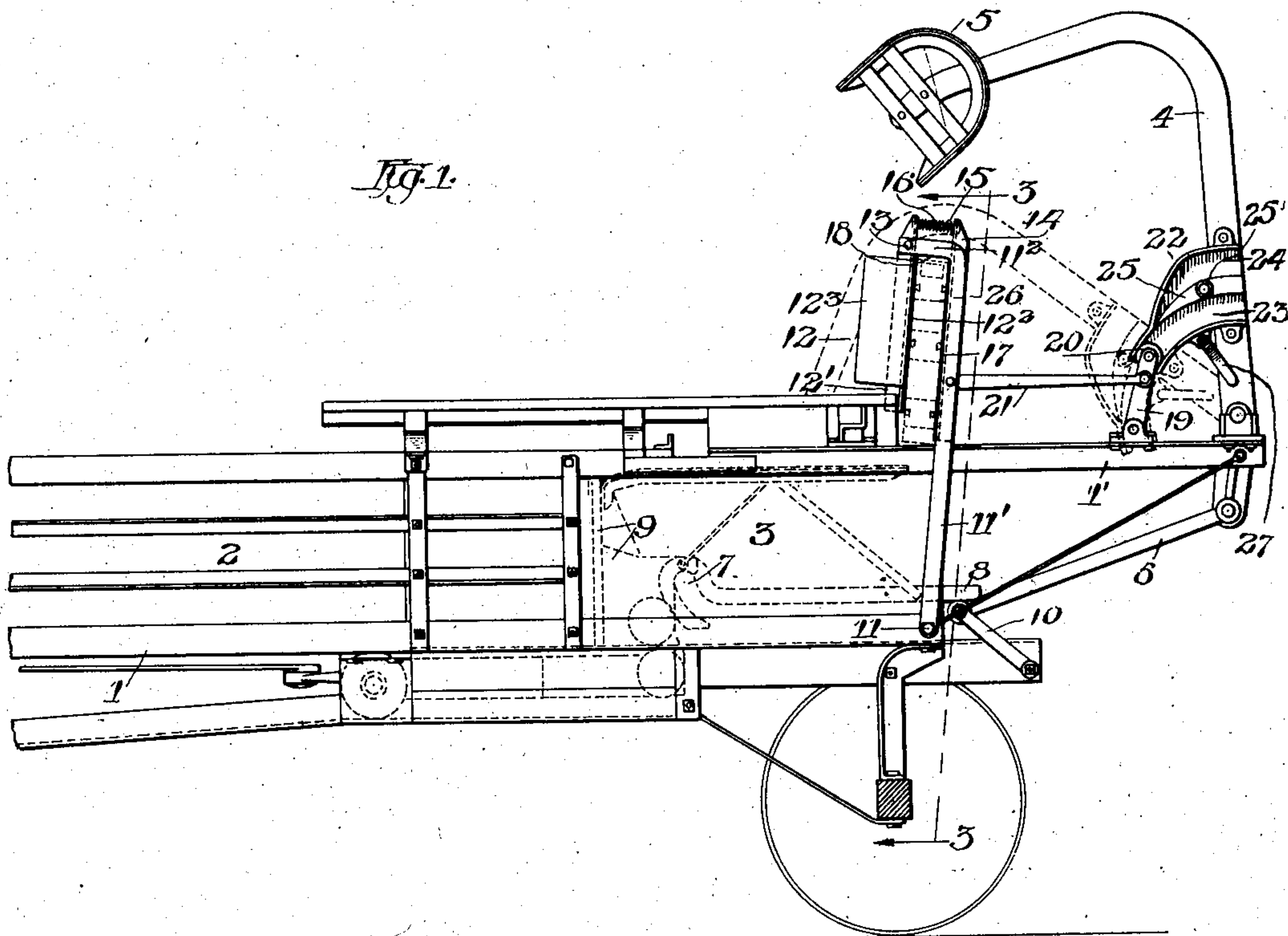
No. 834,325.

