(No Model.)

2 Sheets—Sheet 1.

H. R. JERNIGAN.

BALING PRESS.

No. 521,118. Patented June 5, 1894.

Fig. 1.

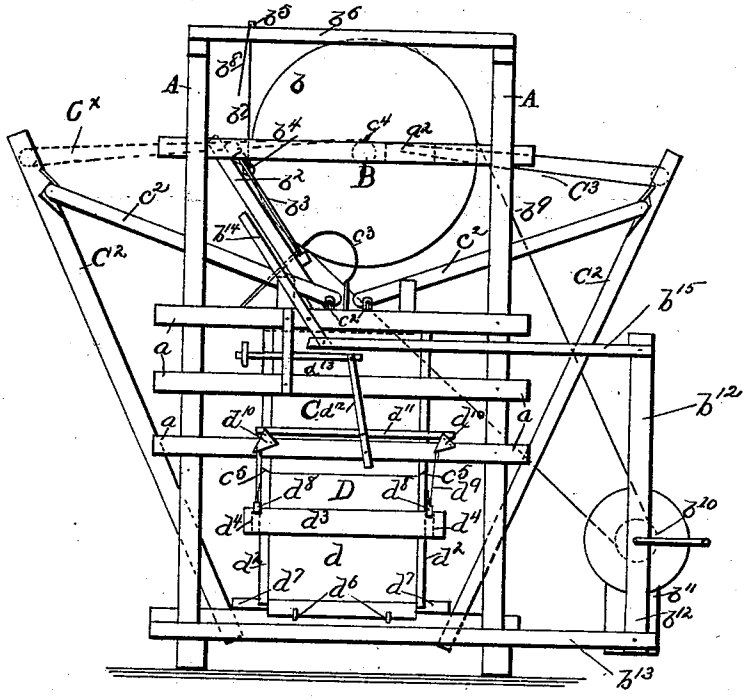
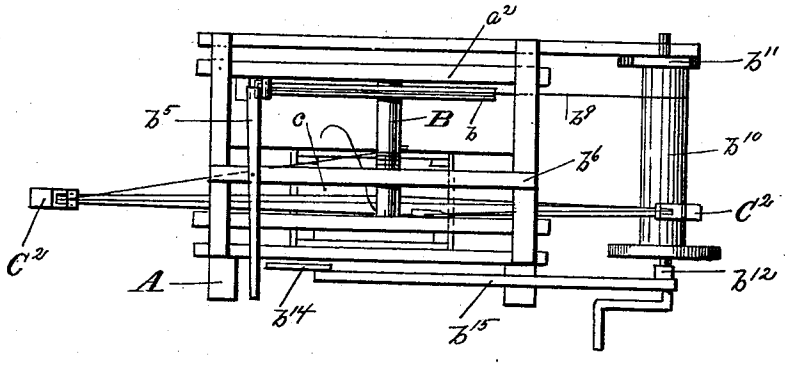


Fig. 2.



WITNESSES

Thos. J. Routt, Jr.

Frank B. Wetherill

INVENTOR

Henry R. Jernigan,

by R. S. Dyer & Forth,

his Attorney

THE NATIONAL LITHOGRAPHING COMPANY.
WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

H. R. JERNIGAN.

BALING PRESS.

No. 521,118. Patented June 5, 1894.

Fig. 3.

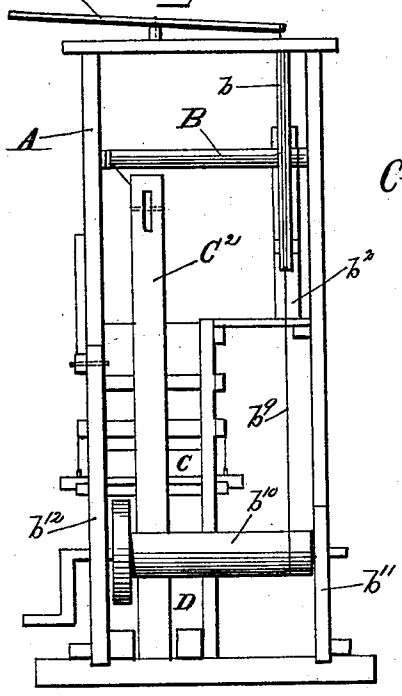


Fig. 4.

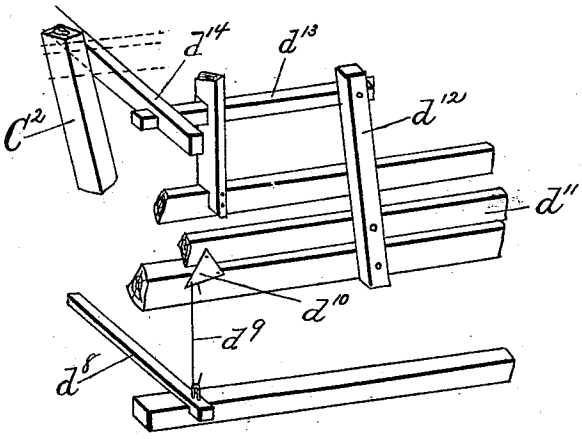


Fig. 5.

