

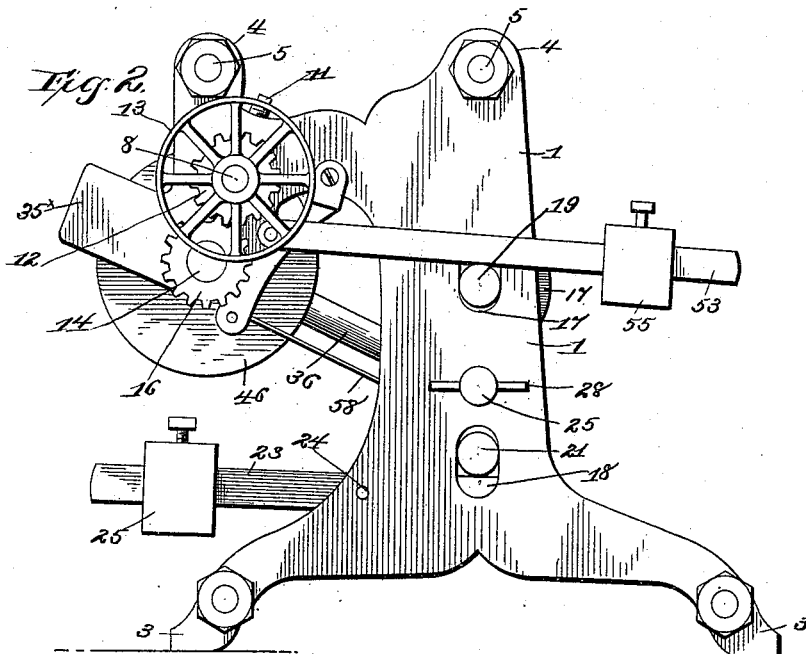
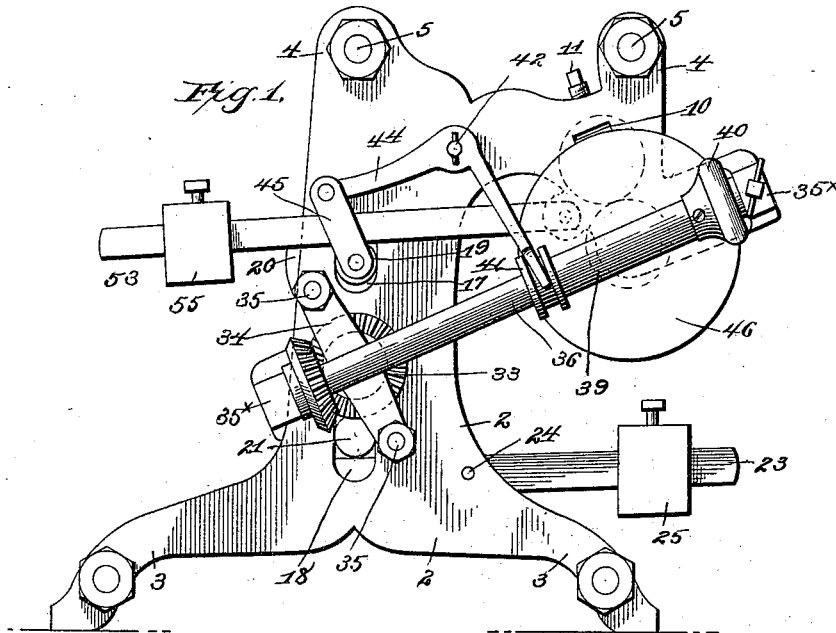
(No Model.)

3 Sheets—Sheet 1.

W. T. BESSONETTE.
COTTON PRESS.

No. 492,132.

Patented Feb. 21, 1893.



Witnesses

E. F. Hurdman.
H. G. Pierson.

Inventor

William T. Bessonette
By his Attorneys,
C. A. Snow & Co.