PATENTED OCT. 30, 1906.

F. A. RYHER.
BLOCK INSERTER FOR HAY BALERS.

APPLICATION FILED SEPT. 20, 1905.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

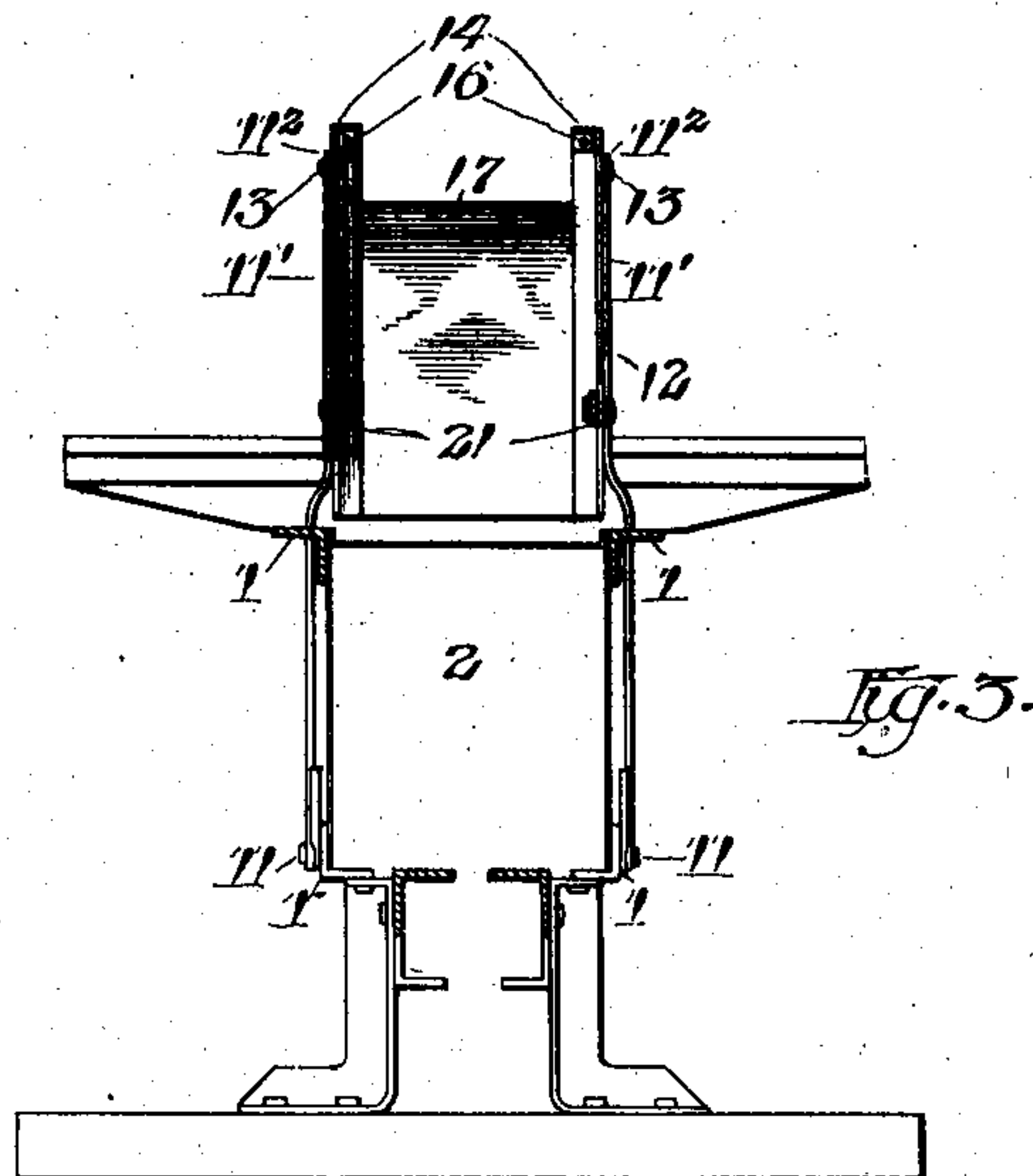


Fig. 3.

