No. 722,191. PATENTED MAR. 3, 1903.

G. B. TRIPLETT.

BALING PRESS.

APPLICATION FILED SEPT. 8, 1902.

NO MODEL. 4 SHEETS—SHEET 1.

Fig. 1.

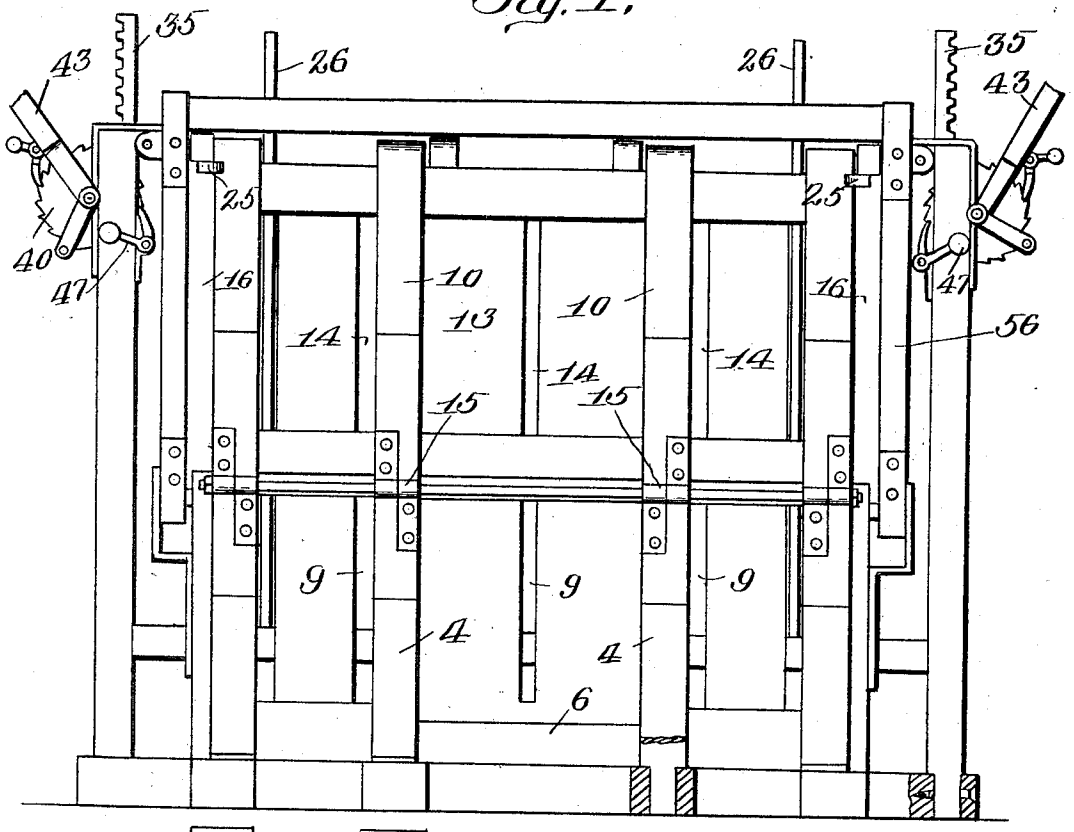
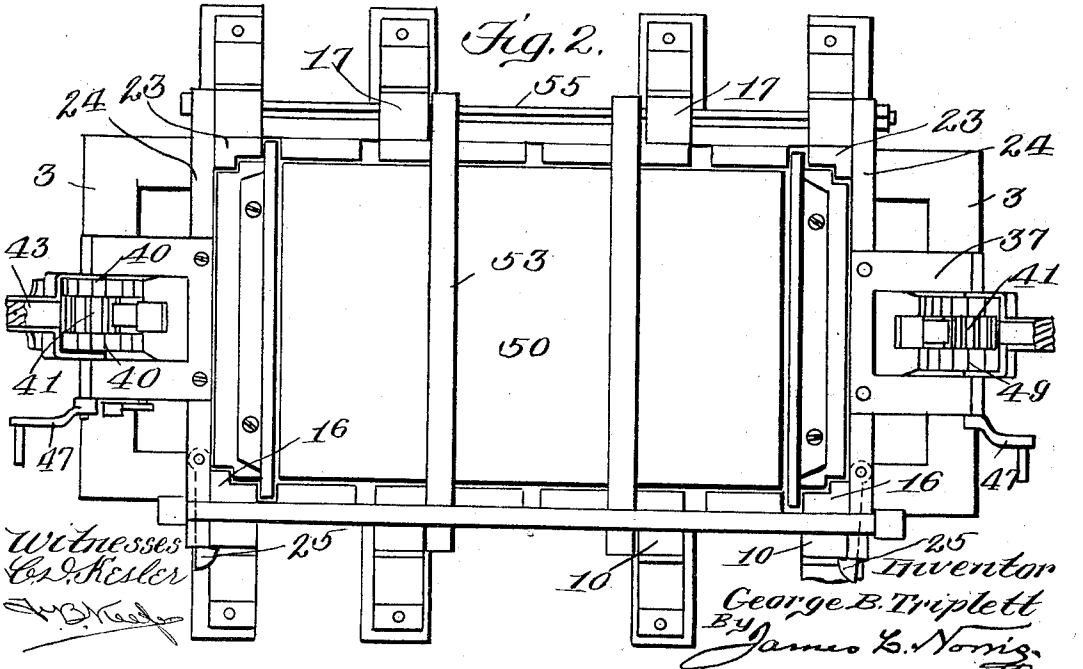


