(No Model.)

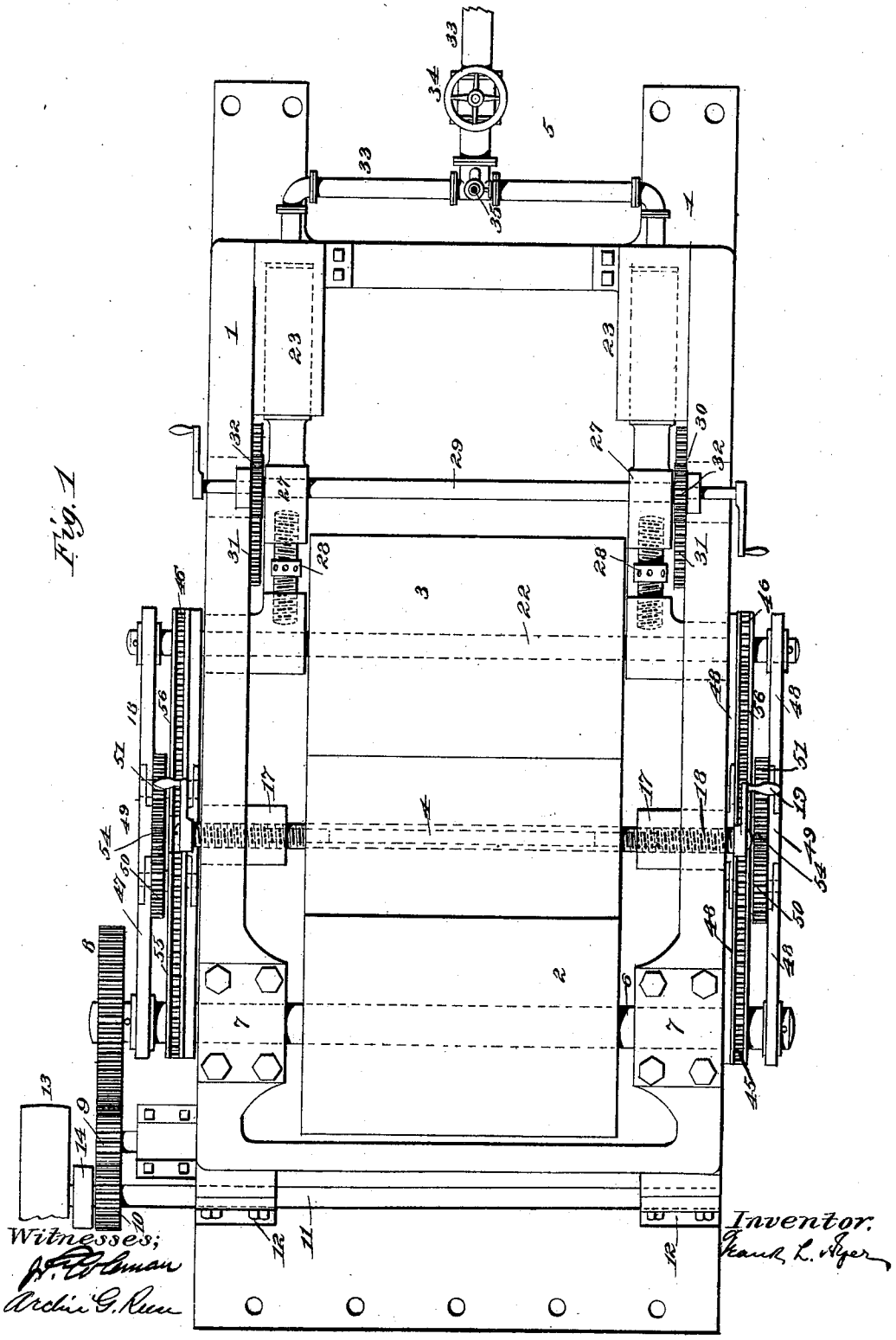
4 Sheets—Sheet 1.

F. L. DYER.

PRESS FOR BALING COTTON.

No. 601,806. Patented Apr. 5, 1898.

Fig. 1.



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Archie G. Rees

Inventor:
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(No Model.)

4 Sheets—Sheet 2.

F. L. DYER.

PRESS FOR BALING COTTON.

