No. 798,679. PATENTED SEPT. 5, 1905.

W. T. HULSCHER.

BALING PRESS.

APPLICATION FILED DEC. 18, 1903.

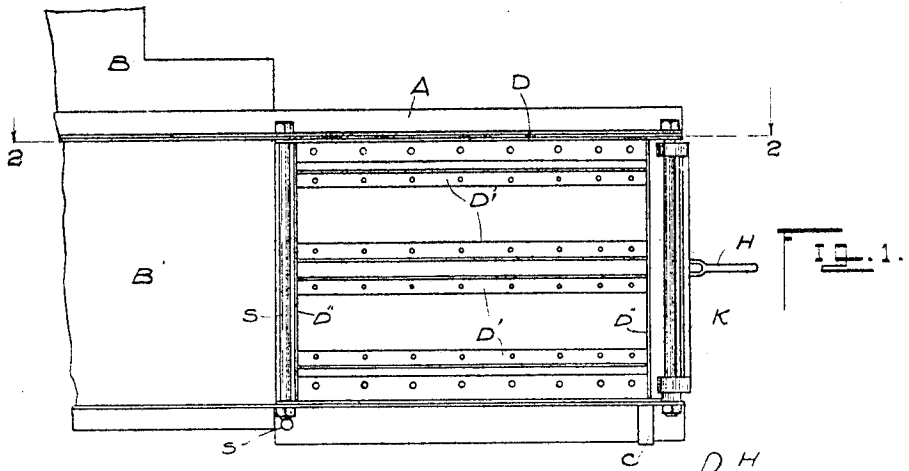


FIG. 1.

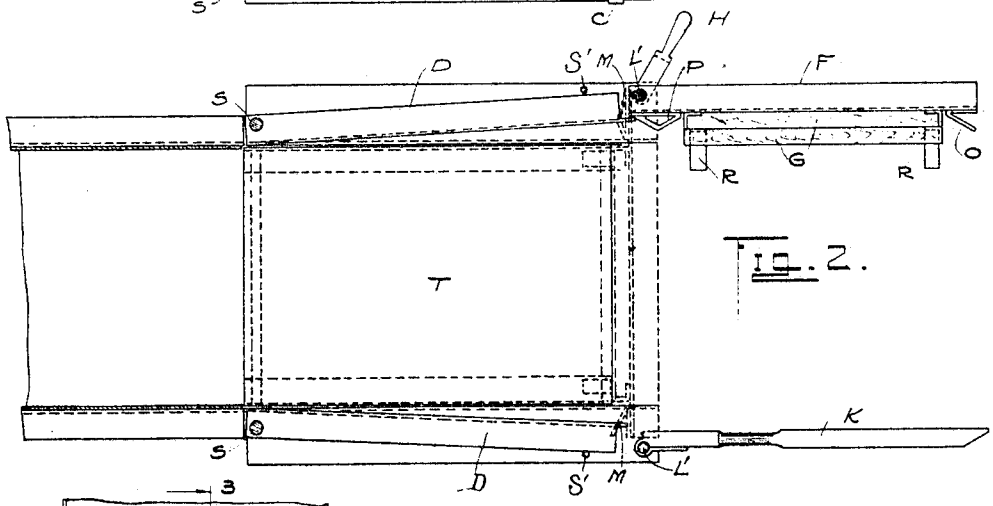


FIG. 2.

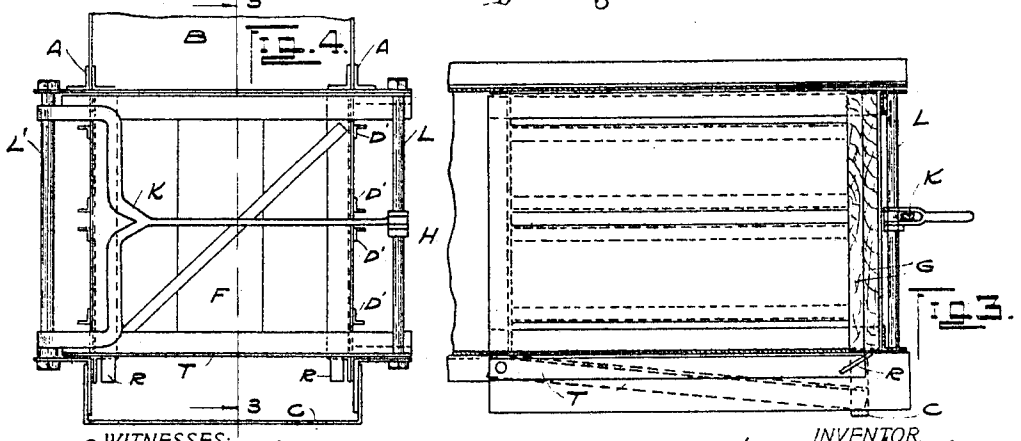


FIG. 4.