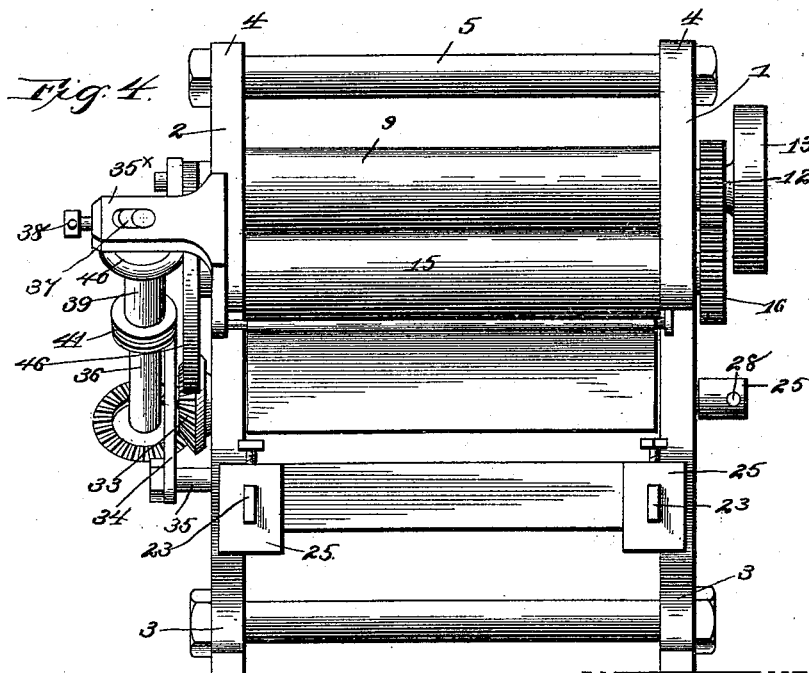
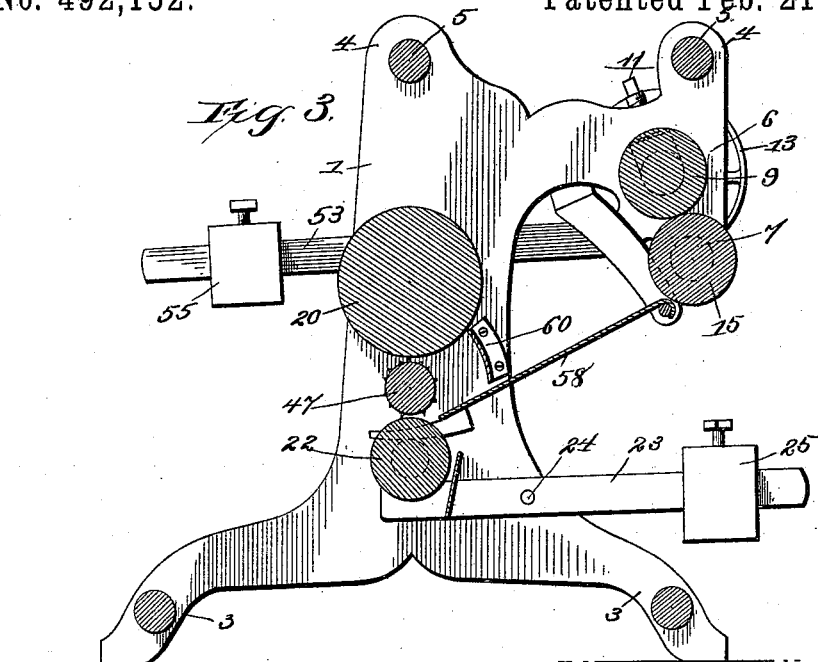
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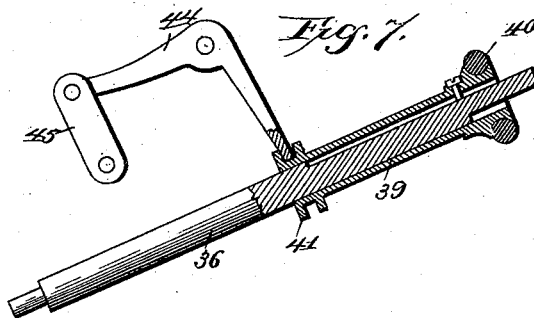
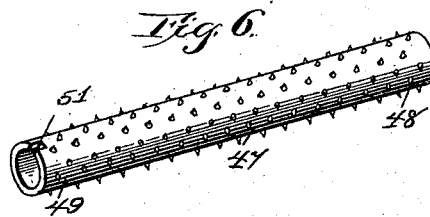
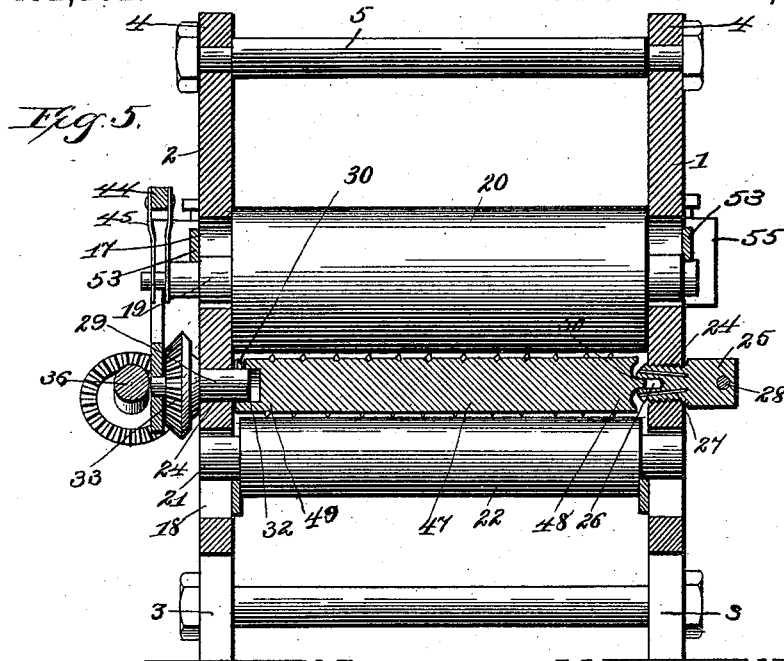
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E. F. Mordeman,
W. G. Pierson.

