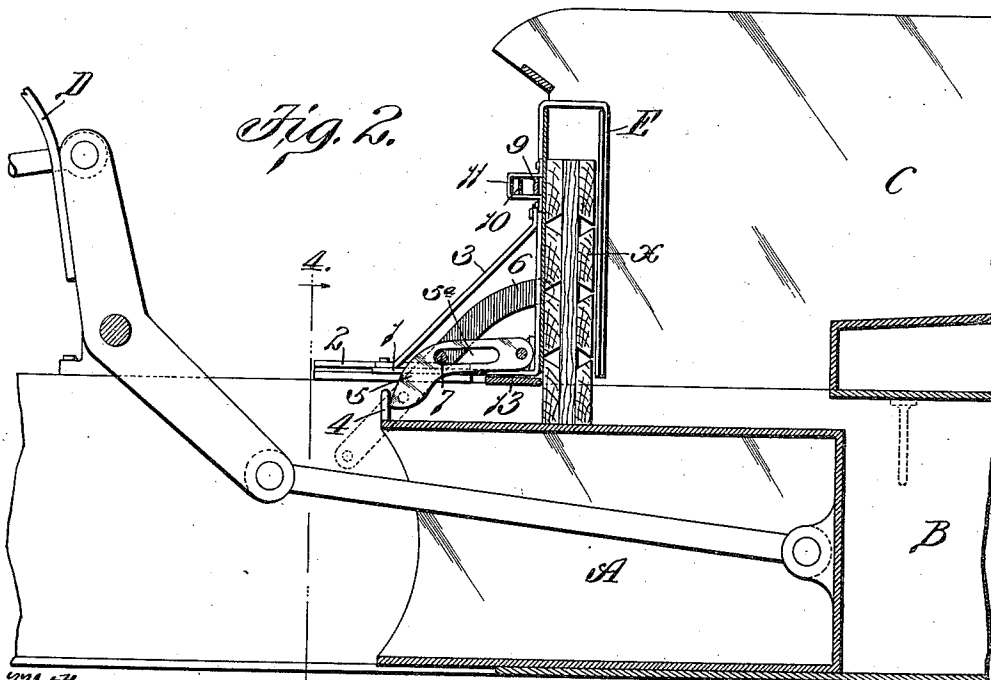
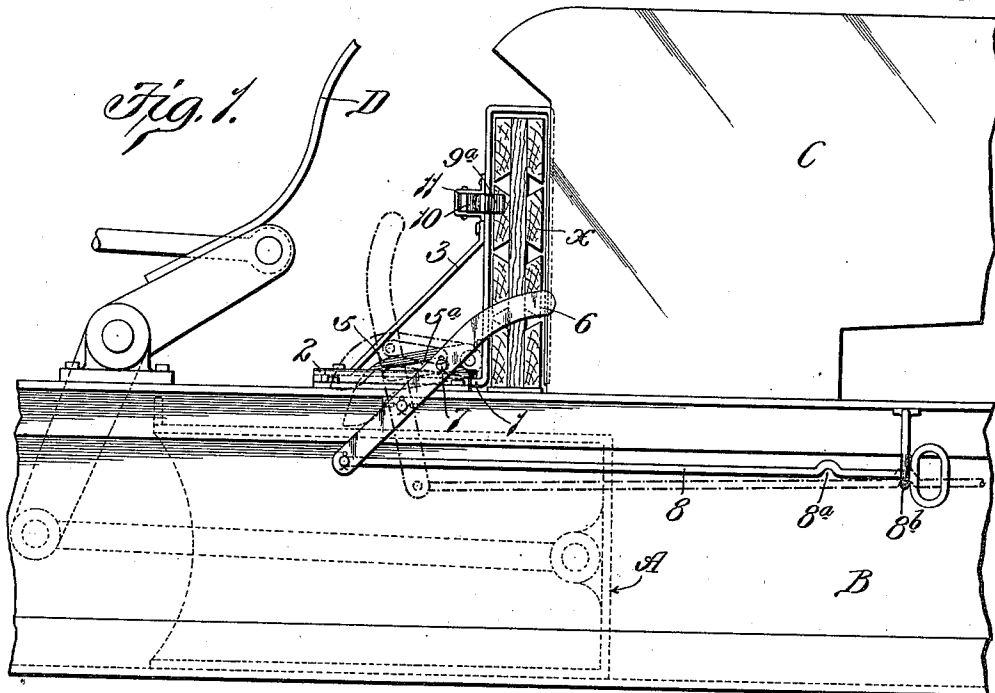


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 BLOCK DROPPING MECHANISM FOR BALING PRESSES.
 APPLICATION FILED JUNE 24, 1911.