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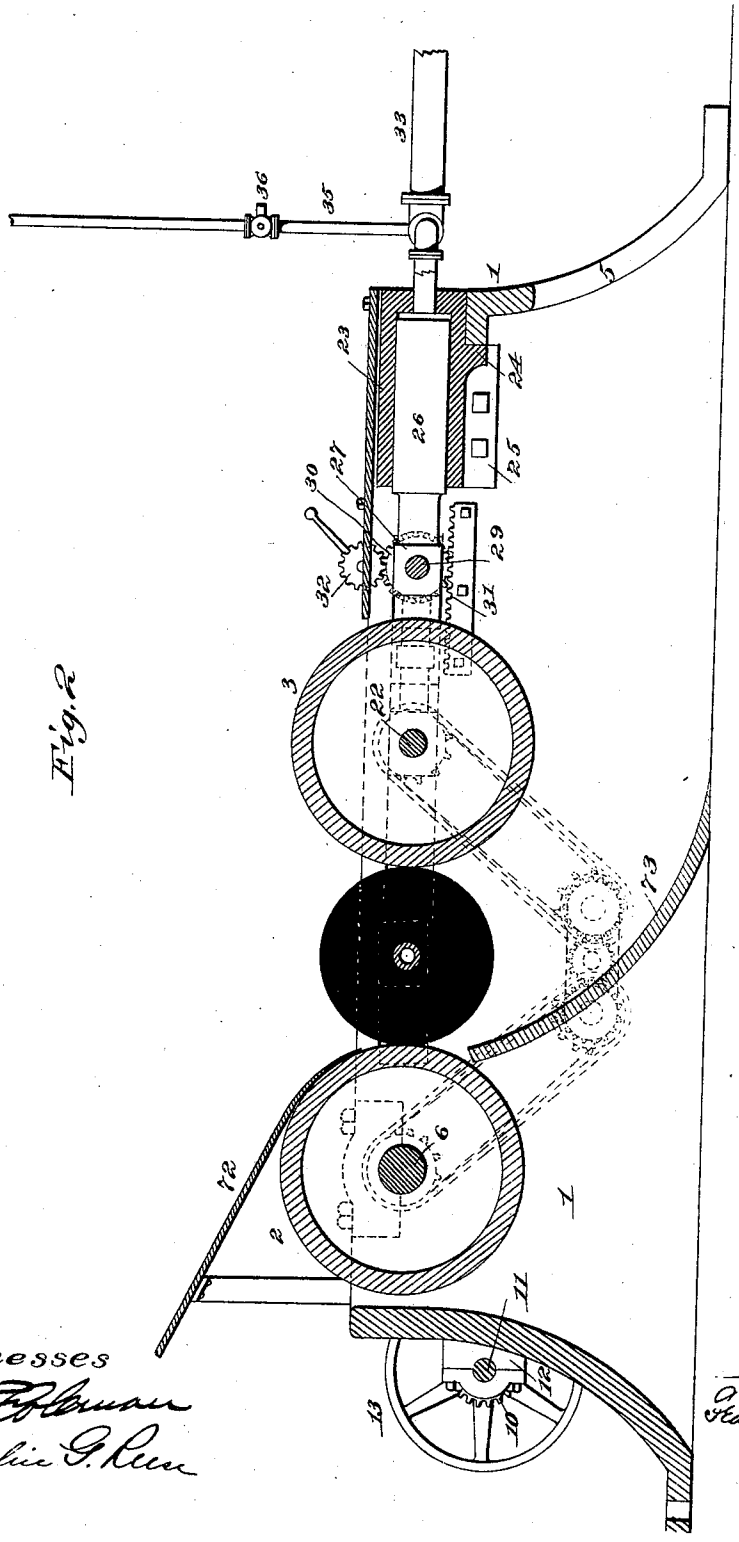

Fig. 2.

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(No Model.) 4 Sheets—Sheet 3.

F. L. DYER.

PRESS FOR BALING COTTON.

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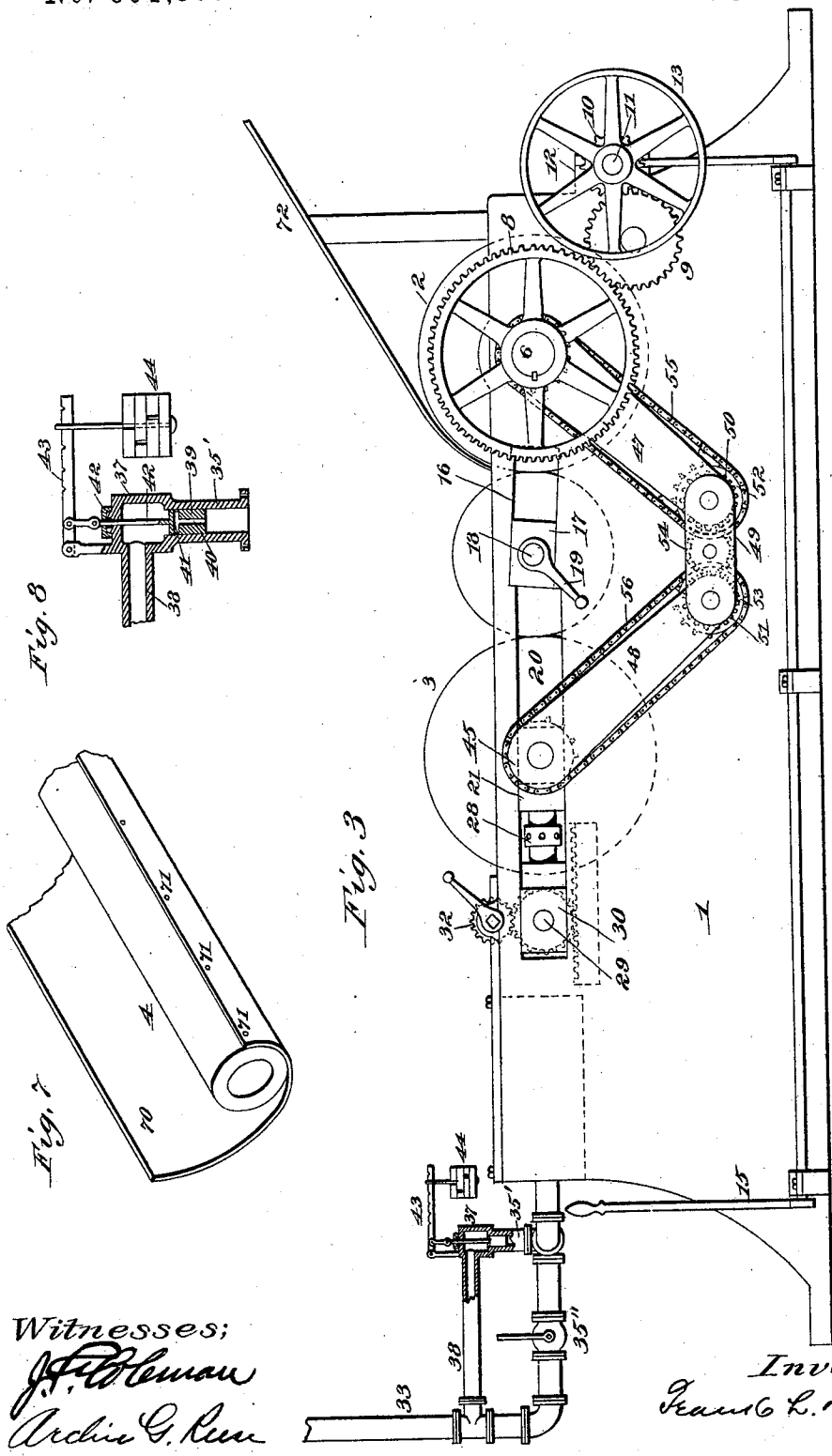