FIG. 3.

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BALING-PRESS.

No. 798,679. Specification of Letters Patent. Patented Sept. 5, 1905.

Application filed December 18, 1903. Serial No. 185,707.

To all whom it may concern:

Be it known that I, WILLIAM T. HULSCHER, a citizen of the United States, residing at the city of Battlecreek, county of Calhoun, State of Michigan, 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. It relates particularly to improvements in baling-chambers for baling-presses.

The main object of this invention is to provide an improved baling-chamber for baling-presses in which the completed bale is automatically ejected when the door of the chamber is opened or is freed, so that it may be readily withdrawn.

Further objects and objects relating to structural details will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is fully illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a detail side elevation view of a structure embodying the features of my invention. Fig. 2 is a detail horizontal sectional view taken on a line corresponding to line 2 2 of Fig. 1, the door of the baling-chamber being shown open and the walls in their distended position, the door and walls being indicated in their closed position by dotted lines. Fig. 3 is a detail longitudinal sectional view taken on a line corresponding to line 3 3 of Fig. 4. Fig. 4 is a rear end elevation view looking from the right of Figs. 1 and 3.

In the drawings the sectional views are taken looking in the direction of the little arrows at the ends of the section-lines, and similar letters of reference refer to similar parts throughout the several views.

Referring to the drawings, the frame A of my improved baling-press is preferably made of angle-iron. B represents the hopper. The forward end or feed portion B′ of the hopper is provided with suitable walls, which are rigidly secured to the frame. The portion of the chamber in which the bale is formed is provided with hinged side walls D and hinged bottom wall T. The side walls and also the bottom are pivoted upon bolts S, which are passed through the frame. (See Figs. 1 and 2.) A pair of stops S′ is provided for the side walls to limit their outward movement. A cross-piece C is provided toward the rear of the baling-chamber to support the bottom when in its open position.

The walls of my improved baling-chamber are preferably made of sheet metal. The side walls D are made up of longitudinal strips D′ and end pieces D″, of angle-iron, to which the sheet-metal lining is secured. The walls of my improved baling-chamber are thus very rigid and durable and at the same time comparatively inexpensive.

The door F is made up of an angle-iron frame on which the strips G are secured. The door F is hinged on a pivot-bolt or rod L′, similar to the pivot-bolts or rods S for the side walls.

Blocks or cams P and O, having inclined faces, which are adapted to engage the projecting ends M of the side walls and force them into their closed or operative position as the door is closed, are carried on the door. (See Fig. 2.)

The cam P is arranged on the hinged side of the door and is provided with a double face, as it is necessary that the same engage the side walls, substantially as shown, as the door begins to close. Blocks or cams R, having inclined faces, which are adapted to engage and lift the bottom T to its closed position when the door is closed, are also carried by the door. Thus arranged, when the door is closed the walls are all returned to their closed or operative positions and are retained there by the door.

A lever K, adapted to engage the door after the same is partially closed and force the same to its closed position, is provided. This lever is pivoted on the rod or bolt L′ and is also adapted to retain the door in its closed position. A catch H, pivoted on the door-pivot L, is provided to engage the end of the lever. The end of the lever K is beveled, so that as the catch H is forced upon the same it has a cam-like action and forces the lever inward.

With the parts thus arranged after a bale is completed the catch H is withdrawn from the lever K, which allows the door to swing

open, thereby releasing the walls, the rear portions of which swing outward, completely releasing the bale. The bottom T, dropping down against the cross-piece C, causes the bale to slide from the chamber. Under ordinary circumstances the bale is thus automatically ejected. However, should the same not move automatically from the chamber it is freed, so that but little force is required to start the same.

My improved baling-press is very economical to produce and is also very easy to operate and also may be operated very quickly. Although comparatively light, it is strong and durable, the parts not being subjected to any unusual strain or wear.