Fig. 2.



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NO MODEL. 4 SHEETS—SHEET 2.

Fig. 4.

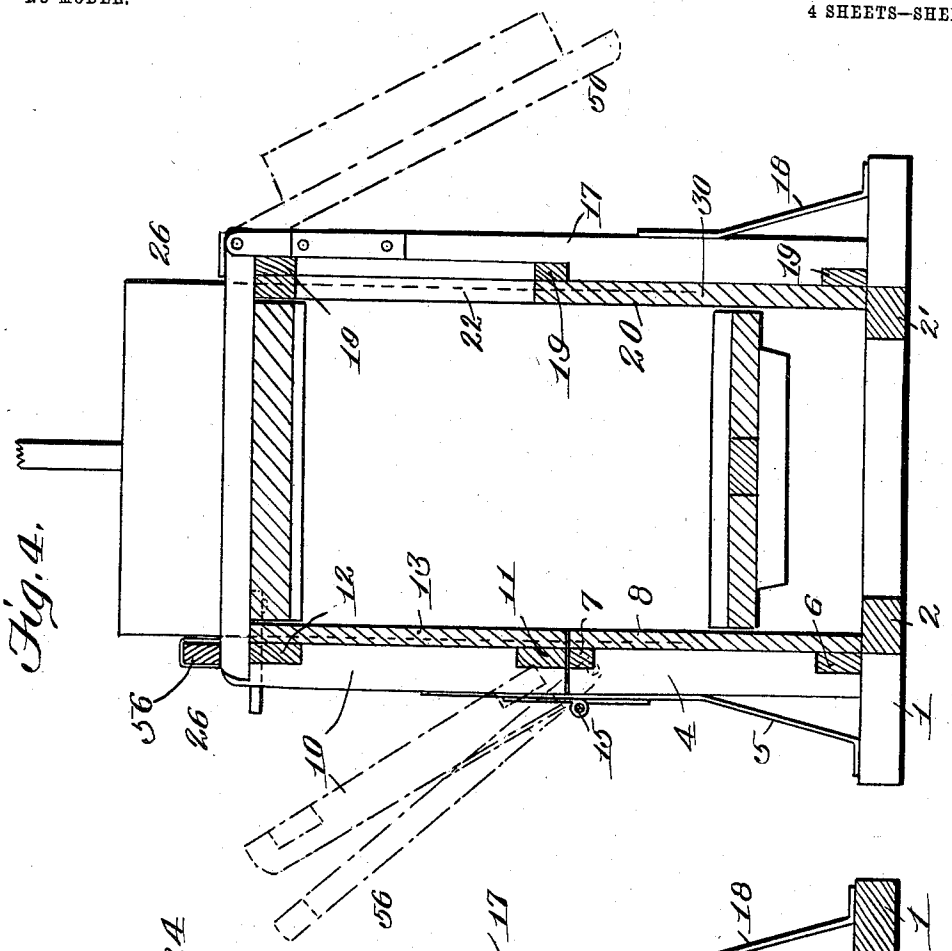
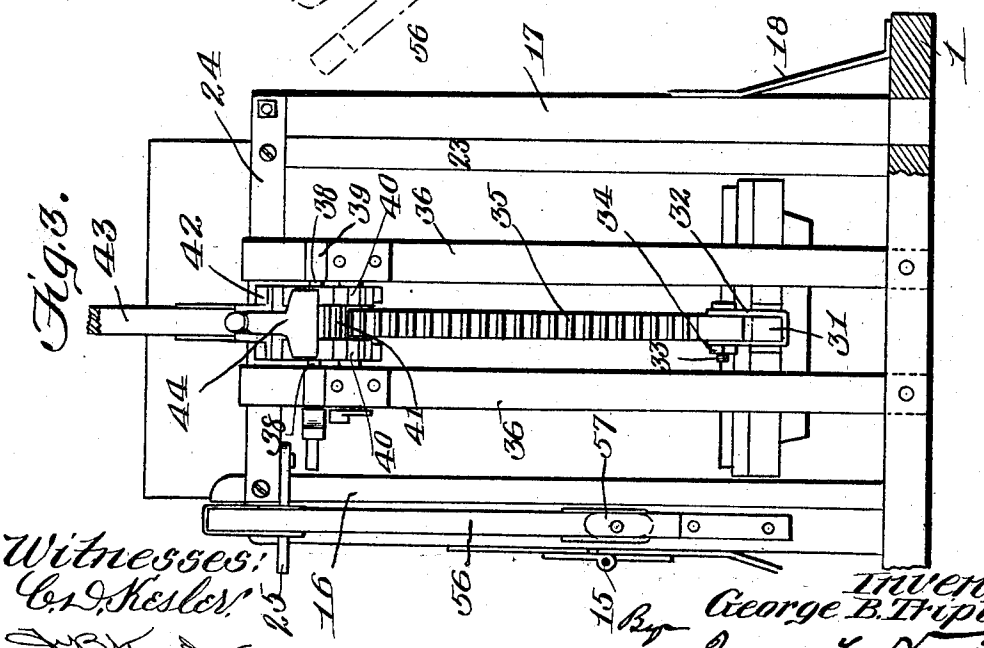


