P. A. GUENZEL.

BALING PRESS.

APPLICATION FILED NOV. 27, 1908.

935,255.

Patented Sept. 28, 1909.

2 SHEETS—SHEET 1.

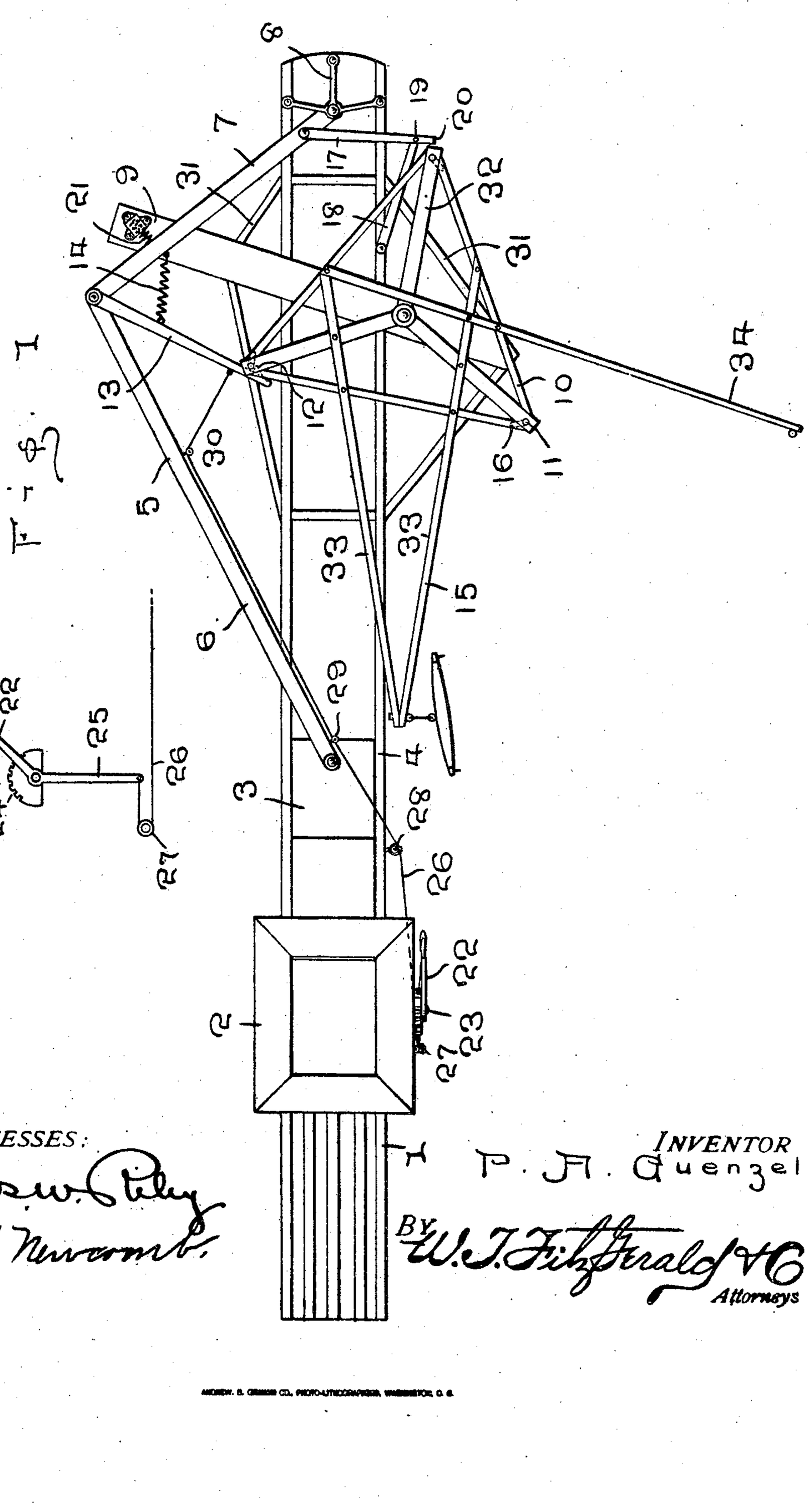

Fig. 1.

Fig. 2.

WITNESSES:

Thos. W. Pelley

M. A. Newcomb.

INVENTOR

P. A. Guenzel

BY W. J. Fitzgerald & Co

Attorneys

P. A. GUENZEL.

BALING PRESS.

APPLICATION FILED NOV. 27, 1908.

935,255.

Patented Sept. 28, 1909.

