F. J. BABCOCK.

BALING PRESS.

APPLICATION FILED JUNE 13, 1914.

1,121,449.

Patented Dec. 15, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

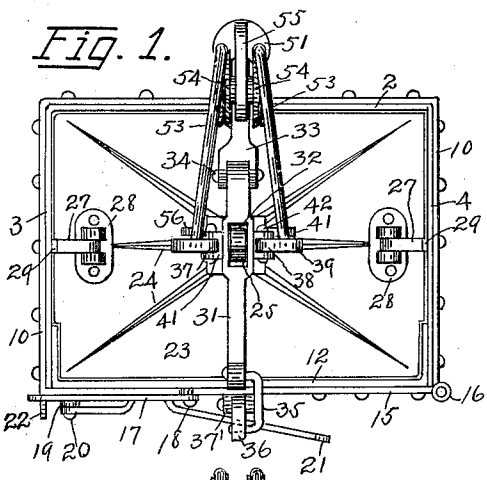


Fig. 4.

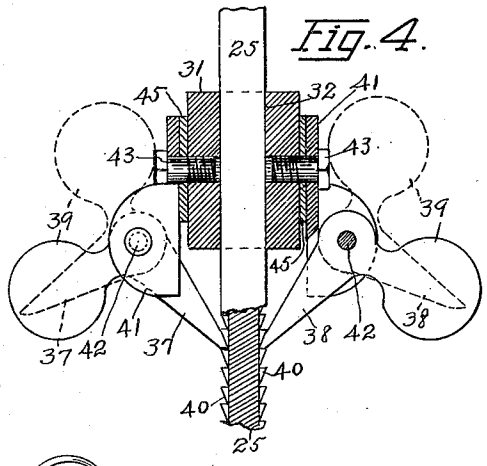


Fig. 2.

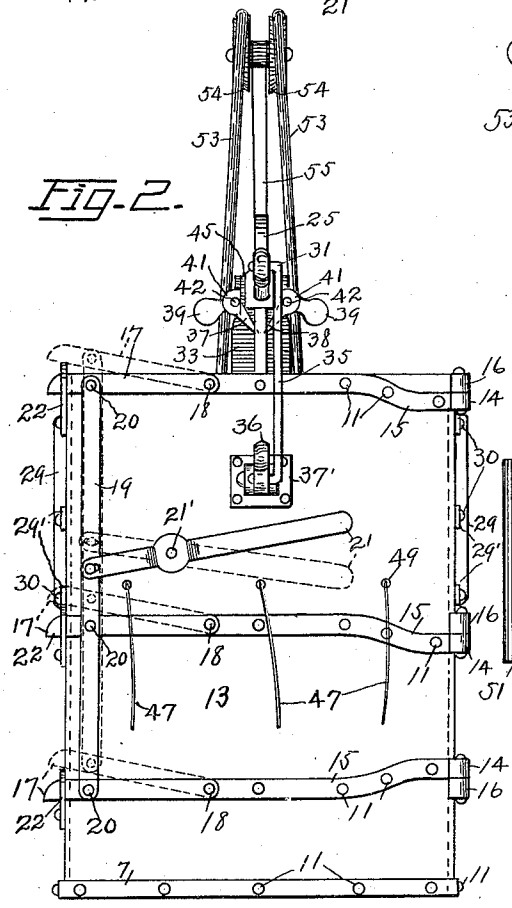
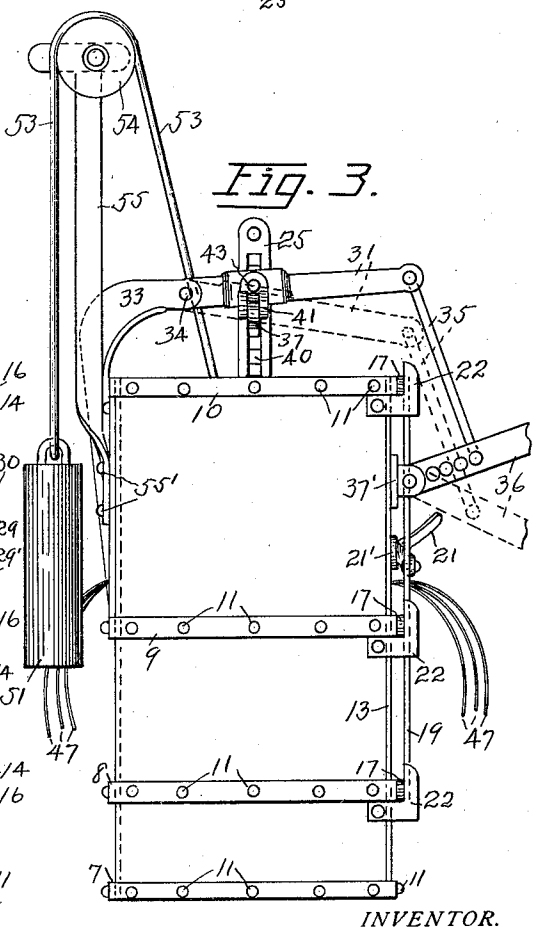