Fig. 3.



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NO MODEL. 4 SHEETS—SHEET 3.

Fig. 5

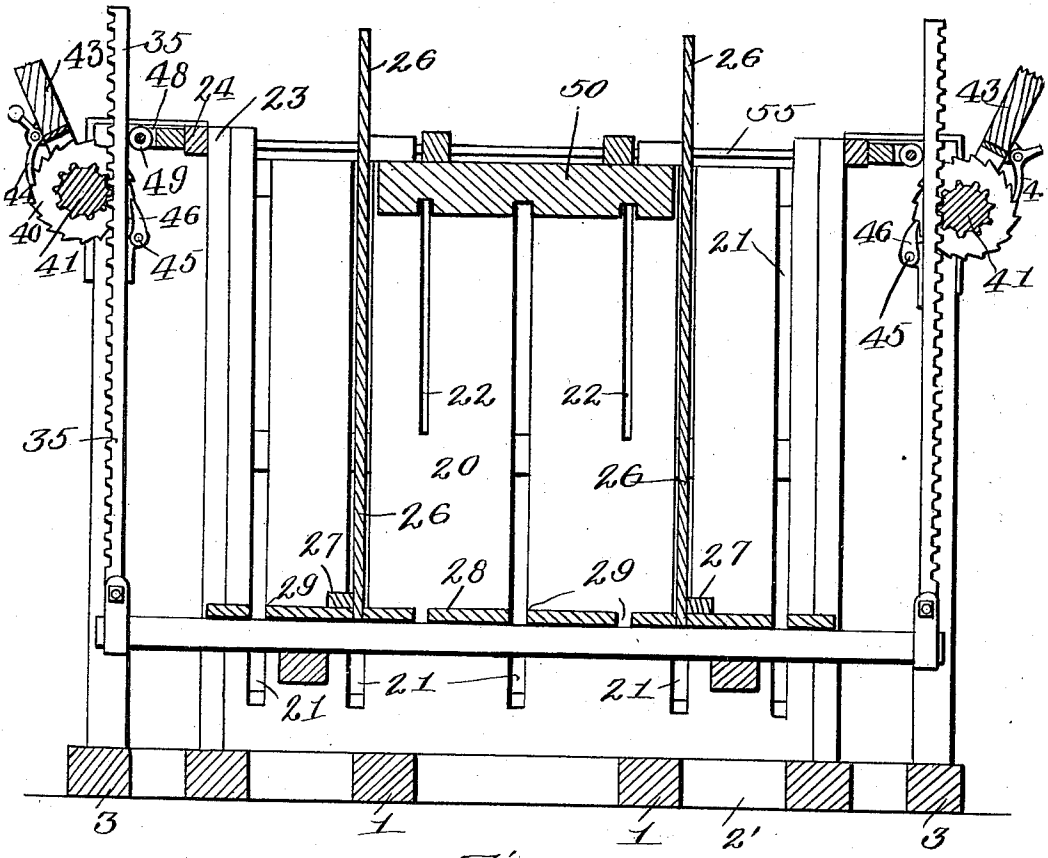
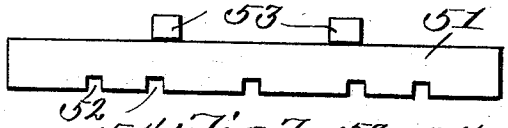
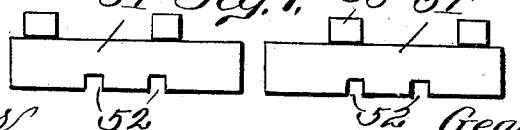


Fig. 6



51' Fig. 7.