2 SHEETS—SHEET 2.

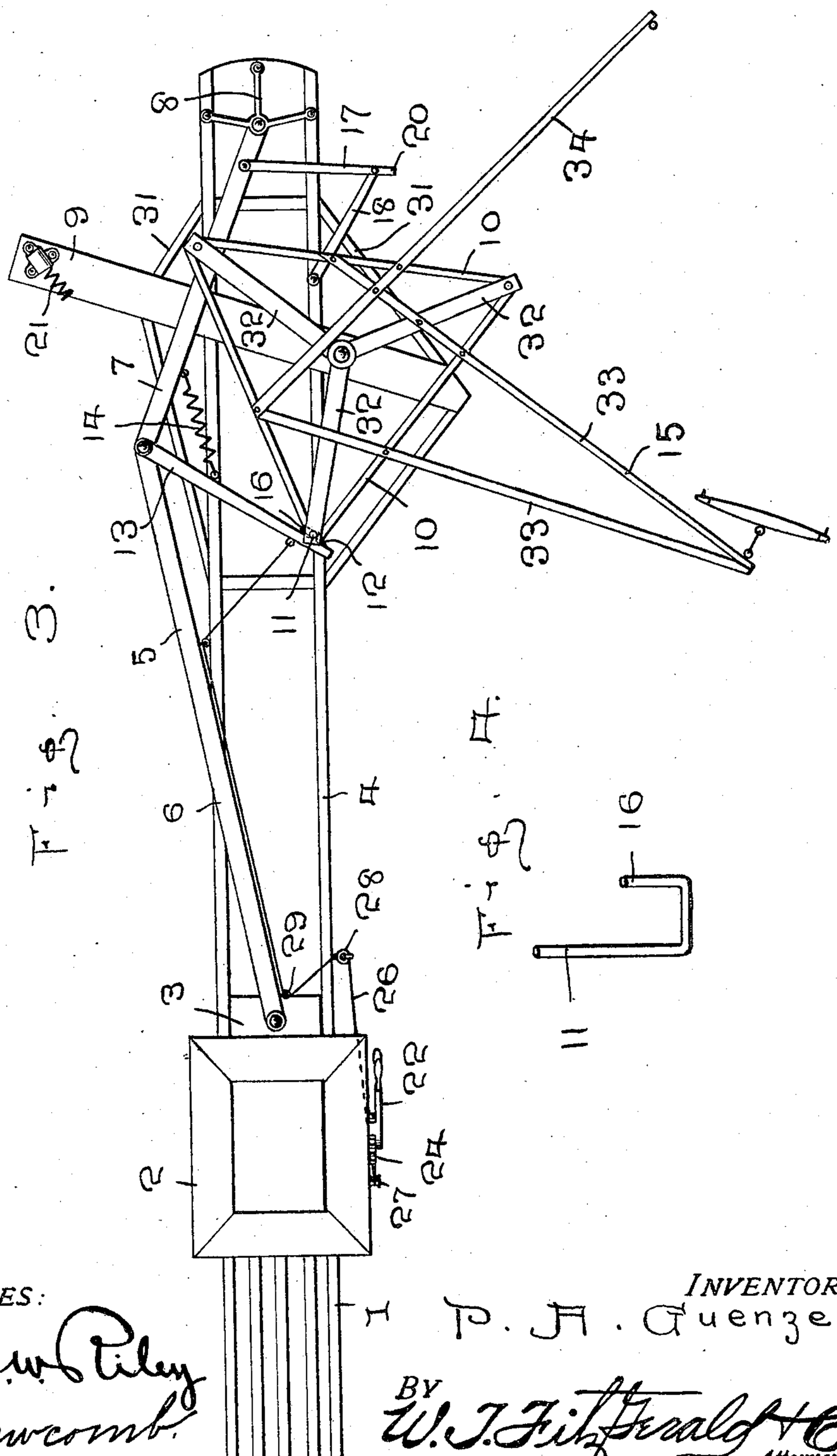

Fig. 3.

Fig. 4.

WITNESSES:

Thos. W. Riley

M. A. Newcomb.

INVENTOR

P. A. Guenzel

BY

W. J. Fitzgerald & Co

Attorneys

ANDREW. B. GRAHAM CO., PHOTO-LITHOGRAPHERS, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

PAUL A. GUENZEL, OF BARTLETT, TEXAS.

BALING-PRESS.

935,255. Specification of Letters Patent. Patented Sept. 28, 1909.

Application filed November 27, 1908. Serial No. 464,541.

