

(No Model.)

2 Sheets—Sheet 1.

M. B. JONES.
BALING PRESS.

No. 495,589.

Patented Apr. 18, 1893.

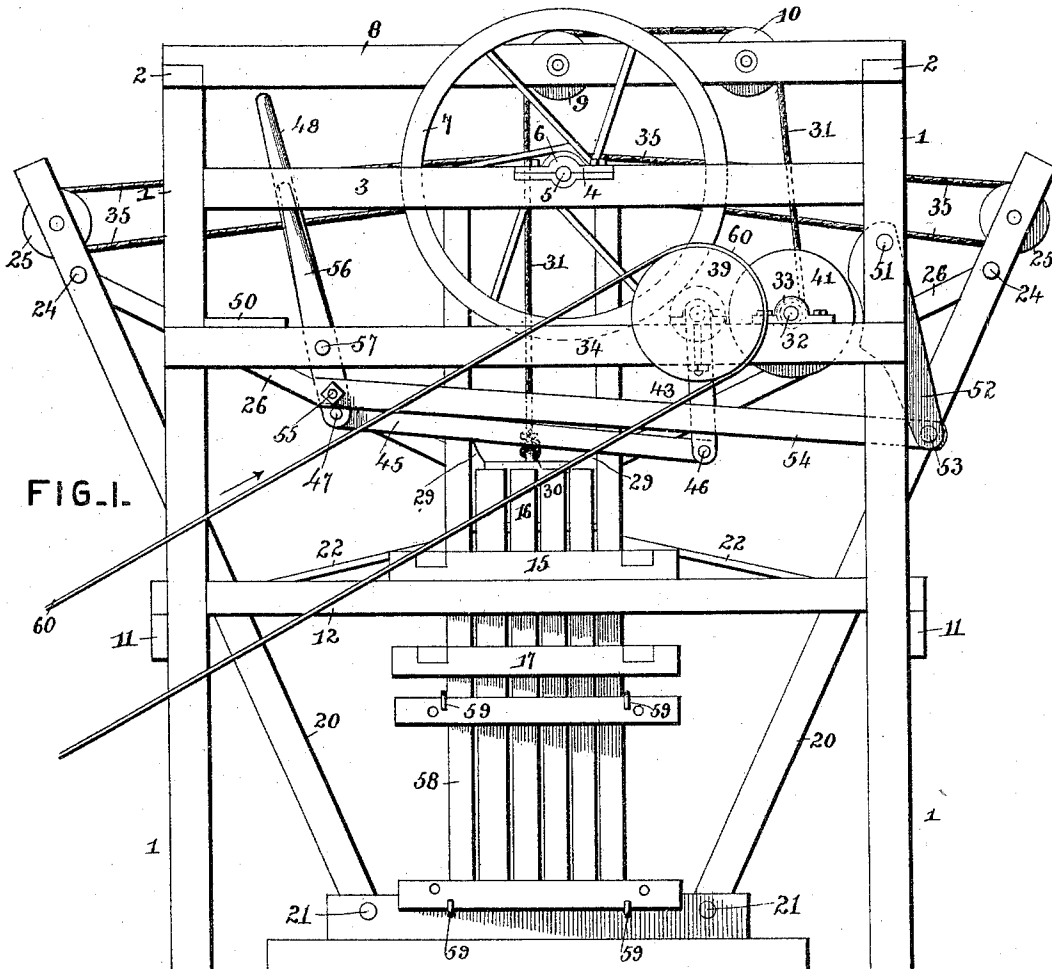


FIG. 1.