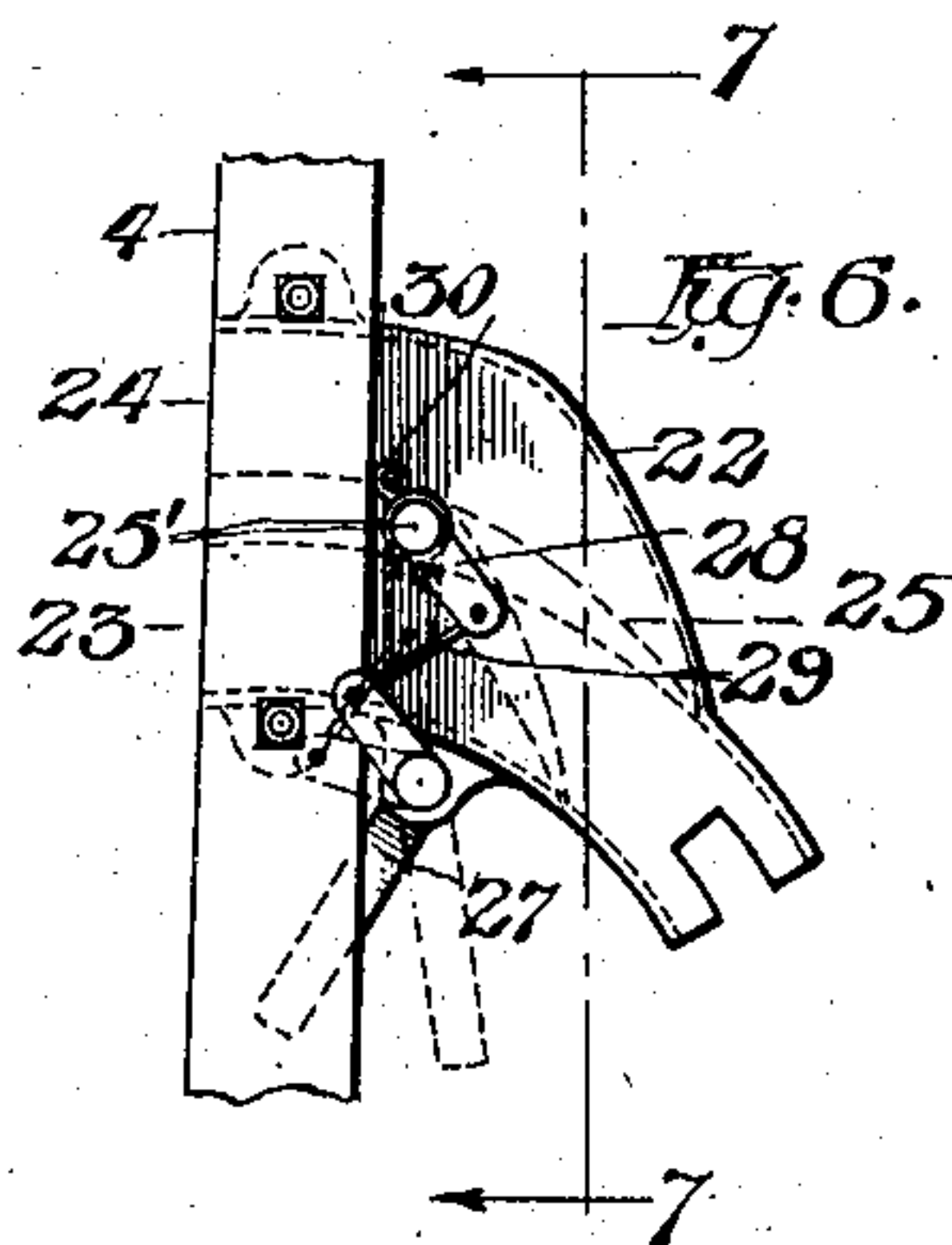


Fig. 6.