Fig. 3

Fig. 7

Fig. 8

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(No Model.) 4 Sheets—Sheet 4.

F. L. DYER.

PRESS FOR BALING COTTON.

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Fig. 4

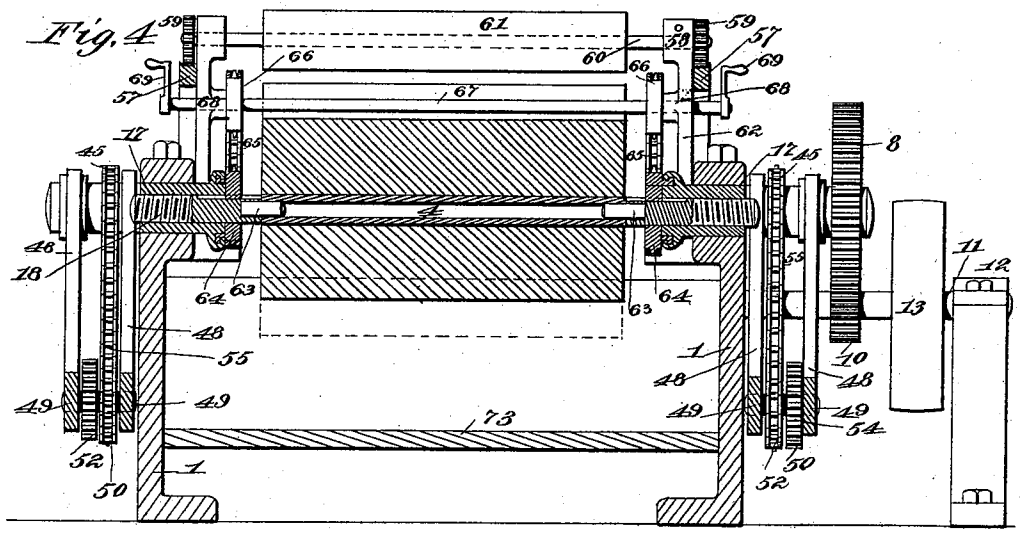


Fig. 5

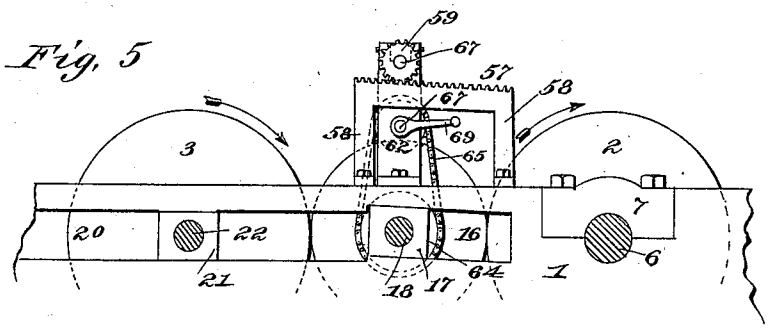
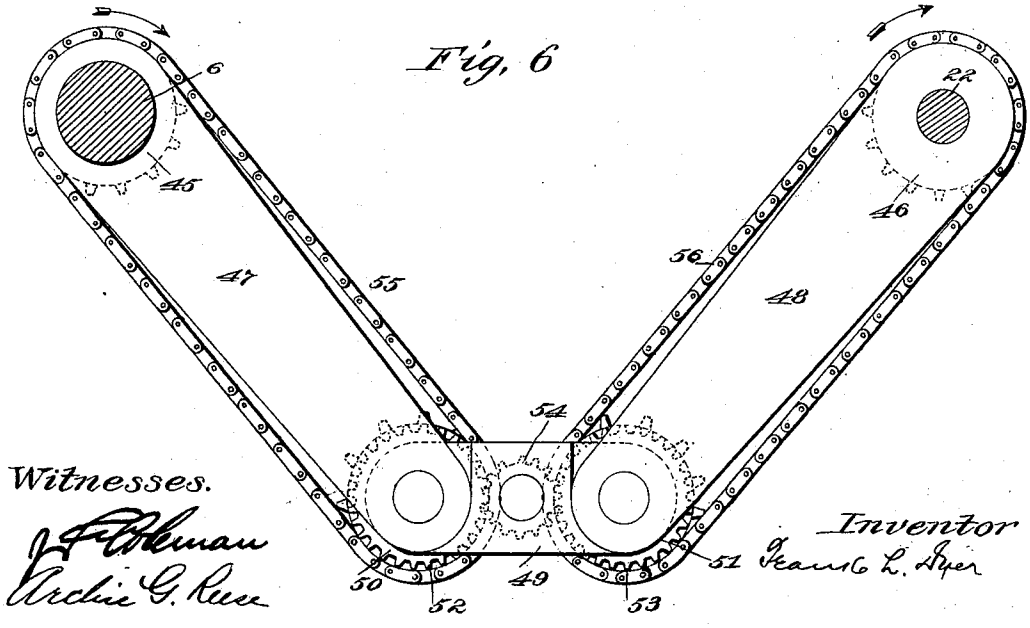