Inventor

William T. Bessonette
By *his* Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

WILLIAM T. BESSONETTE, OF TEMPLE, ASSIGNOR OF ONE-HALF TO WARREN A. PATTERSON, OF LAMPASAS, TEXAS.

COTTON-PRESS.

SPECIFICATION forming part of Letters Patent No. 492,132, dated February 21, 1893.

Application filed August 6, 1892. Serial No. 442,358. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. BESSONETTE, a citizen of the United States, residing at Temple, in the county of Bell and State of Texas, have invented a new and useful Cotton-Press, of which the following is a specification.

My invention relates to improvements in cotton presses of that class wherein cylindrical bales or rolls of cotton are formed, and simultaneously pressed.

The objects of my invention are to produce a cheap and simple machine, designed to be employed in connection with the ordinary cotton-gin to receive the cotton as it passes therefrom in the form of a soft bat, and subsequently to compress and roll the same into a bale-like form, after which the bands may be applied.

Various other objects and advantages will appear in the following description, and the novel features thereof will be particularly pointed out in the claims hereto annexed.

In the drawings: Figure 1 is a side elevation of a cotton press embodying my invention. Fig. 2 is a reverse side view. Fig. 3 is a vertical longitudinal sectional view. Fig. 4 is a rear elevation. Fig. 5 is a transverse vertical section through the baling-rolls. Fig. 6 is a detail in perspective of the core-roll. Fig. 7 is a longitudinal section of the inclined power-transferring shaft, the movable sleeve thereon, and the bell-crank lever for operating the same.