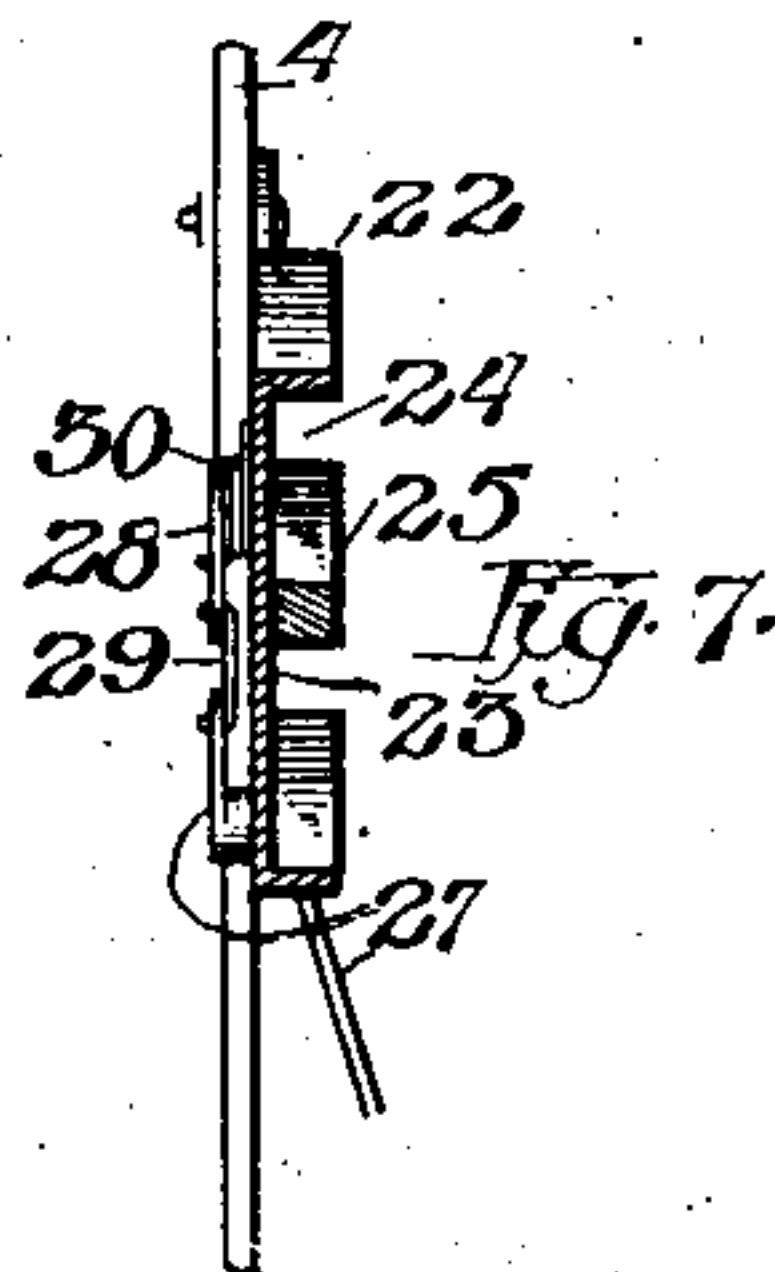


Fig. 7.