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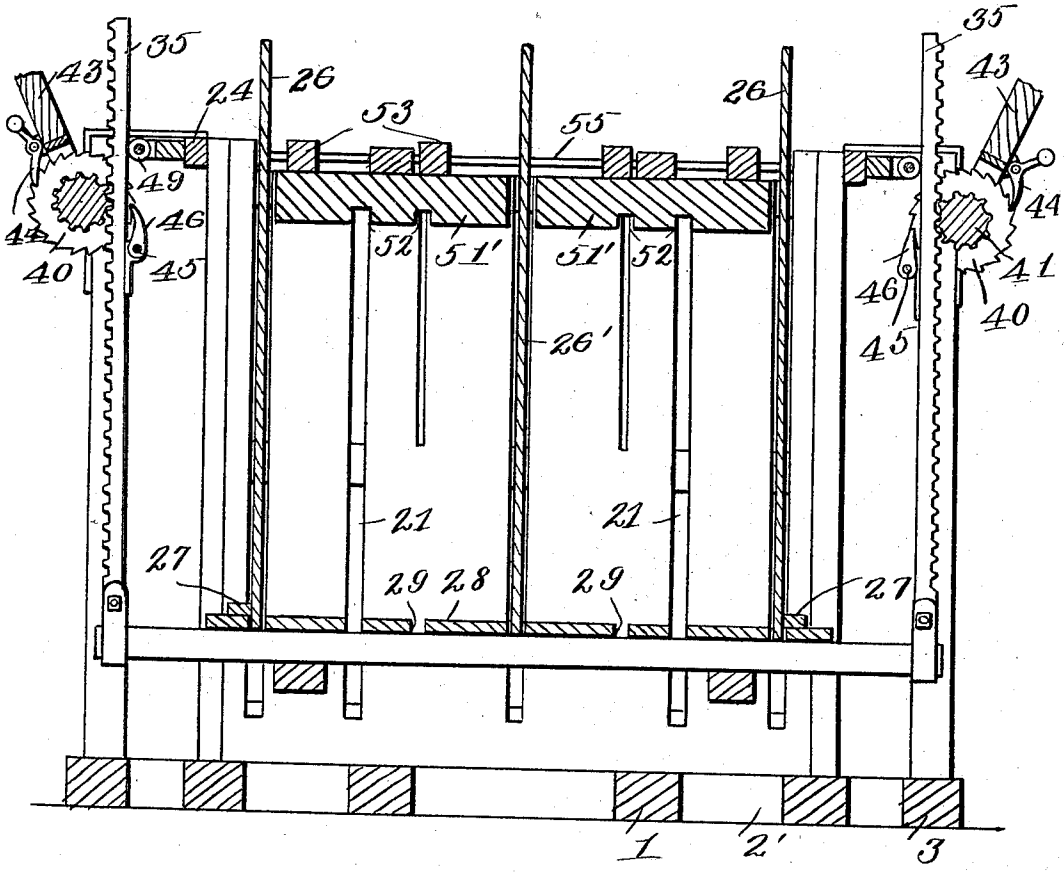
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BALING PRESS.

APPLICATION FILED SEPT. 8, 1902.

NO MODEL. 4 SHEETS—SHEET 4.

Fig. 8.



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UNITED STATES PATENT OFFICE.

GEORGE B. TRIPLETT, OF ALEXANDRIA, VIRGINIA, ASSIGNOR OF ONE-FIFTH TO BEVERLY R. MASON, OF WASHINGTON, DISTRICT OF COLUMBIA.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 722,191, dated March 3, 1903.

Application filed September 8, 1902. Serial No. 122,581. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. TRIPLETT, a citizen of the United States, residing at Alexandria, in the county of Alexandria and State of Virginia, have invented new and useful Improvements in Baling-Presses, of which the following is a specification.

This invention relates to certain new and useful improvements in baling-presses; and the object thereof is to provide a hand-press adapted for baling straw, hay, cornstalks, &c., and which may be very rapidly and conveniently operated.