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

In practicing my invention, I construct a suitable frame for carrying the mechanism, which, in the present instance, consists, chiefly, of a pair of metal sides or standards 1 and 2. These standards 1 and 2 have their lower ends divided and disposed in opposite directions, forming feet 3, for lending stability. At their upper ends perforated lugs 4 are provided at the front and rear corners of the standards, and through the feet and lugs transverse tie-bolts 5 are passed, which bolts serve to maintain the standards in relative and rigid relation. Near the rear upper edge of the standards there is formed an upper and a lower pair of bearing-openings 6 and 7,

respectively. The upper bearings are somewhat elongated and receive the trunnions or journals 8, of an upper feed-roll 9. Concaved follower-blocks 10 are seated upon the upper sides of the journals and are borne upon by a pair of binding-screws 11, whose upper ends project above the standards and are there exposed to manipulation by the operator through the medium of a wrench. One of the journals of the roll 9 is extended beyond its bearings, namely, the one formed in the standard 1, and at its extremity has keyed rigidly thereon a cog-wheel 12, of a diameter corresponding with the roll 9. Beyond the cog-wheel a pulley 13 is mounted on the journal and is designed to be driven by a proper belt receiving motion from any suitable source, as, for instance, the motor employed for operating the gin.

In the lower bearing 7, which is in an inclined plane with relation to the upper bearing, enter the journals 14 of a lower feed-roll 15. This feed-roll 15 is designed to run in contact, or nearly so, with the upper feed roll 9, and has one of its journals passed through the bearing 6 in the standard 1 and, like its companion 9, is provided with a rigidly-mounted gear or cog-wheel 16, that is engaged by the upper companion cog-wheel 12. The cog-wheel 16 is of the same diameter as the roll 15.

Near the front edge of the two standards, and below the planes of the rolls 9 and 15, pairs of elongated bearing-openings 17 and 18 are provided. In the bearing-openings 17 take the trunnions or journals 19 of an upper pressing and baling roll 20, one of whose journals projects beyond the standards 2. In a lower pair of bearings take the journals 21, of a lower compressing and baling roll 22, of a, preferably, less diameter than the roll 20.

23 designates a pair of levers which are fulcrumed upon fulcrum-pins 24, immediately in rear of the lower bearing 18. Each of these levers is provided at its rear end with a sliding weight 25, and at its front end, which takes under the journals of the lower roll 22, is recessed to receive said journals, whereby the weights exert an upward pressure through

the medium of the levers against the under sides of the journals of the roll 22, which latter is thus elevated, as will be apparent.

Each of the standards 1 and 2 is provided with a circular opening 24, located between the bearing-openings 17 and 18. That perforation formed in the standard 1 is threaded, and in the same is located an externally-threaded bearing-bolt 25. The inner end of the bolt is provided with a bearing-socket 26, and at each side of the same the bolt is split longitudinally, as indicated at 27, whereby it is self-locking at any point of its adjustment within the perforation. The other end of the bolt has a pin 28, passed transversely there-through, by which it may be manipulated, or other means may be provided for such manipulation. The remaining perforation 24, that is the one formed in the standard 2, constitutes a bearing-opening for a short shaft 29. This shaft 29 carries a small pin 30, at its inner end and projecting from its side, and its inner end is further provided with a bearing-socket or cavity 32. At its outer end a beveled gear 33 is rigidly mounted and beyond the same the said shaft is journaled in a yoke-plate 34, which is supported upon pins 35, projecting laterally from the standard 2.

Diagonally opposite each other, at the front and rear edges of the standard 2, are located laterally-projecting bearing-lugs 35, and in the same are formed bearing openings which receive the ends of an inclined shaft 36. The upper bearing is provided with a follower-block 37, and a set-bolt 38 is threaded in the end of the lug in which the bearing is formed and bears upon the block, so that said shaft may be moved inwardly, as will be apparent. A sleeve 39 is splined and designed to reciprocate upon the inclined shaft 36, and carries at its upper end a frictional pulley 40, while its lower end has formed thereon a grooved collar or boss 41. A stub-shaft 42 projects from the standard 2, near its center and upper end, immediately above the shaft 36, and upon the same there is loosely mounted for rocking a bell-cranked lever 44. The rear branch of the bell-cranked lever is forked slightly and embraces the collar 41, of the hollow shaft or sleeve 39, while its front branch is, by means of a pair of links 45, loosely connected with the journal 19 at that side of the machine, of the roll 20. That journal of the lower rear feed-roll 15 that projects through the standard 2, is provided with a large friction-disk 46, considerably greater in diameter than the pulley 40, which bears there-against.