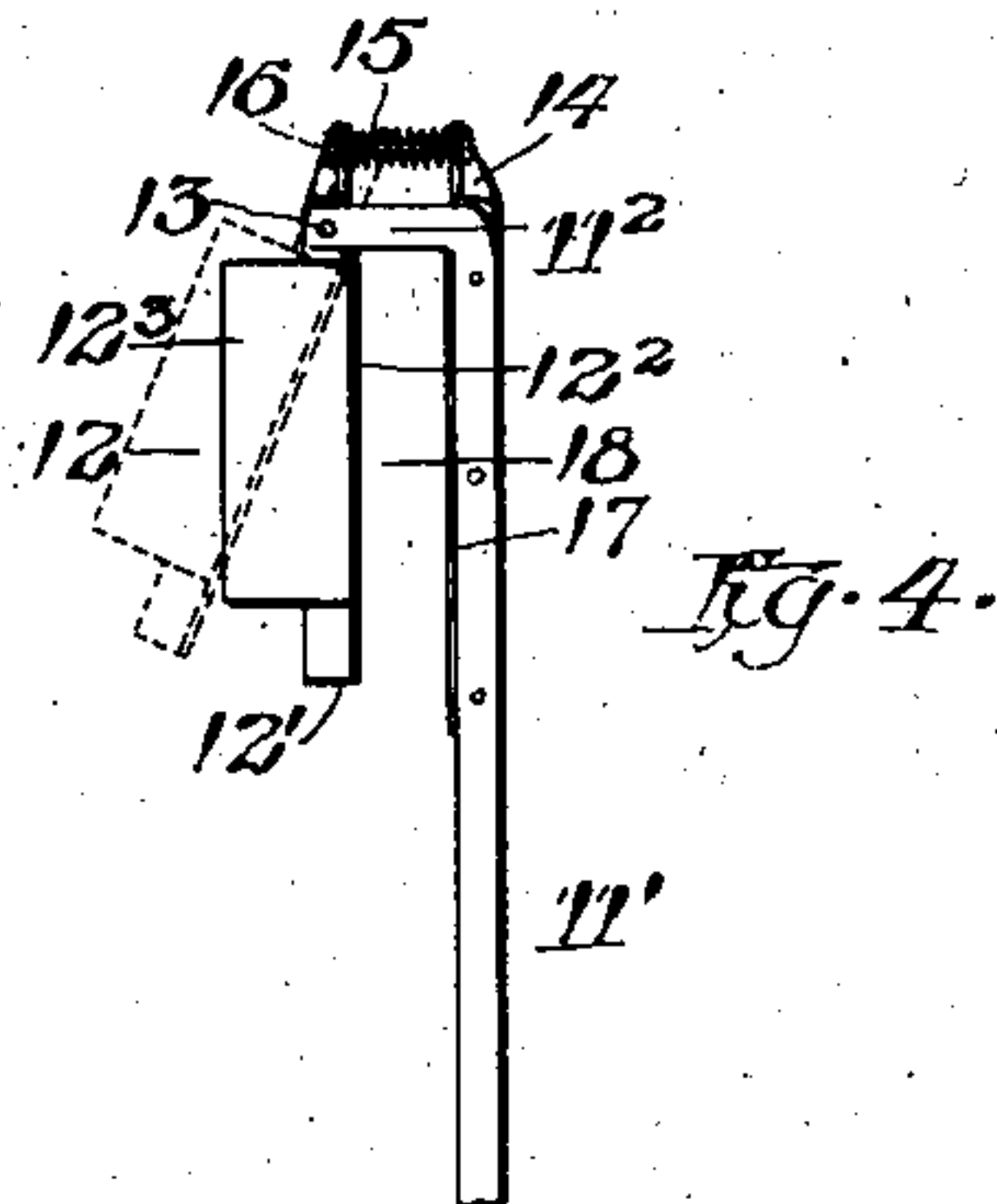


Fig. 4.