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 6.

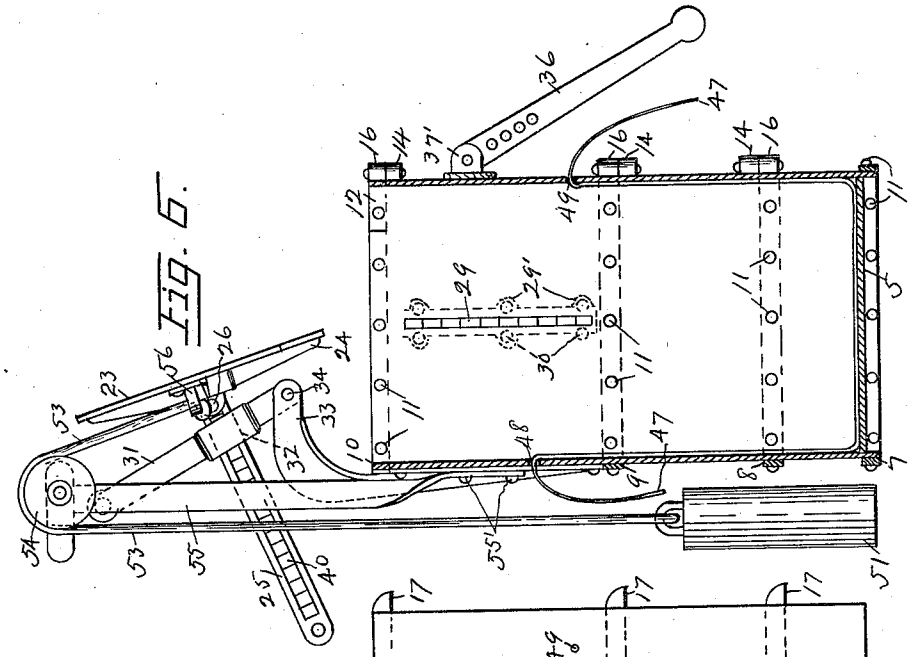
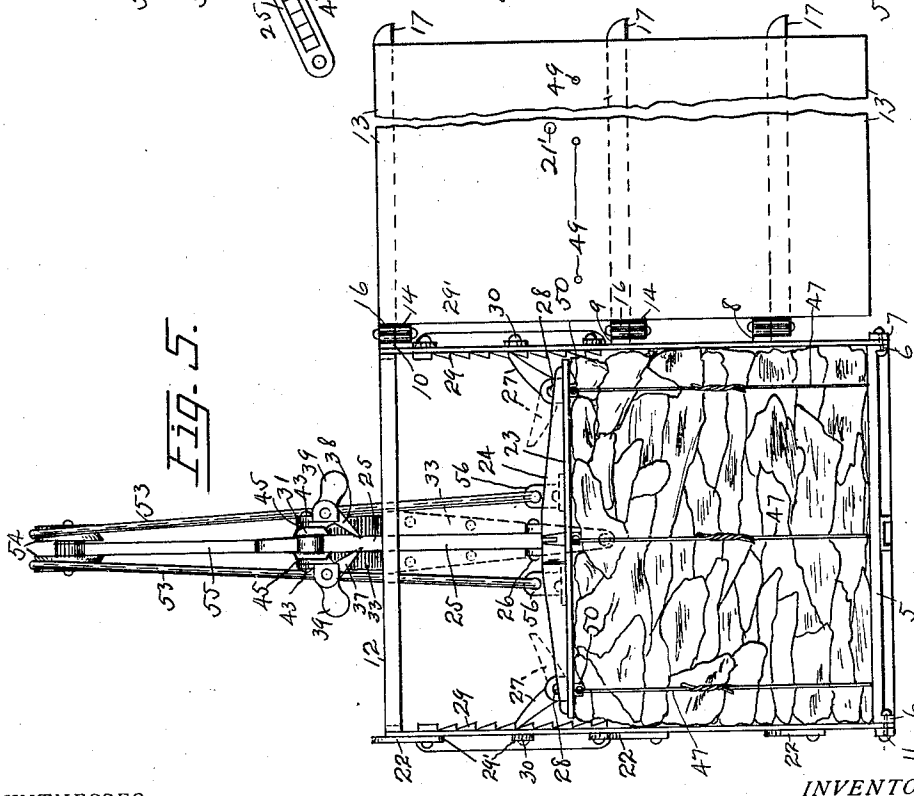