The invention further aims to provide a portable baling-press constructed in such a manner that the parts can be easily detached from one another and which is also constructed in such a manner as to permit of compressing the material—such as hay, straw, and the like—in bales of various sizes and pressing the material into two separate bales simultaneously.

The invention further aims to construct a baling-press which is portable, detachable, strong, durable, efficient in its use, readily and easily operated by hand, and comparatively inexpensive to set up.

With the above and other objects in view the invention consists of the novel combination and arrangement of parts hereinafter more specifically described, illustrated in the accompanying drawings, and particularly pointed out in the claims hereunto appended.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate corresponding parts throughout the several views, and in which—

Figure 1 is an elevation of the press. Fig. 2 is a top plan view. Fig. 3 is an end elevation. Fig. 4 is a transverse sectional view. Fig. 5 is a vertical central longitudinal section. Fig. 6 is a detail view of one of the press-heads. Fig. 7 is a detail view of a pair of press-heads adapted to be used when pressing a pair of bales simultaneously, and Fig. 8 is a vertical longitudinal section showing the employment of a pair of press-heads when pressing a pair of bales simultaneously.

Referring to the drawings by reference-numerals, the base of the press is preferably constructed of a series of horizontally-extending bars 1, a pair of longitudinally-extending bars, as indicated at 2 2′, and a pair of bars 3. The bars 1, 2, and 2′ are secured together in any suitable manner. The bars 2, 2′, and 3 are connected together to form a rectangular frame of such width that the bars 1 will project from each side of the bars 2 2′. It will be evident that to form the frame the bars 3 are connected to the ends of the bars 2 2′. Each of the bars 1 which projects from one side of the bar 2 has mortised therein a vertically-extending standard 4, of suitable height, supported and braced by the stays 5. To the inner face of the standards 4, at the lower end thereof, is secured a longitudinally-extending connecting-strip 6 of flat material, which is arranged on edge, and to the inner face of the standard 4, near the upper end thereof, is secured a similar strip 7. Secured to the inner face of the strips 6 7 is a rectangular flat piece or panel 8, of suitable material, which is arranged on edge and is provided with a vertically-extending series of elongated slots 9. The standards 4, strips 6 7, and panel 8 form the lower section of the front wall of the press, the said section being stationary. The upper section of the front wall of the press is constructed of a series of uprights 10, which are arranged in vertical alinement with the standards 4 and have secured to their inner faces, near the top and bottom, respectively, the longitudinally-extending strips 11 12. These strips are formed of flat material and are arranged on edge. To the inner face of the strips 11 12 is secured a rectangular flat piece or panel 13, of suitable material, which is arranged on edge and provided with a series of vertically-extending slots 14, which register with the slots 9 of the lower section of the front wall. The upper and lower sections of the front wall are hinged together by means of the hinges 15, secured to the uprights 10 and the standards 4.

The reference-numeral 16 denotes a pair of guide-rails, each of which consists of a stationary bar of a height equal to more than the combined height of the two sections forming the front wall. The bars 16 project

slightly above the hinged section of the front wall and form a stop, the function of which will be hereinafter described. The bars 16 are secured at their lower ends to the bars 2 and arranged one near each side edge of the front wall and so that they will abut against the inner face of each outer upright 10 and each outer standard 4.

The rear wall of the press is formed of a series of vertical standards 17, which are secured and mortised in that portion of the bars 1 which projects from one side of the bar 2'. The standards 17 are of a height equal to that of the standards 4 and uprights 10 of the front wall. The standards 17 are supported and braced by the stays 18, secured thereto and to the projecting portion of the bars 1, in which the standards 17 are secured. Secured to the inner face of the standards 17, at the top, center, and bottom thereof, is a series of longitudinally-extending flat strips 19 of suitable material. Secured to the inner face of the strips 19 is a flat piece or panel 20, of suitable material, of such height as to extend from the bar 2' to the top edge of the upper of the strips 19. The panel 20 is provided with a series of vertically-extending slots 21, arranged opposite the slots 9 and 14 of the front wall. These slots 21 extend from near the bottom of the panel 20 to the top thereof. The panel 20 is also provided with the slots 22, arranged between the slots 21. These slots 22 are arranged between the elongated slots 21 and are of a length approximately half of the panel 20.

The reference-numeral 23 denotes a pair of guides, each of which consists of a stationary bar secured to the bar 2' and of a height equal to that of the standards 17. These bars are arranged one near each side edge of the rear wall and so that they will abut against the inner face of the outer of the standards 17. The guides 16 and guides 23 are connected together near their top by means of the horizontally-extending cross-bars 24. The front ends of the cross-bars 24 are secured to the guides 16 a suitable distance below the top thereof, virtually in alinement with the top of the upright 10, and each has secured to its lower face a pivoted latch 25.