47 designates the core-roll, upon which the cotton bale is to be formed, and the same is hollow or tubular and has its periphery provided with a series of minute jags or indentations, or otherwise roughened so as to engage the cotton. The ends of the core-roll are provided with heads 48 and 49, the former having a central lug 50, and the latter head

being concaved and forming a socket. The lug 50 enters the socket or cavity at the inner end of the threaded bearing-bolt, while the socket receives the inner end of the short shaft. The wall of the socket is further provided with a notch 51, which engages and interlocks with the pin before described as projecting from the side of the short shaft. By loosening the bolt, it will be obvious the core-roll may be removed, and inasmuch as the bale, as will hereinafter appear, is formed thereon, the bale will also be removed.

A pair of levers 53 are pivoted at their rear ends to the outer sides of the two standards 1 and 2, and intermediate their ends are recessed so as to receive and rest upon the journals 19 of the upper pressing and baling roll 20. At their front extremities these levers have adjustable weights 55. In this manner, it will be seen that the two rolls employed in the compressing and baling operations and designated as 20 and 22, are always forced toward each other and exert pressure upon the core-roll and the material thereon.

This being the construction, the operation is as follows: The cotton passes from the gin in a soft bat, as is usual, and is caught between the two feed-rolls at the rear end of the machine, where its thickness is reduced by the combined pressure of said rolls, such pressure being regulated in the manner before described. After passing between the rolls, the leading end of the cotton is guided by an inclined table 58, located between the standards, to a point between the lower pressing and baling roll and the core-roll, the fiber of the now thin sheet of cotton being caught by the roughened surface of the core roll and carried by the latter over and to the rear so that it is continued around the core-roll. In this manner the cotton is wound upon the core-roll continuously, and its laminals or layers are constantly under pressure by the pressing and baling rolls bearing thereon, which rolls are permitted to yield as the bale increases in size. After the bale is formed, it is removed by first withdrawing the bearing-bolt that serves to support one end thereof, and subsequently forcing the roll of cotton off the core-roll, which may be accomplished with but very slight opposition upon the part of the said roll by reason of the fact that the teeth thereof are exceedingly minute and short and barely sufficient to engage the first laminal of the bale. Motion is conveyed through the belt and pulley to the large friction-pulley, and at the beginning of the operation the small friction-pulley 40 is near the outer periphery of said large friction-pulley. As the movements of the parts continue, and the bale increases in size, the upward movement of the roll 20, as caused by the increasing bale, serves, through the medium of the links 45, to rock the bell-crank lever 44, thus causing the hollow shaft or sleeve to be drawn to the front gradually and the position of the pulley 40 to change and gradually approach

the center of the large friction-pulley. Such changing of the relative positions of the two pulleys causes the core-roll to have a change of speed, namely, to decrease and thus I compensate for the increased diameter of the bale being constructed, and cause it to run slower as the bale reaches the point of completion. Hence, I avoid any accumulation of cotton between the feed-rolls and baling rolls, as will be obvious. As soon as the cotton is removed from the baling-rolls, the weights cause them to resume their former positions, that is move toward each other, and in this manner the bell-crank is rocked and the sleeve moved to the rear where the pulley 40 resumes its former position.

From the foregoing description, in connection with the accompanying drawings, it will be observed that I have provided a machine of comparatively simple construction, that is strong and durable, that is designed to be operated in conjunction or intimate relation with the ordinary cotton gin and adapted to receive the cotton issuing therefrom, compress the same, conveniently bale it, all in one continuous operation.

Previous to removing the bale from the press, metal ties or bands are passed around the same, said bands being guided by a curved shield 60, located in rear of the core-roll.

Having described my invention, what I claim is—

1. In a press of the class described, the combination with opposite side standards having bearing-openings, pressing and baling rolls journaled in the openings, and bearing-openings located in the standards between the rolls, of means for forcing the rolls toward each other, cotton feed-devices, a short shaft journaled in one of the intermediate bearing-openings and having its inner end provided with a radiating pin, a threaded bolt mounted in the opposite bearing and provided at its inner end with a bearing-lug, means for driving the short shaft, and a core-roll having its outer surface roughened and provided with opposite heads, one of which forms a socket having a notch for the reception of the inner end of the short shaft and its pin, and the other of which has a lug for engaging the bearing-cavity of the bolt, substantially as specified.