Fig. 5.



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UNITED STATES PATENT OFFICE.

FRANK J. BABCOCK, OF EAST SYRACUSE, NEW YORK, ASSIGNOR TO THE SYRACUSE BALER COMPANY, OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

BALING-PRESS.

1,121,449. Specification of Letters Patent. Patented Dec. 15, 1914.

Application filed June 13, 1914. Serial No. 844,843.

To all whom it may concern:

Be it known that I, FRANK J. BABCOCK, a citizen of the United States, residing at East Syracuse, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Baling-Presses, of which the following is a specification.

This invention relates to improvements in baling presses, designed for use particularly for compressing and binding waste-paper and the like.

The object of the invention is to provide a novel, simple and inexpensive press of the class, preferably made entirely of metal capable of being tightly closed for rendering it fireproof.

A further object is to improve the press-head or platen operating mechanism, and a further object is to provide novel and quick acting platen releasing and elevating means.

The various features and parts of the invention will be understood from the detailed description which follows, and by reference to the accompanying drawings, in which—

Figure 1 is a top plan view of the press in operation. Fig. 2 is a front elevation of the same. Fig. 3 is a left-side elevation. Fig. 4 is an enlarged detail view of the pressure lever and pawl-and-ratchet parts. Fig. 5 is a front view, with door open; showing a bale pressed and tied ready for removal. Fig. 6 is a central vertical section; showing the press-box empty; also showing the platen or press-head in elevated position.

In the drawings 2, 3 and 4 represent the back and integral sides of the press-box, which preferably consists of a single sheet of steel or iron (see Fig. 1).

5 represents the bottom also metal, which has its ends bent downwardly as at 6.

7, 8 and 9 and 10 represent narrow metal bands which extend horizontally around the three sides of the box to which they are secured by rivets or bolts 11. At the bottom the bolts 11 also pierce the flanges 6 of the bottom or floor 5. The band 7 preferably extends across the open front of the box. At the top, the front edges of the sides 3 and 4 are tied together and braced by an angle iron 12.

13 represents a sheet metal door which closes the open front of the box, and which is hinged to the side 4, by loops 14 formed on similar bars 15 secured to the door, and loops 16 carried by the bands 8, 9 and 10. The door 13 is held in closed position by a series of latch-bars 17, which are pivoted to the bars 15, as at 18. The latches 17 are connected for simultaneous operation by a vertical bar 19, pivoted at 20, and all of these parts are operated by a hand-lever 21 pivoted to the door at 21′, and is also pivoted to the bar 19. When the door is closed the latches engage strikers 22 carried by the side 3.