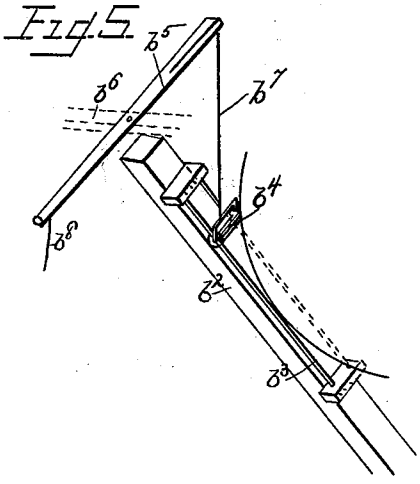
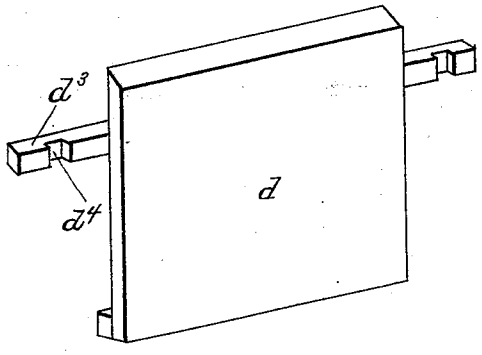


Fig. 6.



WITNESSES
Thos. J. Rait, Jr.
Frank K. Hitchcock.

INVENTOR
Henry R. Jernigan,
by R. S. Newcomb,
his Attorney

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HENRY R. JERNIGAN, OF CHARLTON, ALABAMA, ASSIGNOR OF ONE-HALF TO JESSE H. WALL, OF SAME PLACE.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 521,118, dated June 5, 1894.

Application filed January 6, 1894. Serial No. 495,979. (No model.)

To all whom it may concern:

Be it known that I, HENRY R. JERNIGAN, a citizen of the United States, residing at Charlton, in the county of Dale and State of Alabama, 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.

This invention relates to improvements in baling presses, and has special reference to the class of presses employed in baling cotton.

The object of the invention is to produce a construction whereby the size of such presses will be reduced, rendering the same more compact; furthermore, the object of the invention is to produce a baling press of such construction as to adapt it for use by a single operator, without necessitating his shifting his position to any considerable extent; furthermore, the object of this invention is to produce a baling press of the kind referred to, wherein the sides of the baling chamber shall automatically be released from the retaining devices at any desired point in the operation of compressing.

With these objects in view, the invention resides in the novel constructions and arrangement of parts hereinafter described and particularly pointed out in the claims.

The invention is illustrated in the accompanying drawings, in which—

Figure 1—is a side elevation of the device. Fig. 2—is a plan view. Fig. 3—is an end elevation. Fig. 4—is a detail view of the device, whereby the sides of the baling chamber are released. Fig. 5—is a detail view of the brake for the wheel on the main shaft of the press; and Fig. 6—is a detail view of one of the sides of the baling chamber.

The frame of the press is made up essentially of uprights A, connected by suitable cross-pieces a, and longitudinal braces a^2 of which any desired number may be used to give the necessary strength and solidity to the structure.

Mounted in opposite braces a^2 is a shaft, B, having mounted thereon a drive-wheel, b, preferably provided with a circumferential groove, designed to receive a drive-rope or the like, whereby motion is imparted to the shaft. Arranged contiguous to the drive-wheel b is an inclined bar, b^2, upon which are arranged guides b^3, which retain in place and direct a roller, b^4. The bar b^2 is so arranged in reference to the drive wheel, that its inner end extends obliquely beneath the drive wheel b, to a point nearly beneath the center thereof, and the bar is placed a distance from the drive-wheel too short to permit the passage between the drive-wheel and the bar of the roller, b^4. Thus, it will be seen that the turning of the drive wheel b in one direction may be prevented by allowing the roller to come between the inclined bar and the drive wheel, where it will be held by frictional contact. When the roller is allowed to assume this position, it will furnish an effective brake. To raise the roller free from the drive-wheel b, a lever b^5, mounted in a cross-piece b^6, in the top of the frame of the press, is provided. This lever b^5 has at one end a rope or chain b^7 connected with the roller, and at the other end is provided with a rope b^8 for convenience in use by the operator. Power is imparted to the drive-wheel b through a driving-belt b^9, which is preferably a wire rope, though any suitable belt may be used. The driving-belt b^9 passes over the grooved periphery of the drive wheel b, and also over a shaft b^{10}, mounted adjacent to the frame of the press and receiving motion either directly or through suitable gearing from an engine or the like. The shaft is mounted is suitable uprights b^{11}, b^{12}, which are connected to projections b^{13}, from the base of the press. The upright b^{11} is rigidly secured to one extension, while the upright b^{12} is pivotally connected at its lower end to the other extension b^{13}. The upright b^{12} is capable of moving back and forth, toward and away from the frame of the press, and carries with it the shaft b^{10}, in order to impose greater or less friction on the driving-belt, and, therefore, to start and stop the movement of the drive-wheel b. To regulate the movement of the upright b^{12}, a lever, b^{14}, is connected to a cross-piece of the frame of the machine, at a point adjacent to the baling box and near the point where the rope, depending from the lever b^5, is located. The lever b^{14} is connected to the upright b^{12} by a