The reference-numeral 26 denotes the end walls of the press. These walls are constructed of a single piece of flat material, and each has secured to its outer face near the bottom edge a strip of material 27, forming a ridge or shoulder, the function of which will be hereinafter referred to. The end walls 26 are removable as well as adjustable. The end walls 26 are adapted when in position to be inserted within one of the slots 9 14 of the front wall and slots 21 of the rear wall—that is to say, opposite slots in the front and rear walls. By providing the front and rear walls with a plurality of series of slots 21, 9, and 14 it will permit of the end walls being placed at various points, so that the length of the bale can be made of various sizes, or, in other words, it enables the end walls to be adjustable, so that various-sized bales can be compressed.

The reference-numeral 26' denotes the central wall of the press, which is constructed of a single piece of material and which is adapted to be inserted in the central opening of the series of openings 9, 14, and 21. The central wall 26' is employed in connection with the end walls 26 when pressing two bales of material simultaneously and is removable as well as adjustable, as the same can be used for one of the end walls 26, if desired.

The reference-numeral 28 denotes the bottom of the press, which has formed in its upper face a series of horizontally-extending grooves or channels 29, adapted to register normally with the slots 9 and 21 and when the bottom is raised or elevated in the manner as hereinafter described to also register with the slots 14. The grooves or channels 29 are adapted to receive the lower end of the end walls 26 26. The shoulder or ridge formed by the strip 27 of the end walls is adapted to engage the upper face of the bottom. The lower corners of the end walls are cut away, as at 30, so that when the end walls are in position they will not only extend in the grooves or channels 29, but also into the slots 9, 14, and 21. The bottom 28 at each end thereof has secured thereto centrally thereof an arm 31. The outer end of each of these arms 31 is provided with a yoke 32 for connecting to the said arms 31, by means of the bolt 33 and nut 34, a toothed rack-bar 35 of a height substantially equal to that of the front and rear walls of the press. The arms 31 are of such length as to extend from the bottom to cover the bars 3. Arranged at each side of the rack-bar 35 and secured at its lower end to the bars 3 is a vertical supporting-standard 36 of a height equal to that of the front and rear walls. The upper ends of the standards 36 are attached to the cross-bars 24 by means of the fastening-brackets 37.

The reference-numeral 38 denotes a pair of shafts, one of which is connected to a pair of standards 36, near the top thereof, by means of the bearings 39. Each of the shafts 38 carries a pair of ratchet-wheels 40, and between each pair of ratchet-wheels is arranged a pinion 41 upon the shaft 38 and which engages with the teeth of the bar 35. The shaft 38 also carries a yoke 42, to which is secured an operating-lever 43, carrying a spring-pressed pawl 44. The latter is adapted to engage with the ratchet-wheels 40 for rotating them, imparting a like movement to the shaft 38 and pinion 41, as well as a vertical movement to the rack-bar 35, which carries the bottom and sides of the press therewith. Secured to the inner face of each pair of standards 36 is a shaft 45, provided with the stop-pawls 46. The shaft 45 is operated by means of a crank 47. Secured to the outer face of each of the cross-bars 24 is a bearing-bracket 48, in which is journaled an antifriction-roller 49, the lat-

ter bearing against the rack-bar 35 and retaining the same in engagement with the pinion 41.

The reference-numeral 50 denotes one of the press-heads used when pressing a single bale, the reference-numeral 51 denotes a press-head used when pressing a single bale of a different size, and the reference-numeral 51′ denotes a pair of press-heads which are employed when pressing a pair of bales simultaneously. As shown, the press-head 50 is adapted for use when pressing a small bale and the press-head 51 for pressing a large bale. It is obvious that it is necessary to use various-sized press-heads when compressing various-sized bales. Each of the press-heads has its lower face formed with a plurality of grooves or channels 52, which are used when wiring the bales. The upper face of each of the press-heads has secured thereto a pair of longitudinally-extending strips 53 of suitable material and of such length that they project from each side of the head. The projecting ends of the strips 53 are of such length that they extend to the outer edges of the standards 17 and uprights 10. Through the projecting ends of the strips 53 and standards 17 extends a suitable bar 55 for pivotally connecting either of the heads to the standards. The projecting ends of the strips 53 also engage the top edge of the front and rear walls, so that the head will be supported upon the front and rear walls by the strips 53. The projecting front ends of the strips 53 are adapted to be engaged by a yoke 56 for clamping the head, so that it will be secured to the front and rear walls during the compressing operation. The yoke 56 is pivoted to the stationary section of the front wall, as at 57.