The waste paper or other material is compressed into suitable bales by means of a platen or press-head 23, which substantially conforms to the hollow interior of the box. The platen 23 is preferably made of steel, and is reinforced by a metal spider 24 which is secured to its top side. The platen is moved vertically by means of a rack-bar 25, the lower end of which is pivoted to the center of the spider 24 by a pin 26. As the platen is forced downwardly during the baling operation, it is temporarily locked and held for retaining the pressure, by a pair of pawls or dogs 27, which are pivoted at 28 to the top side of the platen, while their free ends engage vertically disposed ratchets 29 carried by the sides 3 and 4. The ratchets 29 are inserted through slots in the sides 3 and 4 and have lugs 29′ which engage the outer faces of said sides to which they are secured by rivets 30. The ratchet-bar 25 is held in upright position by a rocking-lever 31, which has a slotted opening 32, to loosely receive the said bar. Lever 31 is pivoted at its rear end to the forward end of a bracket 33 by a pin 34. The forward end of lever 31 extends to and over the door, and is perforated to receive the upper end of a link or rod 35.

36 represents a hand-lever, which is pivoted in a bracket 37′ carried by the door. The lever 36 is perforated near its pivoted end to receive the lower end of the link 35. The raising and lowering of the lever 36, pump-handle fashion, operates the lever 31 for depressing bar 25 and platen 23. The bar 25 passes loosely through the enlarged portion of lever 31 and is depressed by a pair of pawls 37 and 38 each having a counterweight 39 for holding the points of the pawl in the shrouded ratchet 40 arranged on the opposite sides of the bar 25. The pawls 37 and 38 are pivoted in brackets 41 by pins 42, the said brackets being piv-

oted to the opposite sides of the lever 31 by bolts 43, which are threaded into holes 44, as best seen in Fig. 4. A washer 45 is interposed between each bracket 41 and the lever 31. Figs. 1, 2, 3, 4 and 5 show the positions of the platen operating parts during or at the final pressing operation. Before any paper is placed in the box, several wires or binding cords as 47 should be disposed in the box, as shown in Fig. 6, with their rear ends passing out through holes 48 in the back 2. The other ends of the wires are inserted through holes 49 in the door, and then the door should be closed and latched. The wires 47 are then left in the positions described until the bale is compressed as in Fig. 5. The platen 23 is then released by unlatching the pawls 27 and elevated sufficiently to allow the rear ends of the wires to be withdrawn from the back 2 and passed over the top of the bale, where they are spaced by small channel-irons 50 affixed to the underside of the platen and these ends are also passed through the holes 49 in the door. The platen is again lowered by the handle 36 for recompressing the bale, and at the same time the slack of the wires is taken up by the operator pulling on the loose ends of the wires projecting through the door 13. When the compressing of the bale, as 46, is completed, the link 35 is disconnected from the levers 31 and 36, the lever 21 is depressed for raising the latches 17, and the door 13 is swung open, as in Fig. 5. The ends of the wires are then tied for binding the bale, and the latter may be removed from the box, after which new wires should be placed in position and the door closed. After the bale 26 is removed the dogs 27 and 37 and 38 are thrown back into the dotted position (see Figs. 4 and 5), and the platen is elevated for refilling the box. The platen is raised by a counterweight 51, which should about equal the weight of the platen 23, the rack-bar 25, and the lever 31. The weight 51 is suspended from the ends of a pair of ropes or chains 53, which pass over pulleys 54, the latter being pivoted to the top of a standard 55 which is secured to the back 2 by bolts 55′. The opposite ends of the ropes 53 connect to lugs 56 carried by the press-head 23, as best seen in Fig. 5. To raise the platen 23, the operator pulls downwardly on the ropes at the rear side of the box, which lifts the platen until it arrives at the position shown in Fig. 6. Here the platen remains until the box is refilled with material for forming another bale. The operator then takes hold of the platen and pulls it downwardly and enters it into the open top to the box. He then replaces the link 35, as shown in Figs. 1, 2 and 3, after which the pressing operations are repeated, as described.

