

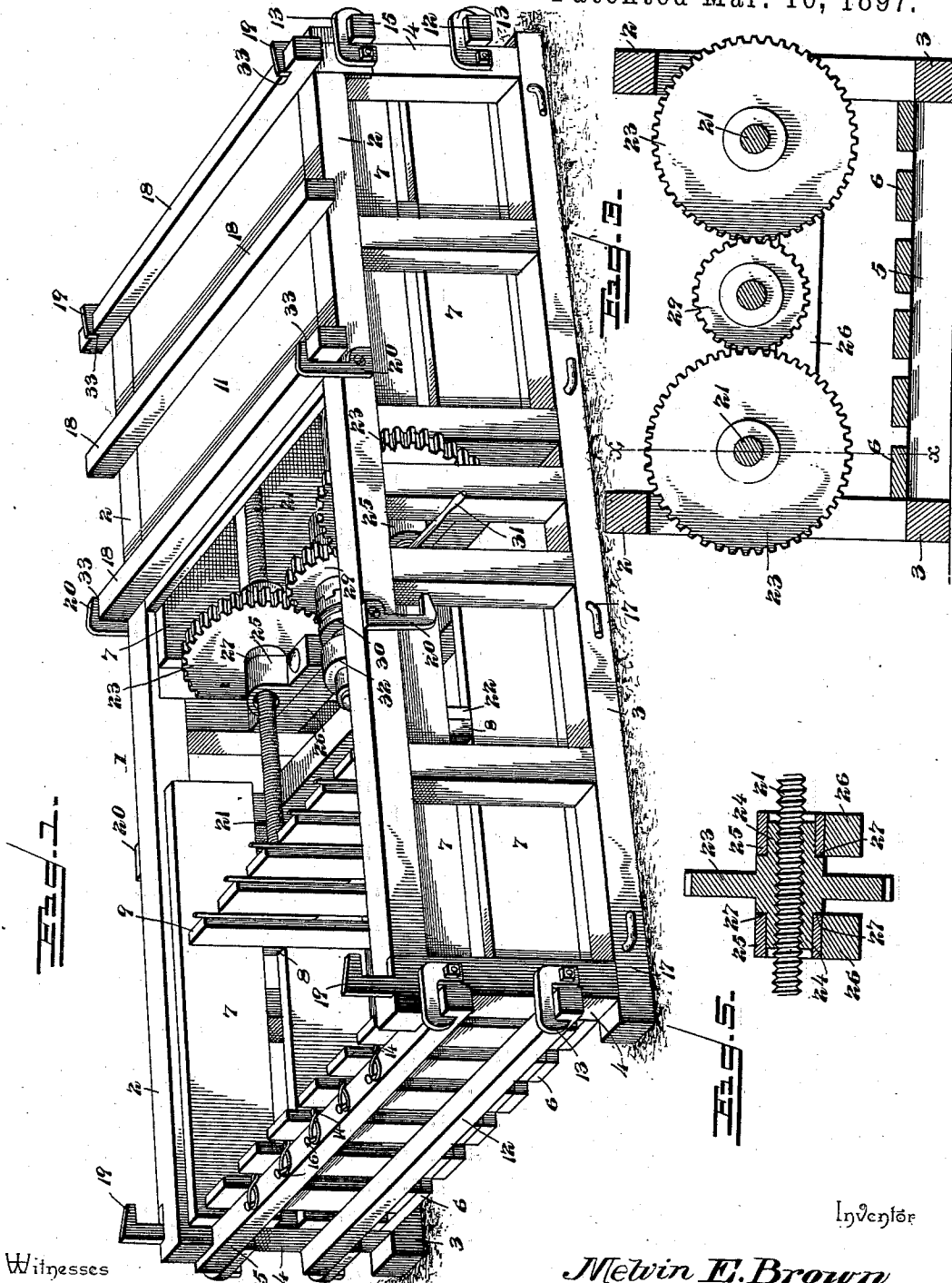
(No Model.)

M. E. BROWN.
BALING PRESS.

2 Sheets—Sheet 1.

No. 578,857.

Patented Mar. 16, 1897.



Witnesses

C. H. Stewart,
V. B. Hillyard.

By *his* Attorneys.