The function of the pivoted latches 25 is to secure the hinged section of the front wall in a vertical manner, and these latches are arranged in such a manner that when the yoke 56 engages the front portion of the strips 53 it will pass the said latches. The function of the slots 22 is, when the bale is compressed and the hinged section of the front wall lowered, to enable the operator to wire the bales, the grooves or channels 52 of the heads also assisting to permit of the wiring. The standards 36 are detachably connected to the bars 3, so that they can be easily removed when desired. The standards 4 and 17 are detachably connected to the bars 1, so that they can be easily removed when desired. By such a construction the press is virtually a knockdown one, the parts being easily separated for shipment, or when it is desired to store the press—that is to say, by knocking down the press—the same can be formed in a compact manner for storing or shipping. As before stated, it is evident that by providing the slots 9, 14, and 21 and grooves or channels 29 the end pieces or end walls can be adjusted so that the material can be pressed to various-sized bales.

The operation of the device when compressing a single bale is as follows: The end walls are placed in position at the point desired and the hinged section of the front wall brought to a vertical position and secured in such position by means of the latches 25. The material to be pressed is then placed within the press, and the head 50 or 51 is closed down and secured in such position by means of the yoke 56. The lever 43 is then grasped, and by moving the same back and forth the pawl 42 will engage in the ratchet-wheels 40, rotating the pinion 41, which engages with the bar 35, and vertically elevating the bottom 28 and end walls 26, compressing the material within the press. The ratchet-wheels are arrested from movement in an opposite direction by means of the stop-pawls 46. When pressing a pair of bales simultaneously, the central wall 26′ is inserted in the central opening of the bottom and of each center opening of the series of openings 9, 14, and 21. The pair of heads 51′ are then secured in position in the same manner as the head 50 or 51. The operation of the apparatus is the same as that above referred to. When the bale or bales has or have been compressed and it is desired to wire the same, the latches 25 are disengaged from the hinged upper section of the front wall, the same is lowered, and the bale or bales wired. When it is desired to remove the bale or bales, the yoke is lowered, the head-piece is swung backward, and the hinged section of the front wall is lowered, which will permit of the bale being removed.

It is thought the many advantages of my improved hay-press can be readily understood from the foregoing description, taken in connection with the accompanying drawings, and it will also be evident that I have devised a simple, inexpensive, and novel construction of portable knockdown baling-press which can be readily set up, and it will furthermore be evident that changes, variations, and modifications may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages, and I therefore do not wish to restrict myself to the details of construction hereinbefore described and as shown in the accompanying drawings, but reserve the right to make such changes, variations, and modifications as come properly within the scope of the protection prayed.

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

1. In a baling-press, a base, front and rear walls secured thereto, a bottom, vertically movable and adjustable walls removably secured in said front and rear walls and said bottom, and means supported by the base and connected with the bottom for vertically moving the latter and said adjustable walls.

2. In a baling-press comprising a front and rear wall, a head hinged to the rear wall, a removable bottom, vertically movable and adjustable walls removably secured in said

front and rear walls and said bottom, and means connected with the bottom for vertically moving the same and said adjustable walls.

3. In a baling-press, rear and front walls, a vertically-movable bottom arranged between said walls, vertically movable and adjustable walls removably secured in said front and rear walls and said bottom, and means connected with the bottom and adapted when operated to impart a vertical movement to said adjustable walls and said bottom.

4. In a baling-press, a base, front and rear walls detachably secured thereto, a vertically-movable bottom arranged between the said walls, vertically movable and adjustable walls removably secured in said front and rear walls and said bottom, means connected with the bottom and adapted when operated to impart a vertical movement thereto and said adjustable walls, and means detachably secured to the base for supporting the said operating means.

5. In a baling-press, front and rear walls, a vertically-movable bottom arranged between said walls, vertically movable and adjustable walls removably secured in said front and rear walls and said bottom, a pair of toothed rack-bars connected with the bottom, means engaging with the said rack-bars and adapted when operated to impart vertical movement to said rack-bars imparting a like movement to said bottom and walls, and two pairs of vertical standards for supporting the said operating means for the rack-bars.