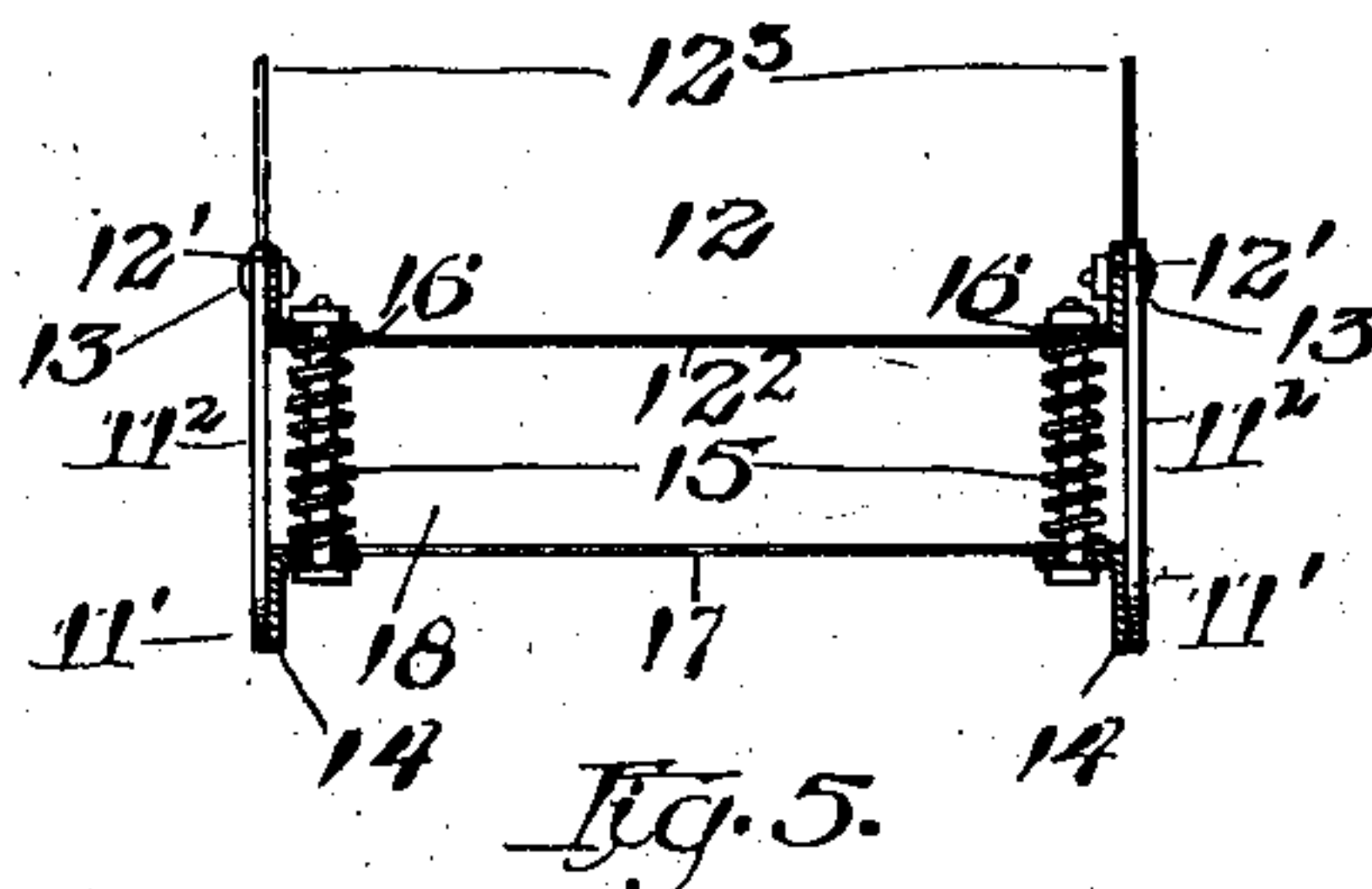


Fig. 5.

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BLOCK-INSERTER FOR HAY-BALERS.

No. 834,325.

Specification of Letters Patent.

Patented Oct. 30, 1906.

Application filed September 20, 1905. Serial No. 279,215.

To all whom it may concern:

Be it known that I, FRANK A. RYTHUR, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Block-Inserters for Hay-Balers, of which the following is a complete specification.