connecting link b^{15}, so that by moving the lever b^{14} back and forth on its pivot, the upright b^{12}, and consequently the shaft b^{10}, are moved toward and away from the frame of the press as desired, to relieve the friction of the driving-belt b^9 on the shaft b^{10}, or to impose it thereon.

The usual baling box or hopper C is suitably supported upon the frame beneath the shaft B, and mounted so as to slide up and down within this box is a follower-block c designed to be operated by the baling-levers C^2, C^2. These baling-levers are mounted in the frame of the press at points below the baling-box, and are provided at their upper ends with sheaves or pulleys, to receive ropes or belts, whereby the levers are drawn inward. Connections between the baling levers and the follower-block are furnished by the links c^2, which are designed to be detachably connected with the block. The baling-block is provided with a rope or chain c^3, and the shaft B is provided with a hook c^4, which is designed to receive the rope or chain c^3, and furnish means of attaching it to the shaft, so that by winding the rope or chain c^3 on the shaft, the follower-block may be raised from the baling box, to remove it when it is desired to introduce the cotton to be compressed. A rope $C^\times$ is permanently connected at one end to a portion of the frame of the press adjacent to the shaft B, and from this point it extends over one of the sheaves on the top of one of the baling-levers, thence, over the sheaves of the other baling lever, and, thence, to the shaft B, to which it is attached by the hook or pin c^4. From the arrangement, it will be seen that when the follower-block is attached to the baling-levers by the links, turning of the shaft B will result in drawing the levers together, forcing the links, and, consequently, the follower-block, downward in the baling box.

Arranged below the baling-box is a baling-chamber D, composed of movable sides d and ends d^2. Both the sides and ends are provided at their upper ends with beveled edges, designed to engage with the corresponding beveled lower edges c^5, of the baling box. Each side d d of the baling-chamber is provided with a projecting bar d^3, having therein, notches d^4, designed to receive the bars d^8 of the end pieces. The sides of the baling-chamber are supported at their lower ends by hooks d^6, projecting from the lower portion of the frame of the press, and the ends d^2 are supported at their lower ends upon a board d^7, provided with suitable grooves for the reception of the ends. The sides are prevented from spreading outward at their upper ends by suspended bars d^8, provided with enlarged ends, designed to engage the end pieces of the chamber. The bars d^3 are supported by suitable links d^9, connected at their upper ends with one extremity of a bell-crank-lever d^{10}, suitably connected to the frame of the press. At the other extremity of the bell crank lever, are rods d^{11}, which are connected with levers d^{12}, these levers being pivotally connected at their upper ends with rods d^{13}, which are joined to a bar d^{14}, placed at the end of the baling box, in the path of the movement of the baling-levers. The bar d^{14} is so connected to the ends of the rods d^{13} as to permit of the adjustment of the bar toward and away from the baling box, and thus to regulate the distance which the baling levers move inward before coming in contact with the bar.

From the arrangement described it will be clear that the device may be so arranged as automatically to relieve the sides of the baling chamber from the retaining bars, at any suitable point of the inward movement of the baling-levers. When the baling lever comes in contact with the bar d^{14}, it will, through the rod d^{13}, lever d^{12}, rods, d^{11}, bell-crank-lever d^{10}, and connections d^9, raise the rods d^8 from the sides of the baling-chamber and allow the same to fall or to be easily removed.

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

1. The combination with a rotatable wheel, of inclined guides rigidly fixed adjacent to the periphery of the wheel, a friction-roller free to move in the guides and adapted to fall by its own weight into engagement with the wheel, and a lever connected with the roller, whereby it may be drawn away from the wheel, substantially as described.

2. The combination in a baling press, of a main shaft, a drive wheel mounted on the shaft, a baling box arranged beneath the shaft, baling levers mounted adjacent to the box and connected with a follower block in the box, an inclined bar arranged adjacent to the drive wheel and extending beneath the drive wheel, a roller arranged on the bar and designed to move up and down on the bar, a lever connected with the roller, and having a rope depending adjacent to the baling box, substantially as described.

3. The combination with the baling box and baling levers, of a chamber composed of movable, interlocking sides, and ends arranged below the baling box, bars engaging the movable sides, bell crank levers to which the bars are connected, and a bar arranged in the path of the movement of the baling lever, and connected to the bell crank levers, substantially as described.

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

HENRY R. JERNIGAN.

Witnesses:
W. P. WINDHAM,
T. J. CREEL.