6. In a baling-press, a base, a rear wall detachably secured thereto, a front wall consisting of a hinged and a stationary section detachably secured to said base, a pair of vertical standards detachably secured to each end of the said base, a vertically-movable bottom arranged between the said front and rear walls, vertically movable and adjustable walls removably secured in said front and rear walls and said bottom, a rack-bar connected to each end of said bottom, means connected to each pair of said standards at the upper end thereof and engaging the said rack-bars for operating them imparting thereby a vertical movement to said bottom and adjustable walls, a press-head hinged to said rear wall, and means connected to the stationary section of the front wall and adapted to engage the press-head for securing it to the said front wall.

7. In a baling-press, a front and rear wall, each of said walls provided with a plurality of diametrically opposite elongated slots, said slots extending approximately the length of the said walls, said rear walls further provided with a plurality of elongated slots approximately half the length thereof, a vertically-movable bottom arranged between said walls and provided with grooves registering with the elongated slots of the front and rear walls, vertically movable and adjustable walls adapted to be removably secured in the grooves of the bottom and the elongated slots of the front and rear walls, a press-head suitably connected to the top of the said front and rear walls, said press-head provided with grooves registering with the slots which extend half the distance of the rear wall, and means connected with the bottom and adapted when operated to impart a vertical movement to said bottom and adjustable walls.

8. In a baling-press, side and front walls, guides arranged against the inner face of each of said walls, a vertically-movable bottom arranged between said walls and adapted to be engaged by the said guides, vertically movable and adjustable walls removably secured in said front and rear walls and said bottom, means connected with the bottom and adapted when operated to impart a vertical movement to said adjustable walls and said bottom, a pawl-and-ratchet mechanism engaging the said means for operating it, and a pair of standards for supporting the said pawl-and-ratchet mechanism.

9. In a baling-press, a base, side and front walls suitably connected thereto, a vertically-movable bottom arranged between said walls, guide-bars for the said bottom suitably secured to the said base and arranged at each end of the said walls, cross-bars connecting the guide-bars together, vertically movable and adjustable walls removably secured in the front and rear walls and said bottom, an arm connected to each end of the bottom, a rack-bar secured to each of the said arms, antifriction-rollers connected with the cross-bars and adapted to engage the rack-bars, a pair of standards suitably secured to each end of the said base, and a pawl-and-ratchet mechanism carried by the upper end of said standards and engaging the rack-bars and adapted when operated to vertically move the said rack-bars imparting a like movement to said bottom and said adjustable walls.

10. In a press, a rear wall provided with a plurality of elongated slots, a front wall consisting of a stationary and a hinged section each of which is provided with a plurality of elongated slots diametrically opposite the slots in the rear wall, a vertically-movable bottom arranged between said front and rear walls and provided with grooves registering with the elongated slots of the said walls, removable and adjustable walls adapted to be removably secured in the slots of the said front and rear walls and the grooves of the said bottom, a press-head hinged to the rear wall and adapted to be suitably connected to the front wall, and means engaging with the bottom and adapted when operated to impart a vertical movement to said bottom and said adjustable walls.

11. In a press, a base, a stationary rear wall detachably secured to said base and provided with a plurality of elongated slots, a front wall consisting of a stationary and a hinged section each of which is provided with a plurality of elongated slots diametrically oppo-

site the slots of the rear wall, said stationary section of the front wall adapted to be detachably connected to the said base, a vertically-movable bottom arranged between the front and rear walls and provided with grooves registering with the elongated slots of the said walls, vertically movable and adjustable walls removably secured in the slots of the said front and rear walls and the grooves in the said bottom, a pair of standards detachably connected to each end of said base, means supported by the upper end of the standards and connected with the said bottom and adapted when operated to vertically move the bottom and the adjustable walls, and a press-head suitably connected to said front and rear walls.

12. A baling-press comprising in its construction front and rear walls, a vertically-movable bottom, a pair of vertically movable and adjustable end walls engaging in said bottom and front and rear walls, a vertically movable and adjustable center wall engaging said bottom and said front and rear walls, means connected with the front and rear walls for closing the top thereof, and means connected with the bottom and adapted, when operated, to simultaneously impart a vertical movement to said end walls, center wall and bottom.

13. In a baling-press, a base, front and rear walls secured thereto, a bottom, a series of vertically movable and adjustable walls secured between said front and rear walls and engaging said bottom, said walls adjustable for the purpose of pressing a pair of bales simultaneously, and means supported by the base and connected with the bottom for vertically moving the latter and said adjustable walls.

14. In a baling-press, front and rear walls, a bottom operating between said walls, means for vertically moving the bottom between the said walls, adjustable walls carried by the bottom, movable therewith and arranged between the said front and rear walls, and means for closing the parts at the top of said rear and front walls.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GEORGE B. TRIPLETT.

Witnesses:
JOHN L. FLETCHER,
DENNIS SUMBY.