Fig. 6



Witnesses.

J. F. Coleman

Archie G. Rice

Inventor

Frank L. Dyer

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UNITED STATES PATENT OFFICE.

FRANK L. DYER, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO THE AMERICAN COTTON COMPANY, OF NEW YORK, N. Y.

PRESS FOR BALING COTTON.

SPECIFICATION forming part of Letters Patent No. 601,806, dated April 5, 1898.

Application filed November 28, 1894. Serial No. 530,251. (No model.)

To all whom it may concern:

Be it known that I, FRANK L. DYER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Presses for Baling Cotton; and I do hereby declare the following to be a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to various improvements in presses for baling cotton; and the type of such presses to which the invention particularly refers is that in which a cylindrical bale is formed by winding a sheet or bat of cotton in successive layers on a core by the action of a pair of baling-rolls which subject the bale during its formation constantly to pressure.

Prior to my invention presses for making cylindrical cotton-bales had been suggested employing two baling-rolls for winding the sheet or bat upon a core located between such rolls; but with such prior presses the baling-rolls were always arranged in a vertical plane. It was found in practice that the weight of the upper baling-roll tended to cake or mat the cotton upon the core, which not only injured the fiber but prevented the bale from being entirely unwound, as is desirable.

The principal object of my invention is to produce a cotton-press of this type wherein the weight of either of the baling-rolls will be removed as a factor in the compressing operation, the compression being applied to the bale by means which can be regulated to obtain any desired degree of pressure upon the cotton. This object I attain by arranging the two baling-rolls in the same horizontal plane, with the core located between said rolls and in the same or approximately the same plane as the axes of the baling-rolls, a pressure-producing device being employed to resist the tendency of the baling-rolls to separate as the cotton accumulates on the core and means being employed to rotate the baling-rolls in the same direction and at the same peripheral speed. By constructing a cotton-press in this way I not only remove the weight of either of the rolls as a factor in the compressing operation, but I am enabled to very easily and quickly remove the bales from the press after they have been formed.

Other objects of my invention are to provide and produce a cotton-press of the character described which will be cheap in construction and effective in use; to provide improved driving mechanism for rotating the baling-rolls in the same direction and at the same peripheral speed, while at the same time the baling-rolls will be allowed to separate with the enlarging bale; to provide improved pressure-producing mechanism for resisting the tendency of the baling-rolls to separate and by which the desired pressure may be applied to the forming bale, and to provide an improved construction of core on which the formation of the bale can be easily started.

For a better understanding of my invention attention is directed to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a plan view of a cotton-press embodying my present improvement; Fig. 2, a longitudinal sectional view of the same; Fig. 3, a side elevation showing a modification in the means for effecting the pressure upon the movable baling-roll; Fig. 4, a vertical section of a modification of the device, taken through the core; Fig. 5, a side view of a portion of the same; Fig. 6, an enlarged view of the driving mechanism for rotating the two baling-rolls; Fig. 7, a perspective view of a portion of the preferred form of core; and Fig. 8 an enlarged section of a portion of Fig. 3, illustrating the pressure-regulator in detail.

In all of the above views corresponding parts are represented by the same numerals.

1 is the main frame of the machine, which may be conveniently cast in one piece. The top of this frame is entirely open, and working therein is a stationary baling-roll 2 and a movable baling-roll 3, a core 4 being arranged between the two baling-rolls and in the same or substantially the same plane as the axes of such rolls. Within the front of the frame 1 is an opening 5, through which the completed bale rolls out. Baling-roll 2 is keyed to a heavy shaft 6, carried in journal-boxes 7, preferably led down into the frame 1, so that the shaft 6 will be on a line below the top of the frame.

The shaft 6 extends out on each side of the journal-boxes 7 and is provided at one end with a gear-wheel 8.

9 is a gear-wheel mounted on a stub-shaft in the frame 1 and meshing with the gear-wheel 8.

10 is a pinion meshing with and driving the gear 9 and keyed to a shaft 11, which is mounted in journal-boxes 12 on the back of the machine, the said shaft extending, preferably, the entire width of the machine, so as to be firmly supported. A pulley 13 is carried by the shaft 11 for operating the baling-roll 2 through the gearing 8, 9, and 10.

14 is a clutch on the shaft 11 for throwing the pulley 13 into and out of engagement with said shaft, said clutch being operated by a lever 15, mounted on the side of the machine near the front thereof.

In order that the weight of the forming bale may be removed from the bearings of the core and be sustained more or less upon the baling-rolls, I prefer to form an inclined slotted guide 16 in each side of the frame 1, and within each of said guides works a journal-box 17. Each journal-box is provided with a screw-threaded bearing 18, working therein and having a small operating-crank 19 on the outer end, the inner end being turned down to receive the ends of the tubular core 4. By operating the handles 19 the bearings 18 may be moved into engagement with the core or disengaged therefrom.