1,013,628.

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2 SHEETS—SHEET 1.



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UNITED STATES PATENT OFFICE.

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BLOCK-DROPPING MECHANISM FOR BALING-PRESSES.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LUTHER TRABUE, a citizen of the United States, residing at Girard, Illinois, have invented a certain new and useful Improvement in Block-Dropping Mechanism for Baling-Presses, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to baling presses, and particularly to the block-dropping mechanisms used in baling presses for arranging the division blocks in operative position in the baling chamber.

One object of my invention is to provide a block-dropping mechanism that comprises means for automatically moving a block-holder into operative position with relation to the baling chamber.

Another object is to provide a mechanism of the character described which is so designed that the block does not have to be inserted in the block-holder at a certain period in the cycle of operations of the plunger or compressing member of the baling press.

Another object is to provide a block-dropping mechanism of the character described which is so designed that the operator cannot insert a block in the block-holder when the mechanism which causes the block-holder to be moved into delivering position is in operative position.

Another object is to provide a block-dropping mechanism which is so designed that a division block cannot be inserted in the block-holder in such a manner that the block will become jammed during the operation of introducing it into the baling chamber. And still another object is to provide a block-dropping mechanism of novel construction which permits a division block to be inserted in the block-holder from either side of the baling press.

Other objects and desirable features of my invention will be hereinafter pointed out.

Figure 1 is a side elevational view of a baling press provided with a block-dropping mechanism constructed in accordance with my invention showing the block-holder arranged in receiving position and provided with a division block; Fig. 2 is a vertical longitudinal sectional view showing the block-holder in delivering position; Fig. 3 is

a similar view showing the plunger of the press retracted and the division block arranged in operative position in the baling chamber; Fig. 4 is a vertical sectional view taken on the line 4—4 of Fig. 2; and Fig. 5 is a horizontal sectional view taken on the line 5—5 of Fig. 4.

Referring to the drawings which illustrate the preferred form of my invention, A designates a plunger or compressing member of a baling press which reciprocates in a baling chamber B, and C designates a hopper arranged over the baling chamber so as to receive the hay or material which is forced into the baling chamber by the beater D. A block-holder E which is arranged above the guideway in which the plunger A travels, forms part of the front wall of the hopper C, and at a certain period in the cycle of operations of the baling press said block-holder is automatically moved from its receiving position, shown in Fig. 1, into delivering position, as shown in Fig. 2, so that the division block *x* therein can drop downwardly into the baling chamber on the return stroke of the plunger A, as shown in Fig. 3. The block-holder E may be formed in various ways without departing from the spirit of my invention, but in the construction herein shown which illustrates the preferred form of my invention, the block-holder E consists of a substantially inverted channel-shaped member open at both ends and provided with horizontally disposed portions 1 which travel in guides or tracks 2 arranged adjacent the upper edge of the passageway in which the plunger A travels, the horizontal portions 1 of said block-holder being reinforced and strengthened by means of brackets 3 connected to same and to the rear vertical wall of the block-holder.

The means which automatically moves the block-holder from receiving position, shown in Fig. 1, into delivering position, shown in Figs. 2 and 3, consists of devices 4 on the plunger A which cooperate with devices 5 on the block-holder during the forward stroke of the plunger. I prefer to provide the plunger A with a pair of upwardly projecting devices 4 arranged adjacent the rear end of same, and I also provide the block-holder E with a pair of pivotally mounted devices or dogs 5 that are adapted to be moved into and out of operative position with relation to the projections 4 on

the plunger A, said dogs 5 being arranged adjacent the lower end of the block-holder E between the horizontal portions 1 of said block-holder.