To all whom it may concern:

Be it known that I, PAUL A. GUENZEL, a citizen of the United States, residing at Bartlett, in the county of Williamson and State of Texas, have invented certain new and useful Improvements in Baling-Presses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to new and useful improvements in baling presses and more particularly to that class adapted to be used for baling hay, straw and the like and my object is to provide means for causing three strokes of the plunger with each revolution of the plunger operating mechanism.

A further object is to provide means for automatically releasing the plunger trigger when the stroke has been completed.

A further object is to provide means for returning the plunger to its initial position and a still further object is to provide means for manually releasing the plunger from the operating lever when desired.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the claims.

In the accompanying drawings which are made a part of this application, Figure 1 is a top plan view of the baler complete, showing the plunger in its outward position and showing the trigger engaged with the lever and ready to force the plunger inwardly. Fig. 2 is an elevation of a device employed for manually releasing the trigger from the operating lever when desired. Fig. 3 is a top plan view of the baler, showing the position of the parts when the plunger is moved inwardly, and, Fig. 4 is a perspective view of a combined pin and trip.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 indicates a baling chamber, which may be constructed in the usual or any preferred manner and is provided at one end with a hopper 2, through which hay, or the like, may be introduced in the path of a plunger 3.

The plunger 3 is slidably mounted on a platform 4 and is moved longitudinally into the chamber 1 through the medium of a toggle 5, the toggle being formed in two sections 6 and 7, which are pivotally secured together at their meeting ends and have their opposite ends secured, respectively, to the plunger 3 and a bracket 8 at the outer end of the platform 4.

A beam 9 is extended laterally across the platform 4 and slightly at an angle to the axial plane of the platform, one end of the beam forming a support for the toggle 5, while the opposite end has pivotally secured thereon a triangular frame 10, depending from the corners of which are pins 11 to extend into the path of a lip 12 on a trigger 13, said trigger being pivotally secured to the toggle 5 at the pivotal connection between the sections 6 and 7 of the toggle.

The lip 12 is fixed to one edge of the trigger and adjacent its outer end and said trigger is normally held in position whereby the lip will engage the pins 11 by extending a spring 14 from the section 7 and into engagement with the trigger, the tension of said spring being such as to normally hold the trigger in the path of the pins.

The triangular frame 10 has fixed thereon a lever 15, to the outer end of which is to be secured a draft animal and by which means the triangular frame is rotated.

In operation, the draft animal is caused to travel in a circle around the pivotal point of the triangular frame 10, thereby rotating said frame and bringing the pins at the corners of the frame into engagement with the lip on the trigger 13 in succession and it will be readily apparent that when the lip is engaged with one of the pins, the continued movement of the frame 10 will bring the two sections of the toggle 5 into alinement with each other, thereby forcing the plunger 3 into the baling chamber 1 and compressing the hay deposited in front of the plunger. As soon as the plunger has reached its full stroke, a trip 16 on the frame 10 will come into engagement with the trigger 13 and force the trigger away from the frame, thereby releasing the lip 12 from the pin with which it is in engagement.

The pins 11 and trips 16 may be formed of integral sections of material by bending the same substantially L-shaped as shown in Fig. 4, the longer stems forming the pins 11, while the shorter stems form the trips 16, the free ends of the pins 11 being entered through the frame and parts carrying the same, while the free ends of the trips 16 are to be entered part-way through the frame 10. The movement of the frame 10 is also employed for returning the plunger to its ini-

tial position by pivotally securing arms 17 and 18 to the section 7 of the toggle and one edge of the platform 4, respectively, the arm 17 being slightly greater in length than the arm 18 and being extended over the end of the arm 18 and pivotally secured thereto by introducing a pin 19 through the overlapped ends of the arms, the projecting end 20 of the arm 17 being so arranged as to extend into the path of the pins 11 when the two sections of the toggle are in alinement with each other, but will rest out of the path of the pins when the plunger 3 has been returned to its initial position and the sections of the toggle moved to the position shown in Fig. 1. As the two sections of the toggle are moved into alinement with each other, the extended end 20 will travel in the arc of a circle and move into the path of the pins 11, whereby, at the instance of releasing the lip 12 from the pin 11, the next preceding pin will engage the extended end 20 and force the sections of the toggle outwardly and return the plunger to its initial position.

A buffer 21 is placed on the beam 9 and in position to be engaged by the section 7 of the toggle, said buffer forming a yielding stop for the toggle.