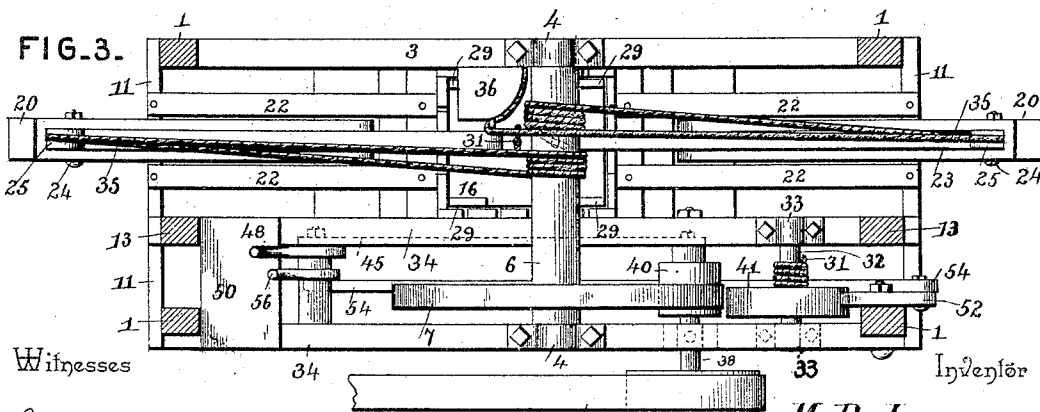


FIG. 3.

Witnesses

Inventor

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By his Attorneys,

M. B. Jones

C. A. Snow & Co.

(No Model.)

2 Sheets—Sheet 2.

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FIG. 4-

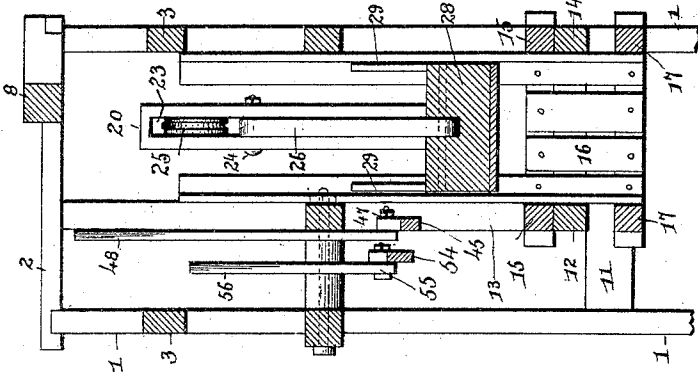


FIG. 5-

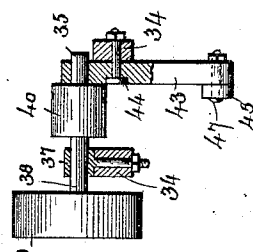
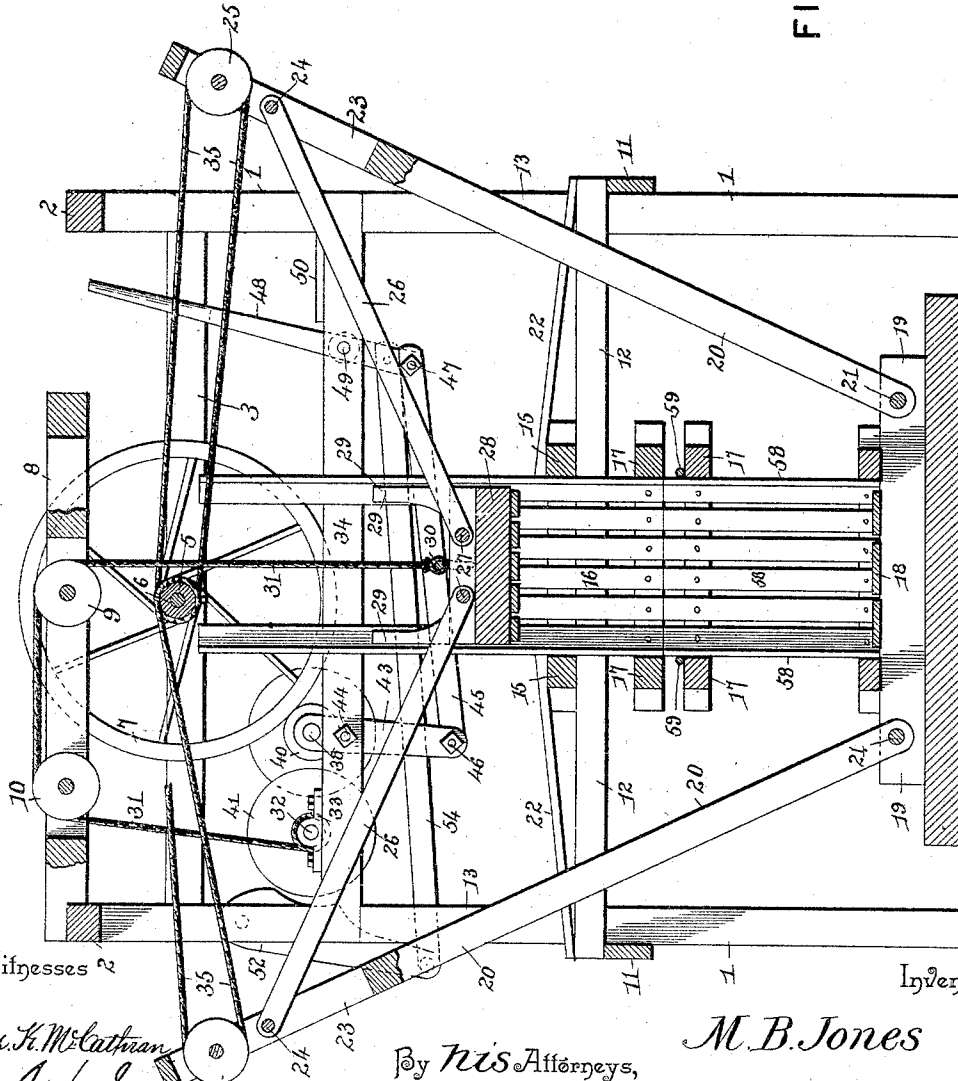