I have illustrated and described my improved baling-chamber for baling-presses in detail in the form preferred by me. I am aware, however, that it is capable of considerable structural variation without departing from my invention.

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

1. In a baling-chamber, the combination of a suitable frame; side walls and a bottom for said chamber, pivoted to said frame at their forward ends; suitable stops for said side walls and bottom; an end door hinged to said frame; blocks or cams having inclined faces carried by said door adapted to engage said side walls and bottom to return them to and retain them in their operative position when the door is closed, for the purpose specified.

2. In a baling-chamber, the combination of a suitable frame; side walls and a bottom for said chamber, pivoted to said frame at their forward ends; an end door hinged to said frame; and blocks or cams, having inclined faces, carried by said door adapted to engage said side walls and bottom to return them to and retain them in their operative position when the door is closed, for the purpose specified.

3. In a baling-chamber, the combination of a suitable frame; walls hinged to said frame at their forward ends; an end door pivoted to said frame; and blocks or cams on said door adapted to engage said walls to return them to their operative position when the door is closed, for the purpose specified.

4. In a baling-chamber, the combination of a suitable frame; walls hinged to said frame at their forward ends; and an end door adapted to engage said walls to return them to their operative position when the door is closed, for the purpose specified.

5. In a baling-chamber, the combination of suitable walls; a bottom hinged at its forward end; and an end door adapted to engage said bottom and return it to its closed position when the door is closed, for the purpose specified.

6. A baling-chamber having hinged walls, and an end door, and devices on said door adapted to engage both the said walls and move them inward, substantially as described.

7. A baling-chamber having hinged sides and bottom, and a swinging end door, and devices on said door adapted to engage the outer ends of both said sides and bottom and move the same inward, substantially as described.

8. In a baling-chamber, the combination of hinged side walls, an end door provided with devices adapted to engage the outer ends of both the side walls and move the latter inward to contract the chamber, and means for locking the door in closed position.

9. In a baling-chamber, the combination of the hinged side walls, an end door hinged at one side, and provided with devices adapted to engage the outer ends of both the side walls and move the latter inward to contract the chamber, and means for locking the door in closed position.

10. In a baling-chamber, the combination of the hinged side walls, an end door having cams on its sides adapted to respectively engage the outer free ends of the sides of the chamber and move the same inward, and hold the same during the baling operation, substantially as described.

11. In a baling-chamber, the combination of hinged side walls and hinged bottom, a swinging end door having cams on its sides and bottom edges adapted to respectively engage the outer free ends of the sides and bottom of the chamber and move the same inward, and means for fastening said door, substantially as described.

12. The herein-described baling-chamber, comprising laterally-swinging side walls, a vertically-swinging bottom, and means to arrest the outward movement of said walls and bottom; with an end door hinged at one side, cam devices on the opposite sides of said door adapted to engage the side walls and move them inward, and cam devices on the lower edge of the door adapted to engage the bottom and lift it as the door is closed, substantially as described.

13. The herein-described baling-chamber, comprising opposite laterally-swinging side walls, hinged at their inner ends, a vertically-swinging bottom hinged at its inner end, and means to arrest the outward movements of said walls and bottom; and an end door hinged at one side adjacent to one end wall, devices on the opposite sides of said door adapted to engage the side walls and move them inward as the door is closed, and devices on the lower edge of the door adapted to engage the bottom and lift it as the door is closed, and a swinging yoke for locking the door, substantially as described.

14. In a baling-chamber, the combination of moving walls and an end door; with devices on said door exterior to the walls, adapted to

engage the latter and move them into closed position, substantially as described.

15. The combination of moving walls and an end door; with cams on said door exterior to the walls, adapted to engage and move the walls into closed position as the door is closed, and means for locking the door when closed.

16. In a baling-chamber the combination of moving side walls and bottom, and an end door; with devices adjacent to the edges of the door and exterior to the walls and bottom, adapted to engage the walls and bottom and close them when the door is closed.

17. In a baling-chamber, the combination of moving side walls and bottom, and an end door; with cams on the door exterior to the walls and bottom, and adapted to engage the walls and bottom and close them as the door is closed, and means for locking the door when closed.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

WILLIAM T. HULSCHER. [L. S.]

Witnesses:

WALTER H. NORTH,

MAUDE BROWNING.