No. 722,513. PATENTED MAR. 10, 1903.

A. JOHNSON.

DOOR CLOSING MEANS FOR BALING PRESSES.

APPLICATION FILED AUG. 11, 1902.

NO MODEL.

Fig. 1.

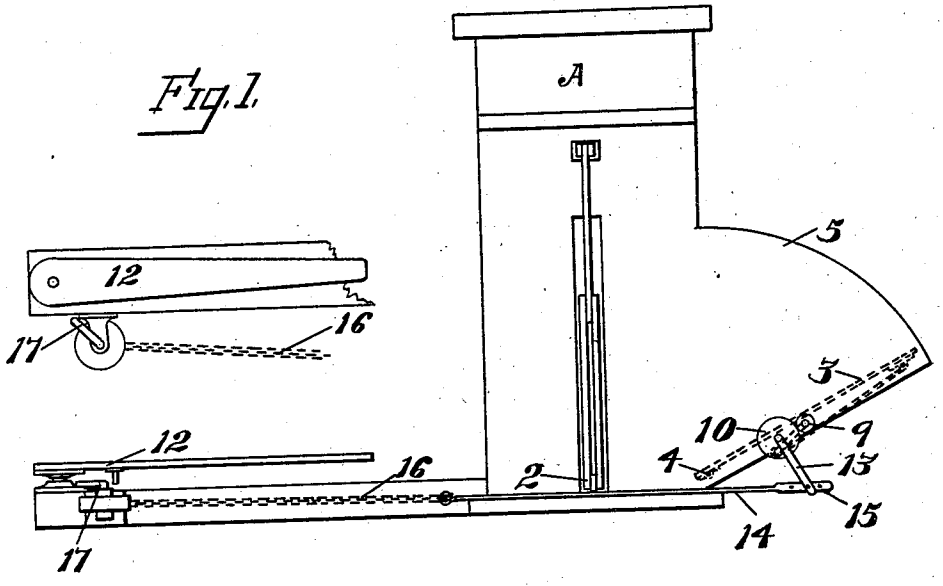


Fig. 2.

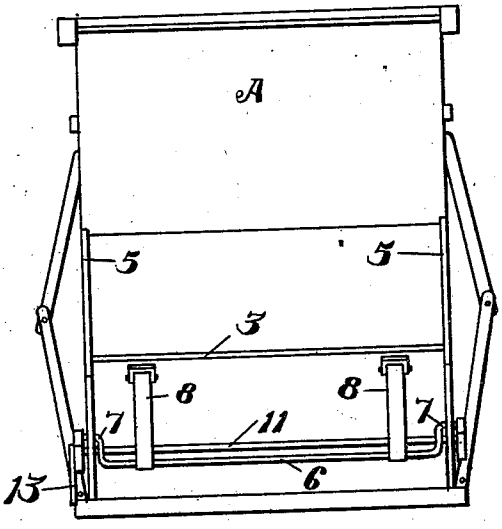
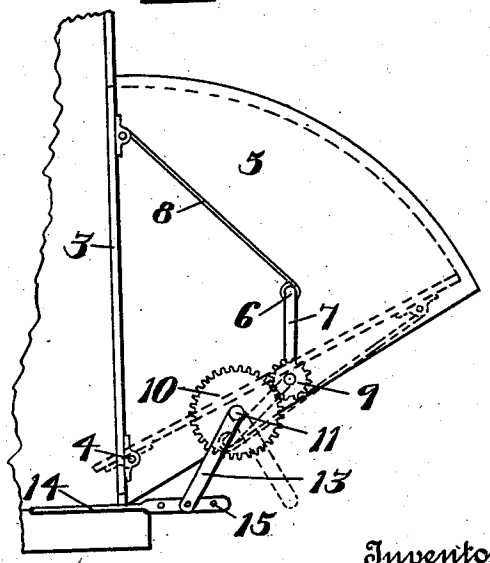


Fig. 3.



Witnesses,
Dudley Moss.
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UNITED STATES PATENT OFFICE.

AUGUST JOHNSON, OF LAFAYETTE, CALIFORNIA.

DOOR-CLOSING MEANS FOR BALING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 722,513, dated March 10, 1903.

Application filed August 11, 1902. Serial No. 119,245. (No model.)

To all whom it may concern:

Be it known that I, AUGUST JOHNSON, a citizen of Sweden, residing at Lafayette, county of Contra Costa, State of California, have invented an Improvement in Door-Closing Means for Baling-Presses; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to improvements in baling-presses, and particularly to a novel form of toggle-lever mechanism for actuating the door. Its object is to simplify the construction and operation of this mechanism in that class of presses in which the material is fed in through an opening in the side of the press-box upon the follower.

It consists in the parts and the construction and combination of parts hereinafter to be set forth, having reference to the accompanying drawings, in which—

Figure 1 is a side elevation of my invention. Fig. 2 is a rear elevation of my invention. Fig. 3 is an enlarged fragment of Fig. 1 with front wall 5 removed.

A represents the press-box of a well-known type of vertical baling-press, in which the follower 2 reciprocates by means of suitable mechanism. (Not necessary here to be shown.)

3 is a door adapted to close the feed-opening, hinged at the bottom, as at 4, and movable between the guide-walls 5. A lever 6, comprising a shaft bent at the ends to form arms 7, is journaled in the walls 5 below the lowest point to which the door is to drop. Links 8 have one end pivoted to the bent lever 6 and the other end to and near the top of the door. These links and the bent lever form the toggles by which the raising and lowering of the door is effected. The novelty resides in the particular manner of operating the toggle-levers.

The ends of arms 7 extend outward through the walls, and each has fixed thereto a small pinion 9, engaging a larger pinion 10 on the straight shaft 11, which latter is likewise journaled in the guide-walls. By rotating shaft 11 and the gears the horizontal portion of lever 6 sweeps through an arc carrying the links and closing or opening the door, as desired. This gearing is operated to close the door through the following connection with the sweep 12. One of the pinions 10 has a crank 13, to which is secured a short bar 14, perforated, as at 15, to allow for suitable adjustment. The other end of the bar connects by a chain 16 with a crank-arm 17, suitably fulcrumed in the path of the sweep, whereby the latter acts at each revolution to turn the arm a certain distance and operate the gears 9 10 to close the door prior to the upward movement of the follower, which compresses the charge. As the door closes it engages a spring-catch mechanism of suitable well-known construction, (not here shown,) by which it is held fast till the follower has passed the upper edge of the door, when the follower trips the catch and releases the door, allowing the latter to open by its own weight ready for the next charge.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination in a baling-press, of a press-box, a door hinged at its lower edge, vertical guide-walls between which said door is movable, a bent lever having its ends fulcrumed in said sides, links pivoted to said lever and to the door to form toggle-joints, pinions upon the ends of said lever, gear-wheels engaging the pinions, and connections between said gear-wheels and sweep by which said toggles are actuated to close the door.

2. The combination in a baling-press, of a press-box, a door hinged at its lower edge, vertical guide-walls between which said door is movable, toggle-levers having one member pivoted in the guide-walls and the other to the door, gears fixed on said first-named members exterior to the guide-walls, other gears journaled in the guide-walls engaging the first-named gears, a crank on one of said other gears, and adjustable connections of said crank with mechanism disposed in the path of the sweep by which the latter operates to turn said gears and actuate the toggle-levers to close the door.

In witness whereof I have hereunto set my hand.

AUGUST JOHNSON.

Witnesses:
H. A. SWEET,
WM. H. HOUGH.