If, for any reason, a foreign object should enter the hopper 2, the operation of the plunger may be instantly stopped by moving the trigger 13 out of the path of the pins 11, which is accomplished by mounting on one face of the baling chamber 1, a lever 22 having a latch 23 thereon adapted to engage a rack 24, whereby the lever will be held in its adjusted position, the depending shank 25 of the lever having secured to its lower end a cable 26, which cable extends into engagement with the trigger 13. The cable 26, in its passage from the end of the shank 25 to the trigger, extends around a sheave 27 on the side of the baling chamber 1 around a similar sheave 28 on the platform 4 and through sheaves 29 and 30 on the section 6 of the toggle, said sheaves supporting the cable and preventing the same from becoming entangled. When the trigger is being moved out of the path of the pins 11, the upper end of the lever 22 is swung forwardly, thus giving a pull on the cable 26 and swinging the trigger away from the pins and by engaging the latch 23 with the rack 24, said trigger will be held away from the pins until such time as it is again desired to operate the plunger, when the lever 22 is swung rearwardly, the tension of the spring 14 immediately returning the trigger to its initial position.

The beam 9 is rigidly secured to the platform 4 by providing suitable braces 31 at opposite sides of the platform 4, while the spider 32 on the frame 10 is securely braced by forming the lever 15 of a pair of bars 33, which are arranged at an angle to each other and have their outer ends secured together, while the inner ends thereof are extended across portions of the frame 10 and the spider arms employed to support the frame, said spider and frame being further reinforced by securing thereto a guide pole 34, said guide pole extending over the inner ends of the bars 33. In this manner, the triangular frame may be constructed of light material and at the same time made extremely strong and durable and it will likewise be seen that by forming the frame triangular and securing a pin at each corner thereof and a corresponding trip for each pin, the plunger 3 will be given three distinct thrusts with each complete revolution of the frame 10.

What I claim is:

1. A device of the character described, comprising a plunger, a toggle connected to said plunger, a spring pressed trigger pivoted to said toggle at its joint, a rotatable frame having an arm provided with a pin member, said trigger having a lip offset and adapted for engagement with said member, said member also having a trip arm arranged at an angle to said trigger whereby during an interval of rotation of said frame, said arm will disengage said trigger from said pin member and means applied to said frame for returning said toggle to its initial position.

2. In a baling press, the combination with a baling chamber and a plunger for said chamber; of a toggle pivotally secured at one end to the plunger and at its opposite end to parts of the press, said toggle being formed of two sections, which sections are hingedly secured together, a trigger pivotally secured to the toggle, a lip on said trigger, a rotatable triangular frame having pins thereon adapted to engage the lip on the trigger and operate the toggle to move the plunger longitudinally and means on the frame to release the lip from the pins.

3. A device of the character described, comprising a plunger, a toggle connected to said plunger, a spring pressed trigger pivoted to said toggle at its joint, said trigger having an offset lip, a rotatable frame having a pendent pin member formed with a trip extension or arm and arranged at such an angle to said trigger as to effect the disengagement of said lip from the pin member proper at a certain interval of the rotation of said frame, said toggle having pivoted thereto near one end an arm, said arm having connected to it an additional pivoted arm, the first-referred to arm being adapted for engagement with an arm of said frame when the toggle has completed its stroke.

4. A device of the character described, comprising a plunger, a toggle connected to said plunger, a spring pressed trigger piv-

oted to the joint of said toggle, said trigger having a lip offset therefrom, a pivoted triangular frame having at each of its corners, a pin member depending therefrom and adapted for engagement with said lip, said pin member having an offset trip arm arranged at such an angle as to effect at an interval of the rotation of said frame the disengagement of said lip from said pin member and arms pivotally connected together, one of said arms being connected to said toggle and the other arm having pivotal connection at a fixed point, one of said arms having an outstanding end portion adapted for engagement with the approaching pin member of said frame for the automatic return of said toggle to initial position.

5. A device of the character described, comprising a plunger, a toggle connected to said plunger, a spring pressed trigger pivoted to said plunger at its joint, said trigger having a lip offset laterally therefrom, a rotatable frame having a plurality of approximately L-shaped pin members, one arm of each pin member being adapted for engagement with said lip and the other arm of each pin member standing at such an angle as to effect engagement with said trigger at a certain interval of the movement of said frame for the disengagement of said pin member from said lip, and pivoted arms together having pivotal connection with said toggle the end of one arm outstanding from the other arm and adapted for engagement with a pin member distant from the pin member in engagement with said lip.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PAUL A. GUENZEL.

Witnesses:
J. G. HOES,
J. J. WELLS.