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

1. A baling press, comprising a box having a door at one side, a platen for pressing material deposited in said box, a hand lever carried by said door, a rocking-lever pivoted above the box, a rod for adjustably connecting said levers, a ratchet bar carried by said platen and guided by said rocking-lever, and pawls carried by said rocking-lever for depressing said platen at each downward stroke of said levers.

2. A baling press, comprising a box having a door at one side, a platen for pressing material deposited in said box, a hand lever carried by said door, a rocking lever pivoted above the box, a rod for adjustably connecting said levers, a ratchet bar carried by said platen and guided by said rocking lever, pawls carried by said rocking lever for depressing said platen at each downward stroke of said hand lever, and a counterweight connected with said platen adapted for elevating said platen and said ratchet-bar, whenever said levers are disconnected.

3. A baling-press, including a press-box having an open top and having a door for closing one open side, a platen in said box, a ratchet-bar connected to said platen, a rocking lever pivoted above said box for supporting and guiding said bar, a bracket for supporting said lever, a hand-lever pivoted to said door, a rod detachably connecting the free end of said rocking lever with the pivoted end of said hand-lever, and pawls carried by said rocking lever and engaging the teeth of said bar for forcing said platen downwardly during the pressing operation, and means for locking the platen for maintaining the pressure.

4. A baling press, including a press-box having an open top and having a door for closing one open side, a platen in said box, a ratchet-bar connected to said platen, a rocking lever pivoted above said box for supporting and guiding said bar, a bracket for supporting said lever, a hand lever pivoted to said door, a rod detachably connecting the free end of said rocking-lever with the pivoted end of said hand-lever, pawls carried by said rocking lever and engaging the teeth of said bar for forcing said platen downwardly during the pressing operation, and a counterweight connected to said platen for elevating and holding said platen above the open top of said box when said levers are disconnected.

5. A baling-press comprising a press-box, open at its top and having a permanent bottom and a door hinged at one side, a platen vertically movable in said box, a rack-bar pivoted at its lower end to said platen its upper end projecting above the top of said box, a rocking-lever pivotally supported

above said box having a slot to receive said rack-bar for supporting and guiding said bar, pawls carried by said rocking-lever engaging the teeth of said rack-bar, a hand-lever pivoted to the said door below the top of the said box, and a link for adjustably connecting said rocking-lever to said hand-lever.

6. A baling press, comprising a press-box having an open top, and one open side, a door for closing the open side, a hand-lever pivoted to said door, a platen vertically movable in said box, a ratchet bar pivoted to the center of said platen, a rocking lever disposed centrally above the box, a bracket to which one end of said lever is pivoted, said lever having a slot to receive and guide said bar, a link for connecting said rocking lever to said hand-lever during the pressing operations, said link removable for allowing the platen and said bar to be elevated for refilling the box, and pawls carried by said rocking lever engaging the teeth of said bar for forcing the platen downwardly during the baling operation.

7. A baling press including a press-box, having an open top and a rigid bottom, a door hinged to one side of said box extending from the top to the bottom thereof, a vertically movable platen in said box, means carried by said platen adapted to engage parts carried by the walls of said box for locking said platen in different positions during the pressing operations, a ratchet-bar pivoted to said platen and extending above the top of said box, a guide for said bar comprising a slotted rocking lever extending across the open end of said box, a bracket for pivotally supporting one end of said lever, a hand-lever pivoted to the outside of said door beneath said rocking lever, a rod connecting said levers, and a pair of pawls carried by said rocking lever and engaging the teeth of said ratchet-bar for forcing said platen downwardly at each downward stroke of said hand-lever.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK J. BABCOCK.

Witnesses:

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E. C. WRIGHT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."