20 is a horizontal slotted guide formed in each side of the frame directly in front of the inclined guide 16, and movably mounted in each of said guides 20 is a journal-box 21. A shaft 22 is mounted in the journal-boxes 21, and the baling-roll 3 is keyed to said shaft. Both the baling-rolls are made, preferably, hollow and are true cylinders.

23 is an hydraulic cylinder secured within the frame 1 in line with each of the journal-boxes 21. The cylinders 23 are provided each with a flange 24, which abuts against the frame 1 and receives the thrust of said cylinders, the latter being also provided with a flange 25, bolted to the frame.

26 is a piston working tightly in each cylinder and having an enlarged head 27 on the end thereof. 28 is an adjusting-screw connecting said pistons with the inner enlarged portions of the journal-boxes 21 and by means of which the relative adjustment between those parts may be effected.

In order to keep the baling-roll 3 in alinement with the baling-roll 2, I prefer to mount a shaft 29 in the portions 27 of the pistons 26, and near the ends of said shaft will be keyed gear-wheels 30, engaging racks 31, secured at each side of the frame 1. It will be noted that the gears 30 will roll on the racks 31 under the lateral movements of the baling-roll 3, so that the two pistons 26 will travel exactly together, and the baling-rolls will thus be kept in perfect alinement.

32 is a pinion engaging each gear-wheel 30 and operated by a crank, as shown, by means of which the baling-roll 3 may be moved back and forth by hand, if desired.

Water may be supplied to the cylinders 23 by a pipe 33, connected with a suitable supply, such as a tank, said pipe being provided with a valve 34 therein.

35 is a water-pipe of very small bore, which may extend to a tank arranged at any suitable height to form a hydrostatic column or leg, said pipe 35 being also provided with a valve 36. Instead of using the hydrostatic column 35 a pressure-valve may be employed, as shown in Figs. 3 and 8.

35′ is a pipe extending up from the pipe 35 in front of the valve 35″, said pipe 35′ being provided with an enlarged chamber 37, connected with the pipe 35 on the other side of the valve 35″ by a pipe 38.

39 is a cylindrical piston fitting tightly within the pipe 35 and having a vertical passage 40 and a horizontal connected passage 41 therein.

42 is a stem extending up from the piston 39 through a packing-box 42′, and is borne upon by a lever 43, carrying an adjustable weight 44.

In the type of machine illustrated the baling-rolls are rotated by mechanism in the same direction and at the same surface speed, the core and the bale thereon turning entirely by friction of the baling-rolls, and since the baling-roll 3 is carried in the slotted guides 20 gradually away from the baling-roll 2 as the bale is being formed on the core (the bale being represented in black in Fig. 2) it is necessary to provide driving mechanism by which the baling-rolls may be rotated simultaneously, irrespective of the position which each may occupy as to the other. In the drawings I have illustrated a convenient form of driving mechanism by which the two baling-rolls may be operated and which will now be described, reference being had particularly to Fig. 6, which shows the arrangement of parts in detail.

The shaft 6 of the baling-roll 2 and the shaft 22 of the baling-roll 3 are provided near each end with sprocket-wheels 45 and 46, respectively.

47 and 48 are swinging arms carried by the shafts 6 and 22, said arms being preferably arranged in bearings on each side of the sprocket-wheels and being connected at their lower ends by a link 49.

50 is a sprocket-wheel mounted at the lower end of each set of swinging arms 47, and 51 is a corresponding sprocket-wheel carried by the arms 48. To the shafts of the sprocket-wheels 50 and 51 are keyed gear-wheels 52 and 53, respectively, and mounted between and in mesh with said gears is an idler 54.

55 is a sprocket-chain connecting the sprockets 45 and 50, and 56 is a sprocket-chain connecting the sprockets 46 and 51.

It will be noted that when power is applied to the shaft 6 of the baling-roll 2 the sprocket-

wheels 45 on each side thereof will be rotated, driving the sprocket-wheels 50 in the same direction, and through the gears 52, 53, and 54 operating the sprocket-wheel 51, chain 56, and sprocket-wheel 46, to rotate the baling-roll 3 in the same direction and at the same peripheral speed. As the baling-roll 3 recedes from the baling-roll 2 in the formation of the bale the swinging arms 47 and 48 will be inclined more or less to the horizontal, thereby elevating the links 49, but in no way affecting the rotating elements.

Instead of mounting the core 4 upon independent bearing-pieces 18, as explained, the said bearing-pieces may be simultaneously operated, whereby the removal of the cotton-bale may be conveniently effected by one man at either side of the machine. The mechanism by which this is effected is described and claimed in my divisional application filed January 31, 1898, and numbered, serially, 668,516; but in order to illustrate the capacity of my present invention and the preferred form thereof I have shown this mechanism and will describe the same herein.

Extending up from the main frame 1, on each side thereof, is a rack 57, carried by standards 58, said rack being inclined slightly and parallel with the guide 16. Each of the bearing-blocks 17 of the core is provided with a standard 62, extending up therefrom, in which standards is mounted a horizontal shaft 67 in journal-boxes 68, said shaft carrying a crank 69 at each end thereof. Near each end of the shaft is a sprocket-wheel 66, keyed thereto.