FIG. 2-



Witnesses 2

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UNITED STATES PATENT OFFICE.

MILTON BRANARD JONES, OF MERIDIAN, MISSISSIPPI, ASSIGNOR TO CHARLES J. HYDE, OF SAME PLACE.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 495,589, dated April 18, 1893.

Application filed September 30, 1892. Serial No. 447,427. (No model.)

To all whom it may concern:

Be it known that I, MILTON BRANARD JONES, a citizen of the United States, residing at Meridian, in the county of Lauderdale and State of Mississippi, have invented a new and useful Baling-Press, of which the following is a specification.

My invention relates to improvements in baling presses, and has special reference to improvements upon that class of press known to the trade as the "Southern Standard," the construction of which is based upon United States Patent, reissued May 4, 1880, to G. W. Soule, and bearing No. 9,193.

The objects of my invention are to reduce the size of the press, rendering the same more compact, and therefore occupying less room in the gin-house; to reduce the quantity of rope heretofore employed for operating the baling levers; and to provide mechanism for raising and lowering the follower and operating the baling levers to take the place of the heretofore employed hand-operating mechanism.

With these main objects, and various other minor objects in view, the invention consists in certain features of construction hereinafter specified, and particularly pointed out in the claims.

Referring to the drawings—Figure 1 is a side elevation of a baling press embodying my improvements. Figure 2 is a vertical longitudinal section thereof. Fig. 3 is a plan the guide pulley supporting bar being removed or broken away. Fig. 4 is a transverse section. Fig. 5 is a transverse section through the swivel box for supporting the power shaft.

Like numerals indicate like parts in all the figures of the drawings.

From any suitable base, as for instance, the gin-house floor, rise a series of, in this instance, four main standards or posts 1, the same being arranged in the form of a rectangle, and connected at their upper ends by a pair of opposite transverse connecting-beams 2, and a pair of longitudinal beams 3, the latter being below the former, and provided at their centers with journal boxes 4, for the reception and accommodation of a main transverse shaft 5, which is loosely journaled in the boxes. The shaft 5 has mounted rigidly

thereon a drum 6, and a large friction wheel or pulley 7. The diagonally opposite ends of the transverse connecting beams 2 are connected by a guide pulley diagonally-disposed supporting beam 8, the same being slotted from a point at one side of its center to near one end, and in the slot is located near the ends thereof grooved guide-pulleys 9 and 10, whose office and functions will be hereinafter described.