5 The means herein shown for moving the dogs or pivotally mounted devices 5 on the block-holder into and out of operative position with relation to the projections 4 on the plunger, consists of a pair of pivotally
10 mounted levers 6 which carry a rod 7 that passes through elongated slots 5^a in the dogs 5, and means, such, for example, as a rod 8, connected to one of said levers 7 for rocking them on their pivots so as to elevate the
15 dogs 5 or move them into an inoperative position, as shown in broken lines in Fig. 1, or move said dogs in the opposite direction into operative position, as shown in full lines in Figs. 2 and 3. Any suitable means
20 may be employed for locking the rod 8 so as to hold the dogs 5 in an inoperative position, the means herein shown consisting of a notch or recess 8^a in the rod 8 that engages a stationary member 8^b when the rod is
25 pulled forwardly, as shown in broken lines in Fig. 1. The levers 7 are preferably made long enough so that they will extend across the open ends of the block-holder E when the dogs 5 are in operative position and the
30 block-holder is in receiving position so as to prevent the operator from inserting a division block α in the block-holder at this time, namely, when the mechanism which causes the block-holder to be shifted into
35 its delivering position is operative or arranged in the path of travel of the projections 4 on the plunger.

The block-holder is provided with means for preventing a division block from being
40 positioned improperly in said holder or arranged in such a position that it will become jammed during the operation of moving the holder into delivering position, the means herein shown for accomplishing this
45 consisting of a bar 9 arranged transversely of the block-holder and provided with forwardly projecting portions or extensions 9^a and a device, preferably a leaf spring 10, which exerts pressure on said bar and thus
50 holds the extensions 9^a thereon in such a position that they act as stops which limit the movement of the block during the operation of inserting it in the holder. The bar or
55 stop member 9 may be mounted on the block-holder in any suitable manner, and any suitable device can be used for holding said stop member in operative position. In the embodiment of my invention herein shown, the bar 9 is mounted in a bracket 11 connected to
60 the outer vertical wall of the block-holder, and the spring 10, which exerts pressure on said bar, is connected to a supporting device 12 which is pivotally connected to the bracket 11 in such a manner that the spring
65 10 can turn on a vertical axis and thus per-

mit one end of the stop bar 9 to yield slightly during the operation of inserting a division block in the block-holder.

Whenever the operator desires to insert
70 a block in the block-holder he moves the rod 8 forwardly so as to move the lever 6 into an inoperative position with relation to the block-holder and also raise the dogs 5, and after the block has been inserted in the block-holder the rod 8 is released so that
75 the dogs 5 will move downwardly into the path of the projections 4 on the plunger A. On the succeeding forward stroke of the plunger the projections 4 thereon engage the dogs 5 on the block-holder and thus automatically
80 move the block-holder forwardly into delivering position, as shown in Fig. 2. As soon as the block moves off of the horizontally disposed supporting member 13 on which it rested when the block-holder was
85 in receiving position, said block will drop downwardly onto the plunger A, as shown in Fig. 2, and on the return stroke of said plunger the division block α will drop downwardly into operative position in the baling
90 chamber B, as shown in Fig. 3, as soon as the plunger A passes from under said block. The block-holder and the stop device 9 which coöperates with same, are so constructed that the division block can be in-
95 serted in the holder from either side of the baling press, and as said stop device limits the lateral movement of the division block it prevents it from being arranged in the holder improperly or in such a position that
100 it will jam against the side walls of the hopper D when the block-holder is moved into delivering position.

One advantage of a block-dropping mechanism of the construction above-de-
105 scribed is that the operator does not have to watch the baling press carefully so as to insert the division block at a certain period in the operation of the plunger or move the block-holder manually into delivering position for said mechanism is so designed that
110 the block can be inserted in the block-holder at any time when said holder is in receiving position and left therein until it is desired to introduce the block into the baling
115 chamber, at which time the operator releases the rod 8 so as to set the dogs 5 in operative position to be engaged by the projections 4 on the plunger on the succeeding forward stroke of the plunger. Another
120 advantage of such a block-dropping mechanism is that the division block cannot be inserted therein at a time when the mechanism which causes the block-holder to be moved into delivering position is operative, this
125 being due to the fact that the levers 6 are so proportioned that they extend across the open ends of the block-holder when the dogs 5 are in operative position. And still
130 another desirable feature of my improved

block-dropping mechanism is that the blocks can be inserted in the holder from either side of the press and without liability of inserting them too far or arranging them in such a position that they will jam during the operation of introducing them into the baling chamber. The outward pressure which the material in the hopper C exerts on the block-holder tends to move said block-holder back to receiving position, but in case said block-holder has not been restored completely to receiving position at the time it is desired to introduce a block into same, the operation of pulling the rod 8 forwardly to raise the dogs 5 causes the block-holder to be restored completely or moved clear back to receiving position. The rod 8 is detachably connected to the lever 6 so that said rod can be arranged on either side of the press, both sides of which are provided with devices 8^b for locking the rod so as to hold the dogs 5 in an inoperative position.