60 is a shaft carried in open journal-boxes at the top of the standard 62 and parallel with the shaft 67. On the ends of the shaft 60 are keyed gear-wheels 59, which engage with the racks 57, so that both of the standards 62 will be moved simultaneously.

63 63 are bearing-spindles made, preferably, of hardened steel and inserted within the screw-threaded shafts 18 for supporting the ends of the core.

64 is a sprocket-wheel splined to each screw-threaded shaft 18, so as to rotate the same, but to allow said shafts to move laterally with respect to each sprocket-wheel. To accomplish this end, the said sprocket-wheels may be held against lateral movement by small fingers formed on the bearing-boxes 17, as shown in Fig. 4. The sprocket-wheels 64 and 66 are connected on each side of the machine by a chain 65. It is obvious that by turning the shaft 67 by crank 69 the sprocket-wheels 64 will be rotated, causing the screw-threaded shafts 18 to be moved laterally within the bearing-boxes 17 for engaging with or disengaging from the core.

In Fig. 7 I have illustrated an improved form of core which is of especial advantage, since by its use the preliminary starting of the bale can be easily effected. I am aware that prior to my invention it had been suggested to provide small projections on the core of a cotton-press for engaging with the cotton and for causing the same to be rolled up thereon; but such a device, while seeking the same end as that which I accomplish, is obviously objectionable. The core 4 (shown in Fig. 7) is made, preferably, of metal tubing, an ordinary piece of gas-pipe being well adapted for this purpose. Secured to this core is a flap 70, held in place preferably by rivets 71, said flap being flexible and made of canvas or of thin sheet metal or of any other suitable material. In starting the bale it is obvious that by inserting the bat between the flap 70 and the core the said flap will be rolled up thereon, carrying the bat therewith when the baling-rolls are rotated. My baling-press operates in the same manner as other devices of this type, the sheet or bat of cotton being formed by any suitable condenser and being passed down an inclined guide or way 72 between the core and the baling-roll 2, so as to be wound up on the core in successive layers until it has reached the desired size. A strip of canvas of the same width as the bale may then be wound one or more times around the same, after which the canvas is cut off and nailed or otherwise secured in place, so as to prevent the bale from expanding materially. A convenient arrangement (shown in Fig. 4) consists in mounting a roll of canvas 61 on the shaft 60, so that the canvas will be always kept immediately over the bale. After the bale has been formed and covered the bearings for the core are withdrawn and the bale is allowed to drop from between the baling-rolls, being received by a curved table 73, by which it is deflected and rolled out through the opening 5 in the front of the press.

As the bale increases in size and weight the wear between the core and its supporting-pieces would be excessive if the core were always maintained in exactly the same plane as the baling-rolls. In order to relieve wear due to this strain, I prefer to mount the bearing-boxes 17 of the core in inclined slotted guides 16, as explained, so that as the bale increases in size and as the core is moved farther away from the baling-roll 2 the core, carrying the bale with it, will be slightly elevated above its normal plane and the weight of the bale will be largely thrown upon the surfaces of the baling-rolls instead of upon the bearings of the core.

When the machine is started, the core 4 is moved over in contact with the baling-roll 2 and the baling-roll 3 is moved up in contact with said core, this being preferably accomplished by admitting water into the cylinders 23 by opening the valve 34, Fig. 1, or 35″, Fig. 3. If, however, the water-pressure is not sufficient for this purpose, the pressure-roll 3 may be moved into contact with the core, so as to hold the same tightly between the baling-rolls, by means of the crank and pinion 32 on either side of the machine, so as to engage the gear-wheels 32 with and roll them upon the racks 31. The valve 34, Figs.

1 and 2, is now closed, and as the bale increases in size the baling-roll 3 will be moved away from the baling-roll 2 and the pistons 26 will be forced into the cylinders 23 against the pressure of the hydrostatic column 35, and by which the desired compression will be effected upon the bale. The two pistons 26 therefore act in the nature of pumps, receiving water through the pipe 33 and forcing the same against the pressure of the hydrostatic column 35 into the tank before referred to. With the arrangement shown in Figs. 3 and 8, the pistons 26 force the water out of the cylinders 23 against the weighted piston 39, causing said piston to be elevated and allowing for the escape of the water through the passages 40 and 41 therein. In the arrangement shown in Figs. 3 and 8 a single tank may be used, which may be connected with the pipe 33, since the valve 35″ may be open when the pistons 26 are to be moved outwardly and closed during the formation of the bale.

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

1. In a cotton-press of the character described, the combination of two baling-rolls, and a core mounted between said baling-rolls in the same horizontal plane therewith, the baling-rolls being movable toward and away from each other, whereby the completed bale may be dropped by gravity from between the baling-rolls, substantially as set forth.

2. In a baling-press of the character described, the combination of two baling-rolls, a core mounted between said baling-rolls and in the same horizontal plane therewith, and means for effecting pressure on the baling-rolls, said baling-rolls being movable away from and toward each other, whereby the completed bale may be dropped by gravity from between the same, substantially as set forth.

3. In a baling-press of the character described, the combination of two baling-rolls, a core mounted between said baling-rolls and in the same horizontal plane therewith, a hydraulic cylinder having a piston connected with the journal-boxes of one of the baling-rolls, and means for offering resistance to the movement of said piston in said cylinder, said baling-rolls being movable toward and away from each other, whereby the completed bale may be dropped by gravity from between the same, substantially as set forth.