This invention relates to the construction of both the block-holding frame and the mechanism by which the movement of the frame is controlled.

The object in view is to provide a block holding and carrying frame capable of yielding to the forward movement of the block in the event the said block does not drop entirely free from the frame when the latter is moved over the compression-chamber.

A further object consists in providing convenient and effective means for actuating the block-holding frame.

Referring to the accompanying drawings, Figure 1 represents a side elevation of the rear end of a baling-press embodying my invention. Fig. 2 is a view corresponding with Fig. 1, but with the feed-lever in its "down" position and the block-holding frame in its forward position. Fig. 3 is a transverse sectional view through the press, the view being taken as indicated by the line 3 3 in Fig. 1. Figs. 4 and 5 represent a side elevation and plan, respectively, of the block-holding frame. Fig. 6 is a detached view showing in inner or rear side elevation the switch; a front view of which is shown in Fig. 2; and Fig. 7 is a vertical section through same, taken as indicated by the line 7 7 of Fig. 6.

In the accompanying drawings, 1 designates the frame of the press, 2 the baling-chamber, and 3 the compression-chamber. On the end of the rearwardly-projecting beam 1' of the frame is pivotally mounted in suitable bearings the reciprocative feed-lever 4, which is provided on its upper or free end with the feeder-head 5. The feed-lever 4 is actuated by means of the link 6, which detachably engages the slot 7 in the rearwardly-projecting bar 8, secured to the plunger 9. The short links 10 control the lower end of the link 6. The operation of these links, as well as that of the above-mentioned parts, is clearly set forth in an application filed by me June 19, 1905, Serial No. 265,996, baling-press.

Pivoted near the bottom of the frame 1 on

the bolts 11 are the arms 11' of the block-holding frame. The upper ends of the arms 11' terminate in the laterally-deflected or forwardly-bent portions 11². To the free ends of these deflected portions is pivotally attached the frame 12. This frame 12 is constructed of the side bars 12', pivoted at 13, and to which is secured the sheet-metal plate 12², having the flange portions 12³. The side bars 12' project a short distance above their pivotal fastenings, and between the upper projecting ends thereof and the short extensions 14, which are secured to the upper ends of the arms 11', are interposed the coil compression-springs 15, the bolts 16 supporting same and limiting the rocking movement of the frame 12.

The bolt-receiving apertures are made considerably larger than the diameter of the bolts, so that a rocking movement of the frame will be permitted. A sheet-metal plate 17 of a width substantially equal to the length of the bars 12' is secured to the arms 11' in a position opposed to the frame 12 and in connection with said frame forms the block-receiving chamber 18. A pivotally mounted block-holding frame is thus provided having its forward side pivotally mounted and longitudinally yielding, so that in the event a division-block does not drop entirely out of the frame into the compression-chamber it will not result in the destruction of said frame, but the forward side by yielding will permit the plunger to force the block forward, and no harm will result aside from forcing the block in askew. The dotted lines in Fig. 4 indicate the position to which said frame may be swung when swung forwardly by a disengaged block. Heretofore the forward side of the block-holding frame has been constructed rigid, in consequence of which the failure of the block to completely disengage therefrom would result in the destruction of the frame.

The block-holding frame is actuated by the following described mechanism: An arm 19, provided with a roller 20, journaled on the free end thereof, is pivotally mounted on the rear end of the baler-frame, and this arm connects with the block-holding frame through the pitman 21. A casting 22 is secured to the feed-lever 4, and in this casting is formed the upper and lower cam-grooves 24 and 23, respectively, which unite at their forward ends. The roller 20 is arranged to engage

said cam-grooves, the position of the switch 25 determining which of the two grooves the roller must follow. The lower cam-groove 23 is made concentric with the pivotal axis of the feed-lever, so that when the switch 25 occupies the position shown in Fig. 1 it will confine the roller on the arm 19 to said lower track and no rocking movement of the arm 19 will result; but when the switch is depressed, as shown in Fig. 2, the roller 20 will be forced into the upper cam-track and the arm 19 will be rocked forwardly. This rocking movement of the arm 19 will also rock the block-holding frame, moving it from the position shown in Fig. 1 to that shown in Fig. 2, thereby permitting a block 26 to drop into the compression-chamber.