Near their centers the main posts or standards 1 are connected by transverse end bars 11, and these in turn near a pair of the posts 1, support a longitudinal beam 12, from whose ends short vertical standards 13 rise, and at their upper ends aid in the support of the transverse beams 2. A horizontal beam 14 is located opposite the beam 12, is in the plane therewith, is parallel thereto, and connects a pair of the posts 1. These beams 12 and 14 support the rectangular frame-bars 15 that incase the baling box or casing 16, a lower rectangular frame 17 embraces the lower portion of the box, which extends a short distance below the aforesaid beams 12 and 14. The baling box 16 is open at its upper and lower ends and is vertically above a stationary platen 18, which is seated on the floor or other object upon which the structure may be mounted. The platen 18 has its opposite ends recessed at 19, and receives the lower ends of a pair of baling levers 20, whose lower ends are pivoted within the recesses 19 by substantial transverse bolts 21. These levers are designed to operate in a longitudinal direction within a pair of guides 22, with which each end of the framework is provided at opposite sides of the baling box. The levers 20 extend up within a short distance of the top of the framework, and are provided near said upper ends with slots 23, the upper ends of which are occupied by loosely journaled guide-pulleys or sheaves 24. The lower portions of the slots receive and have pivoted therein at 25 a pair of links 26, whose lower ends converge, are designed to extend down into the baling box, and are pivoted at 27 at opposite sides of the center of the follower block 28, which is designed to ride loosely in the baling box in the usual manner and to prevent binding therein is provided at its four corners with short ver-

tical guides 29. A hook or eye 30 is located at the center, and upon the upper side of the aforesaid follower block, and to this hook is connected the lower end of a cable 31, whose upper or leading end is passed over the pulleys 9 and 10 in the order named, depends from the latter, and is made fast to a transverse shaft 32 located below the beam 8 and to one side and in line with the friction pulley 7. This shaft 32 is supported in journal boxes 33, which are located upon the upper sides of a pair of parallel horizontal beams 34, that extend longitudinally through the framework and are connected at their ends to and supported by a pair of the posts 1 and vertical standards 13. A second rope or cable 35 has one end connected securely to the drum 6, is wound upon the same, then passed toward one end of the framework over and under the pulley or sheave 25 thence inward and over the drum 6, thence to the opposite side of the machine around the other pulley and is finally made fast to an inwardly-standing block 36 secured to one of the longitudinal main beams 3. A journal box 37 is pivotally mounted on the outer longitudinal beam 34, and serves as a support for the loose journaling of a transverse shaft 38. The outer end of this loose shaft 38 is occupied by a band pulley 39 mounted rigidly upon the shaft, and near the inner end of this shaft or at the opposite side of the journal box 37 there is located a small friction pulley 40. This shaft as shown in detail in Fig. 5, is pivotally mounted upon the beam 34 and is located intermediate the large friction pulley 7 and the small friction pulley 41, which is rigidly mounted on the shaft 32 formerly mentioned. A lever 43 is pivoted at 44 to the innermost beam of the pair 34 and has its upper end above its bearing loosely connected with the vibratory shaft 38 before mentioned. A longitudinally-disposed link 45 has one end pivotally connected at 46 to the lever 43, and its opposite end similarly pivoted at 47 to a hand-lever 48, which is pivoted at 49 to the innermost beam 34, and adjacent to the platform 50 for the accommodation of the operator, and which is supported upon the beams 34 between their ends. It will be readily apparent that by throwing the lever 48 in one direction its friction pulley 40 will be thrown in contact with and will drive the large friction pulley 7, and by throwing said lever in an opposite direction, the aforesaid friction pulley 40 will be thrown into contact with and drive the friction pulley 41 and its shaft 32.

To that post 1 adjacent to the pulley 42 there is pivoted at 51 a brake lever 52, whose face adjacent to the pulley 41 is concaved to bear thereon. The lower end of the lever has pivoted to it at 53 a link or connecting-rod 54, whose opposite end extends toward the platform 50, and is pivoted at 55 to the lower end of a hand-lever 56, which is fulcrumed between its ends at 57 upon the outer beam 34. The hand-lever 56, like the hand-lever 48 it

will be observed is adjacent to the operator platform 50, and by its manipulation the brake-lever may be drawn into contact with and lock the wheel 41 against operating. As soon as released, however, the brake-lever swings to such position automatically as to release the pulley 41 from its pressure.

58 designates the removable sides of the baling chamber, through whose instrumentality the bale after compression may readily be removed. These sides are maintained in position in any suitable way, in the present instance, by means of clamping-bars 59, all as will be readily understood, and as is common in this class of inventions.