4. In a baling-press of the character described, the combination of two baling-rolls, a core mounted between said baling-rolls and in the same horizontal plane therewith, a hydraulic cylinder having a piston connected with the journal-boxes of one of the baling-rolls, a second and smaller cylinder connected with said hydraulic cylinder behind the piston therein, and a piston in said second cylinder adapted to be elevated by the movement of the hydraulic piston to allow for the gradual escape of water from the hydraulic cylinder, said baling-rolls being movable toward and away from each other, substantially as set forth.

5. In a baling-press of the character described, the combination of two baling-rolls, a core mounted between said baling-rolls and in the same horizontal plane therewith, said baling-rolls being movable toward and away from each other, a hydraulic cylinder having a piston connected with the journal-boxes of one of the baling-rolls, a second and smaller cylinder connected with said hydraulic cylinder behind the piston therein, a piston in said second cylinder adapted to be elevated by the movement of the hydraulic piston to allow for the gradual escape of water from the hydraulic cylinder, and means for effecting a graduated resistance to the elevation of the second piston, substantially as set forth.

6. In a baling-press of the character described, the combination of two baling-rolls, a core mounted between said baling-rolls and in the same horizontal plane therewith, said baling-rolls being movable toward and away from each other, a hydraulic cylinder having a piston connected with the journal-boxes of one of the baling-rolls, a second and smaller cylinder connected with said hydraulic cylinder behind the piston therein, a piston in said second cylinder adapted to be elevated by the movement of the hydraulic piston to allow for the gradual escape of water from the hydraulic cylinder, and an adjustable weight on the piston of the said second cylinder, substantially as set forth.

7. In a baling-press of the character described, the combination of a stationary baling-roll, a movable baling-roll, a core mounted between said baling-rolls in the same horizontal plane therewith, the baling-rolls being movable toward and away from each other, means for effecting pressure on the baling-rolls, a shaft carried by the movable baling-roll behind the same and having a gear-wheel keyed near each end thereof, and a rack on each side of the main frame of the machine with which said gear-wheel engages for the purpose mentioned, substantially as set forth.

8. In a cotton-press of the character described, the combination with two baling-rolls mounted in the same substantially horizontal plane, of a core mounted between said baling-rolls and on which the bale is formed, means for constantly rotating the bale, whereby a continuous sheet or bat of cotton may be wound convolutionally thereon, and an inclined apron or guideway for conveying said continuous sheet or bat to the revolving bale, substantially as set forth.

9. In a cotton-press of the character described, the combination of a stationary baling-roll, a movable baling-roll mounted in the same substantially horizontal plane therewith, means for rotating said rolls, means for effecting pressure on the movable baling-roll, and an apron or guideway permanently lo-

cated above the stationary baling-roll for conveying a continuous sheet or bat of cotton between said rolls, whereby said sheet or bat will be wound convolutionally on the bale, substantially as set forth.

10. In a cotton-press of the character described, the combination of a stationary baling-roll, a movable baling-roll mounted in the same substantially horizontal plane therewith, a core mounted between said baling-rolls and on which a continuous sheet or bat of cotton is wound convolutionally while being subjected to pressure of said baling-rolls, means for rotating said baling-rolls, means for effecting pressure on the movable baling-roll, and an apron or guideway permanently located above the stationary baling-roll for conveying said continuous sheet or bat to the rotating bale, substantially as set forth.

11. In a cotton-press of the character described the combination of two baling-rolls mounted in the same substantially horizontal plane and between which the bale is formed, said rolls being movable gradually away from each other as the bale enlarges in size, means for resisting the tendency of said rolls to separate, means for constantly rotating the bale, whereby a continuous sheet or bat of cotton may be wound convolutionally thereon, an apron or guideway for conveying said continuous sheet or bat to the rotating bale, and a guide or table beneath said baling-rolls for receiving the finished bale, substantially as set forth.

12. In a cotton-press of the character described, the combination of two baling-rolls mounted in the same substantially horizontal plane, a core mounted between said baling-rolls and on which the bale is formed, means for effecting pressure on the bale during its formation, means for constantly rotating the bale, whereby a continuous sheet or bat of cotton may be wound convolutionally thereon, an apron or guideway for conveying said continuous sheet or bat to the rotating bale, and a guide or table beneath said baling-rolls for receiving the finished bale, substantially as set forth.

13. In a cotton-press of the character described, the combination of a stationary baling-roll, a movable baling-roll mounted in the same substantially horizontal plane therewith, means for rotating said rolls, means for effecting pressure on the movable baling-roll, an apron or guideway permanently located above the stationary baling-roll for conveying a continuous sheet or bat of cotton between said rolls, whereby said sheet or bat will be wound convolutionally on the bale, and a guide or table beneath said rolls for receiving the finished bale, substantially as set forth.

14. In a cotton-press of the character described, the combination of a stationary baling-roll, a movable baling-roll mounted in the same substantially horizontal plane therewith, a core mounted between said baling-rolls and on which a continuous sheet or bat of cotton may be wound convolutionally while being constantly subjected to the pressure of said baling-rolls, means for rotating said baling-rolls, means for effecting pressure on said movable baling-roll, an apron or guideway permanently located above the stationary baling-roll for conveying said continuous sheet or bat to the revolving bale, and a guide or table beneath said baling-rolls for receiving the finished bale, substantially as set forth.

15. In a cotton-press of the character described, the combination of two baling-rolls and a core mounted between said baling-rolls in the same horizontal plane therewith, means for feeding a continuous sheet or bat to said core, and means for automatically starting the commencement of the winding of said sheet or bat around said core, substantially as set forth.