2. In a press of the class described, the combination with the opposite side standards having pairs of transversely-opposite elongated slots forming bearings, an upper and a lower roll having trunnions mounted in the bearings, cotton feed devices located in rear of said rolls, an intermediate table, means for yieldingly pressing the rolls together, an intermediate removable core-roll, means for revolving the upper and lower rolls, and for revolving and gradually increasing the speed of the core-roll, substantially as specified.

3. In a press of the class described, the combination with the opposite side standards, the pair of rear feed-rolls, means for driving the

same and communicating motion from one to the other, a large friction-disk on one of said rolls, and a pair of yielding rolls located in the front of the standards, of a removable core-roll located between the front rolls, means for yieldingly pressing the front rolls thereagainst, bearing-shafts for the core-roll, a pinion on one of said shafts, a longitudinal shaft, bearings for the same, a sleeve splined on the longitudinal shaft and provided at its inner end with an annular collar, a friction pulley at the rear end of the sleeve contacting with the friction-disk, a pivoted bell-crank lever having its rear end forked to engage the groove of the sleeve and its front end loosely connected with a journal of one of the front rolls, substantially as specified.

4. In a press of the class described, the combination with the side standards, the rear guide-rolls, means for driving the same and for transmitting motion from one to the other, of a friction-disk carried by one of the rolls, a pair of front yieldingly-mounted baling and pressing rolls, a shaft supported at the side of the standard, a sleeve mounted non-rotatably for sliding on the shaft, a friction pulley mounted on the upper end of the sleeve, connecting devices between the sleeve and the front roll, whereby an upward movement of the roll causes a movement of the sleeve, a core-roll between the front rolls, and means for driving the same, substantially as specified.

5. In a press of the class described, the combination with the opposite standards, the pair of loosely journaled feed-rolls geared together, means for operating the same, a friction-disk carried by one of said rolls, bearings located at the opposite sides of the disk and in front thereof, one of said bearings being elongated, a shaft journaled in the bearings, a follower-block mounted on the shaft, a bolt bearing on the block, a sleeve mounted on the shaft, a pulley carried by the sleeve and contacting with the disk, of a pair of front rolls, an intermediate core-roll, and devices located between one of the front rolls and sleeve whereby a movement of said roll will serve to draw the sleeve toward the front, substantially as specified.

6. In a press of the class described, the combination with the opposite standards, the tie-bolts for securing the same, the pairs of bearing-openings near the rear upper edge of the standard inclined with relation to each other, the two rolls having their journals located in the bearings, a follower-block located in the upper bearings, binding-bolts passed through the standards and bearing on the blocks, gear-wheels mounted on corresponding ends of the rolls and engaging each other, and a pulley mounted on one end of one roll and a friction-disk on the opposite end of the companion roll, of the front elongated bearings, the upper and lower rolls journaled therein, the front and rear diagonally-opposite bearing lugs, the shaft journaled therein and pro-

vided at its lower end with a beveled gear, the sliding sleeve splined upon the shaft, the friction pulley at the upper end of the sleeve, the stud projecting from the standard, the
5 bell-cranked lever mounted on the stud and engaging the sleeve, links connected to the opposite end of the bell-crank lever and to the roll, pivoted levers fulcrumed on the standard, arranged above and below each
10 other and the front rolls and bearing upon the journals thereof, weights upon the rear ends of the lower levers, and front ends of the upper levers, bearing-openings between the

front rolls, an adjustable bearing-bolt in one of the openings, a short shaft in the other, a 15 roughened core-roll supported thereby, and a beveled gear mounted on the outer end of the short shaft and engaging the beveled gear of the inclined shaft, substantially as specified.

In testimony that I claim the foregoing as 20 my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM T. BESSONETTE.

Witnesses:

W. A. PATTERSON,
W. S. DUVAL.