This being the construction of the press, the operation may be briefly stated as follows:— It will be observed that the pulley 39 is connected with and driven by a belt 60 leading from any suitable motor, and in the direction indicated by the arrow. In order to introduce the cotton into the baling box, the operator standing upon the platform 50 manipulates the lever 48 by throwing the same away from him, whereby the friction pulley 40 is thrown into operative contact with the friction pulley 41, and thus motion is imparted through the belt, the pulleys 39 and 40 and their shaft to the pulley 41, which revolving rotates its shaft 32 and winds the rope or cable 31 thereon. This causes a lifting of the follower block through the instrumentality of the aforesaid rope or cable 31, causing the upper end of the baling box to be open for the deposit of the cotton and through the medium of the links 26 throwing the levers 20 outward at their upper ends. The levers moving outward will cause the windlass or drum shaft to revolve so as to unwind the rope or cable 35. After the cotton has been deposited, the operator throws the shifting lever 48 in the reverse direction or toward the platform thus arresting the movement of the swinging shaft 32 and bringing the friction pulley 40 into operative engagement with the large friction pulley 7. The friction pulley 7 is now revolved together with its shaft and drum thus winding the cable or rope 31 thereon and drawing the levers 20 toward each other at their upper ends. This inward movement of the levers forces the follower-block through the medium of the links 26 down into the baling chamber, thus compressing the deposit of cotton contained therein. The downward movement of the follower-block causes the winding shaft 32 to unwind, thus paying out sufficient of the rope or cable to permit of the descent of the block to the required distance. The tendency of the shaft 32 to unwind would, were not means provided for the obviation of said tendency, loosen or suddenly relax the cable or rope 31 to such an extent as would perhaps cause the same to kink. In order to avoid this the brake-lever 52 is provided and by a proper manipulation of this lever by the operator it will be seen that the rotation of the aforesaid wind-

ing shaft 32 may be regulated so as to pay out the rope at a proper speed. Immediately after the compression of the first deposit of cotton the lever 48 is reversed and the follower block again elevated whereby the baling chamber may receive a second deposit and said follower block again operated to descend and compress the second deposit of cotton until the bale has been completed and is compressed to such a degree as will give it the required density, after which the bale bands are applied in the usual manner, the sides of the baling chamber removed, and the bale completed.

From the foregoing description, in connection with the accompanying drawings it will be seen that I have adapted the class of press mentioned at the beginning of this specification to be mechanically operated and for tramping or packing the deposits of cotton in the press previous to the final compression, whereby a compact bale of the required density is produced; that all of the parts are under the direct control of the operator; that the same is condensed; that considerable rope or cable is saved; and that the press is made more compact and requires less room in the gin-house for its accommodation.

Having described my invention, what I claim is—

1. In a press of the class described, the combination with the framework, the baling box, the platen below the same, the levers pivoted to the platen, pulleys in the upper ends of the levers, a follower block mounted in the baling box, a superimposed drum shaft, a gear thereon, an adjacent winding shaft, a gear thereon, suitable guides, a cable leading from the winding shaft over the guides to the follower block, a cable connected to the drum and passed about the pulleys, a power shaft pivotally supported between the drum shaft and winding shaft, means for driving the same, a gear thereon for engaging

the gears of either the drum or winding shafts, a lever for operating said power shaft, and a brake for the pulley of the winding shaft, substantially as specified.

2. In a press of the class described, the combination with the framework, the baling box, the platen below the same, the levers pivoted in the platen, and provided at their upper ends with pulleys, the links connected to the upper ends of the levers, and the follower block within the box and pivotally connected to the lower ends of the links, of the winding shaft journaled adjacent to the drum shaft, a pulley thereon, a cable leading from the shaft over suitable guides and connected to the follower block, a pulley on the drum shaft, a pivoted journal box mounted between the two shafts, a shaft in the journal box, a pulley on the outer end of the shaft a belt for operating the same, a pulley at the inner end of the shaft adapted to contact with and communicate motion to the pulleys of either the winding or drum shafts, a lever pivoted in the framework and at its upper end loosely connected with the pivoted shaft, a platform a hand lever pivoted adjacent to the same, a connecting rod loosely connecting the lower end of the hand lever with the shifting lever, a brake lever fulcrumed in the framework and adapted to bear on the pulley of the winding shaft, a hand lever fulcrumed adjacent to the platform, a connecting bar between the lower end of the same and the brake lever, and a cable secured to the drum shaft and passed about the pulleys of the levers, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

MILTON BRANARD JONES.

Witnesses:

W. M. STONE,
J. L. HUGHES.