16. In a cotton-press of the character described, the combination of two baling-rolls and a core mounted between said baling-rolls in the same horizontal plane therewith, means for feeding a continuous sheet or bat of cotton to said core, and a flexible guide-strip in engagement with said core for starting the commencement of the winding of said continuous sheet or bat thereon, substantially as set forth.

17. In a cotton-press of the character described, the combination of two baling-rolls between which the bale is formed, said baling-rolls being movable gradually away from each other as the bale enlarges in size, means for constantly rotating the bale, whereby a continuous sheet or bat of cotton may be wound convolutionally thereon, an operating-lever 15 actuating a clutch for arresting the rotation of the rolls, a cylinder containing a fluid, a piston mounted therein with which one of said rolls is connected, whereby the tendency of the rolls to separate is resisted, means for resisting the flow of liquid from said cylinder by the movement of the piston therein, and a valve adjacent to said operating-lever for allowing the return of the liquid into the cylinder for the formation of a new bale, substantially as set forth.

18. In a cotton-press of the character described, the combination of two baling-rolls mounted in the same substantially horizontal plane and between which the bale is formed, said baling-rolls gradually separating as the bale enlarges, a sprocket-wheel for driving each end of the shaft of each baling-roll, and connections between said sprocket-wheels for driving said baling-rolls, said connections allowing for the separation of said baling-rolls, substantially as set forth.

19. In a cotton-press of the character described, the combination of two baling-rolls mounted in the same substantially horizontal plane, said baling-rolls gradually separating as the bale enlarges, a core mounted between said baling-rolls and on which the bale is formed by convolutionally winding a contin-

uous sheet or bat thereon, a sprocket-wheel for driving each end of the shaft of each baling-roll, and connections between said sprocket-wheels for driving said baling-rolls, said connections allowing for the separation of said baling-rolls, substantially as set forth.

20. In a cotton-press of the character described, the combination of two baling-rolls mounted in the same horizontal plane, means for resisting the tendency of said rolls to separate, and a core adapted upon the accumulation of the cotton to be supported slightly out of the plane of the baling-rolls, whereby the thrust of the bale will be received by the said baling-rolls instead of upon the bearings of said core, substantially as set forth.

21. In a cotton-press of the character described, the combination of two baling-rolls mounted in the same horizontal plane, a core normally in the plane of the baling-rolls and between the same, and means for gradually elevating the core out of its normal plane during the formation of the bale for the purpose mentioned, substantially as set forth.

22. In a cotton-press of the character described, the combination of two baling-rolls, means for effecting pressure on the baling-rolls, a core mounted between said baling-rolls and normally in the same plane therewith, and means for gradually elevating the said core out of its normal plane during the formation of the bale, substantially as set forth.

23. In a cotton-press of the character described, the combination of two baling-rolls, means for effecting pressure on the baling-rolls, means for rotating said baling-rolls simultaneously, a core mounted between said baling-rolls and normally in the same plane therewith, and means for gradually elevating said core out of its normal plane during the formation of the bale, substantially as set forth.

24. In a cotton-press of the character described, the combination of the main frame, two baling-rolls mounted therein in the same horizontal plane, an inclined guide in each side of said frame, a bearing-box working in each of said guides, and a core carried by said bearing-boxes normally in the plane of the baling-rolls and adapted to be gradually elevated out of its normal plane during the formation of the bale, substantially as set forth.

25. In a cotton-press of the character described, the combination of two baling-rolls mounted in the same horizontal plane, one of said rolls being stationary and the other movable, a core normally in the plane of the baling-rolls and between the same, means for gradually elevating the core out of its normal plane during the formation of the bale, a shaft 29 having gear-wheels 32 keyed to the ends thereof, racks 31 with which said gear-wheels engage, and adjustable connections between the movable baling-roll and said shaft for the purpose mentioned, substantially as set forth.

26. In a baling-press of the character described, the combination of two baling-rolls movable toward and away from each other, a core mounted between said baling-rolls and in the same plane therewith, sprocket-wheels 45, 46 carried by the shafts of said baling-rolls, swinging arms 47, 48 extending from said shafts and connected together at the lower ends, sprocket-wheels 50 and 51 at the lower ends of said swinging arms, connections between said sprocket-wheels 50 and 51, and sprocket-chains 55 and 56 connecting said sprocket-wheels 50, 51, and 45, 46, substantially as set forth.

27. In a baling-press of the character described, the combination of a stationary baling-roll, a movable baling-roll, a core mounted between said baling-rolls and movable toward and away from the stationary roll, and a shaft carrying a roll of canvas mounted above said core and traveling back and forth with the same, substantially as set forth.

28. In a cotton-press of the character described, the combination of a main frame, a baling-roll 2 mounted therein, slotted guides 20 in each side of said frame, bearing-boxes 21 carried in said slotted guides, a core 4 mounted in said frame between said baling-rolls, sprocket-wheels 45, 46 carried by the shafts of said baling-rolls, swinging arms 47, 48 extending down from said shafts and connected together at the lower ends thereof, sprocket-wheels 50 and 51 at the lower ends of said swinging arms, connections between said sprocket-wheels 50 and 51, and sprocket-chains 55 and 56 connecting said sprocket-wheels 50, 51, and 45, 46, substantially as set forth.

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

FRANK L. DYER.

Witnesses:

LEONARD H. DYER,

ARCHIE G. REESE.