To operate the switch, a bell-crank lever 27 is journaled in a suitable bearing in the casting 22. The switch-stem 25' is provided with the crank-arm 28, which is connected to the bell-crank by means of the link 29. The coil-spring 30, interposed between the casting 22 and the switch-stem 25', operates to hold the switch up in an inoperative position, as shown in Fig. 1. While in practice the switch is controlled by the operator grasping the bell-crank 27, a suitable extension may be connected thereto in order that it may be operated from any other part of the machine.

In operation a block, as 26, is placed within the space 18 of the supporting-frame, the block resting on the upper surface of the baling-chamber, as shown in Fig. 1. When the time for the introduction of same arrives, the bell-crank lever 27 is moved to depress the switch to the position shown in Fig. 2. The next descent of the feed-lever 4 will force the roller-bearing arm 29 forwardly, thus rocking the block-holding frame to a position in which the said block will be permitted to drop into the compression-chamber. On the ascent of the feed-lever all parts will return to their normal position and so remain until the switch 25 is again depressed.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a baling-press, in combination, a block-holding frame, a reciprocating feeding device, a double-grooved cam in connection with said feeding device, a switch in operative relation with the grooves of said cam, and means actuated by the cam-grooves for controlling the movement of the said block-holding frame.

2. In a baling-press, in combination, a block-holding frame, a reciprocating feed-lever having a double-grooved cam in connection therewith, a switch in operative relation with the grooves of said cam, and means actuated by said cam-grooves for controlling the movement of the said block-holding frame.

3. In a baling-press, in combination, a block-holding frame, a reciprocating feed-le-

ver, a double-grooved cam secured to said feed-lever, a pitman for controlling the movement of the block-holding frame, the forward end of said pitman being arranged to engage either groove of said cam, and a switch for throwing the engaging end of said pitman into either of the cam-grooves.

4. In a baling-press, in combination, a block-holding frame, a reciprocating feed-lever, a double-grooved cam secured to said feed-lever, one of the grooves of said cam being arranged concentric with respect to the pivotal axis of said feed-lever and the other groove eccentric with respect thereto, a pitman for controlling the movement of the block-holding frame, the forward end of the pitman being mounted on a rocking arm and provided with a roller adapted to engage the grooves of said cam and a switch for throwing said roller into engagement with either of the cam-grooves.

5. In a baling-press, in combination, a compression-chamber, a longitudinally-movable block-holding frame for depositing the division-blocks in said compression-chamber, said frame having a yielding or elastic movement independent of its normal longitudinal movement, and means for controlling the action of the block-holding frame.

6. In a baling-press, in combination, a compression-chamber, a longitudinally-movable block-holding frame for depositing the division-blocks in said compression-chamber, the said frame being provided with an elastically-held side adapted to permit the block to yield independent of the longitudinal movement of said frame, and means for controlling the action of the block-holding frame.

7. In a baling-press in combination, a compression-chamber, a feed-lever, a longitudinally-movable block-holding frame the forward side of which is pivotally mounted and yieldingly held with respect to the rear side thereof, and means actuated by said feed-lever for controlling the movement of said frame.

8. In a baling-press, in combination, a compression-chamber, a feed-lever, a pivotally-mounted longitudinally-movable block-holding frame consisting of upwardly-extending arms having their upper ends bent forwardly, fingers projecting above the arms, a depending frame pivoted to the bent portion of said arms, springs interposed between said depending frame and the said fingers whereby the said depending frame is yieldingly held in normal position, and means actuated by said feed-lever for controlling the movement of said block-holding frame.

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Witnesses:

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