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

1. In a baling press, a reciprocating block-holder arranged in a vertical position and forming one wall of the hopper of the press, a reciprocating plunger or compressing member, a movable device carried by said block-holder which is adapted to be engaged on the forward stroke of the plunger so as to move said block-holder into delivering position, and means adapted to be actuated manually by the operator for moving said device into operative position with relation to the plunger and also into an inoperative position with relation to said plunger.

2. In a baling press, a reciprocating plunger or compressing member, a reciprocating block-holder arranged adjacent said plunger and forming one of the vertical walls of the hopper of the press, a pivotally mounted device on said block-holder which is adapted to be engaged by a projection on said plunger and moved into delivering position, and means adapted to be moved manually in both directions for moving said device into and out of the path of said projection.

3. In a baling press, a block-holder, a reciprocating member, a device on said block-holder which is adapted to be engaged by said reciprocating member so as to move the block-holder into delivering position, and means for preventing a block from being inserted in said holder when said device is set in operative position.

4. In a baling press, a reciprocating member, a block-holder, a movable device on said holder which is adapted to be engaged by said reciprocating member, a lever operatively connected to said device for moving it into and out of operative position, a rod connected to said lever and adapted to be moved manually by the operator in both

directions, and means for locking said rod so as to hold said device in either an operative or inoperative position.

5. In a baling press, a reciprocating member, a block-holder, a movable device on said holder which is adapted to be engaged by said reciprocating member, a lever operatively connected to said device for moving it into and out of operative position, and means for actuating said lever, said lever having a portion which prevents a block from being inserted in the holder when said device is in an operative position.

6. In a baling press, a plunger or compressing member, a block-holder, pivotally mounted dogs on said block-holder which cooperate with projections on said plunger, a rod that passes through elongated slots in said dogs, and manually-operated levers which carry said rod.

7. In a baling press, a reciprocating plunger or compressing member, a reciprocating block-holder arranged above said compressing member and provided with horizontal portions which travel in stationary guide-ways, pivotally mounted devices on said block-holder, projections on said plunger which engage said devices and move said block-holder into delivering position, levers pivotally connected to stationary parts of the press, means carried by said levers for moving said devices into and out of operative relation with respect to the projections on said plungers, and means for moving said levers.

8. In a baling press, a block-holder having open ends, a stop device for limiting the lateral movement of a block that is inserted endwise into said holder, and yielding means which exerts pressure on said stop device.

9. In a baling press, a block-holder provided with a side opening through which a block can be inserted in said member, and a yielding stop device cooperating with said holder for limiting the lateral movement of the block that is inserted in same.

10. In a baling press, a block-holder having open sides, a transversely arranged stop member provided with projections which limit the lateral movement of a block that is inserted in said holder, and yielding means cooperating with said member for holding said projections in operative position.

11. In a baling press, a block-holder which is open at both sides, a transversely arranged member on said holder provided with projections which limit the lateral movement of a block that is inserted in said holder, and a pivotally mounted spring for exerting pressure on said member.

12. In a baling press, a reciprocating plunger or compressing member, a reciprocating block-holder arranged above said plunger and adapted to be moved into de-

- livering position, a yieldingly operated stop member cooperating with said holder for limiting the lateral movement of a division block that is inserted in same, cooperating
5 devices on said holder and plunger for causing the holder to be moved into delivering position on the forward stroke of the plunger, and means governed by the operator for controlling said devices.
- 10 13. In a baling press, a horizontally reciprocating block-holder, a movable compressing member, a movable device on said block-holder which is adapted to be engaged by said compressing member so as to cause
the block-holder to be moved into delivering
15 position, manually operated means for moving said device into and out of operative position with relation to said compressing member, and means for locking said device
20 in an inoperative position.
- In testimony whereof I hereunto affix my signature in the presence of two witnesses, this sixteenth day of June 1911.
- LUTHER TRABUE.
- Witnesses:
WELLS L. CHURCH,
GEORGE BAKEWELL.

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