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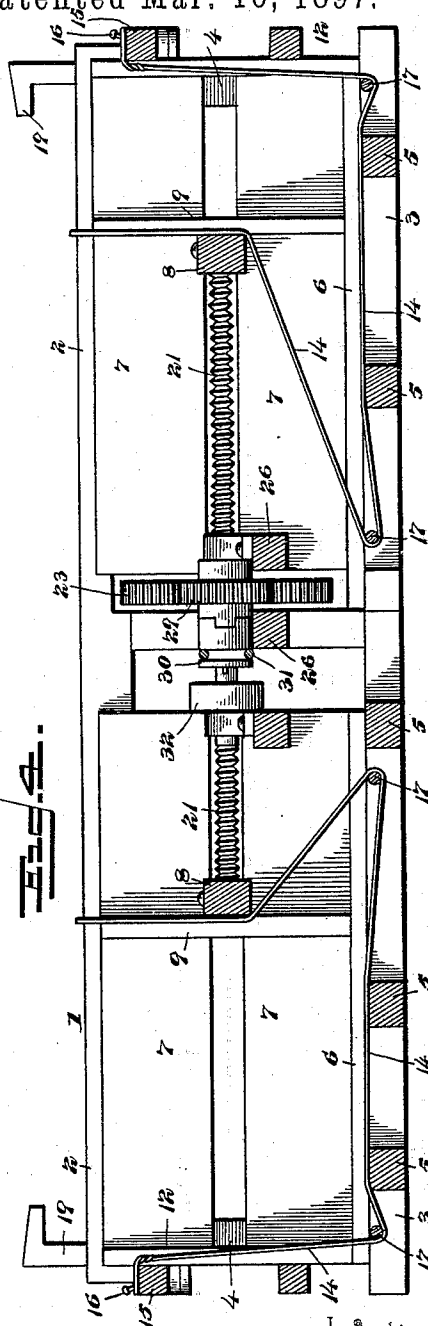
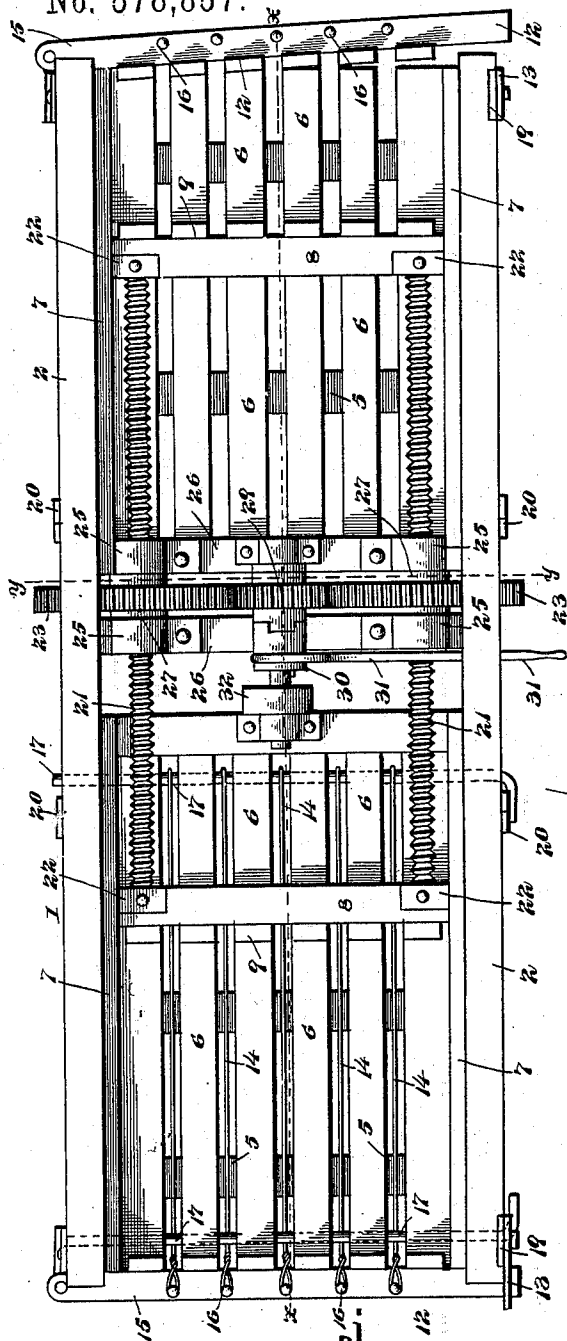
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Inventor

Melvin E. Brown

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UNITED STATES PATENT OFFICE.

MELVIN E. BROWN, OF NEWMAN, ILLINOIS.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 578,857, dated March 16, 1897.

Application filed June 8, 1895. Serial No. 552,127. (No model.)

To all whom it may concern:

Be it known that I, MELVIN E. BROWN, a citizen of the United States, residing at Newman, in the county of Douglas and State of Illinois, have invented a new and useful Baling-Press, of which the following is a specification.

This invention relates to that class of baling-presses which embody in their organization two baling-chambers in which the material to be compressed is alternately packed and formed into bales, and two followers operatively connected and disposed to reciprocate in the baling-chambers to compress the bale and force the latter from the said baling-chambers, and actuating mechanism for operating the said followers.

The primary object of the invention is to improve the general construction of this class of presses; and to this end the improvement consists of the novel features and the peculiar construction and combination of the parts which hereinafter will be more fully set forth and claimed, and which are shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a baling-press constructed in accordance with and embodying the essence of the invention. Fig. 2 is a top plan view of the same, the cover being removed and one end-gate being partially opened. Fig. 3 is a cross-section on the line Y Y of Fig. 2, showing the actuating mechanism. Fig. 4 is a longitudinal section of a baling-chamber on the line X X of Fig. 2, showing the manner of stringing the binding wires or strands. Fig. 5 is a cross-section of one of the feed gear-wheels on the line X X of Fig. 3.

The press comprises similar side pieces 1, formed of upper and lower longitudinal beams 2 and 3, extending in parallel relation and connected by vertical posts 4, and a series of cross-beams 5, connecting the longitudinal beams 3, and upon which are placed the slats 6, forming the bottom of the structure. Side boards 7 are fastened to the vertical posts 4, and have their opposing edges spaced apart to receive the ends of the cross-bars 8 of the followers 9, and guide the latter in their reciprocating movements. These side boards inclose and form the sides of the baling-chambers 10, formed at opposite ends of the press. The

upper edges of the top side boards form guides for the cover 11 to move on when the latter is slid from one baling-chamber to the other, it being understood that only one cover is necessary, inasmuch as only one bale is compressed at a time. The outer ends of the baling-chambers are closed by end-gates 12, which are hinged at one end to a side of the structure, and which have their opposite ends held closed by hooks or similar fastenings 13, secured to the opposite side of the press and engaging with a batten or cleat of the said end-gates. The end-gates and the followers, like the bottom of the press, comprise slats which are spaced apart to provide passages for the stringing of the binding wires or strands 14. The top batten or cleat 15 of the end-gates is provided with a series of pins 16 opposite the spaces between the slats for engagement therewith of one end of the binding wires or strands 14, and said binding wires or strands pass downwardly between the slats of the end-gates, horizontally between the slats of the press-bottom, and upwardly in the spaces between the slats of the followers, as most clearly indicated in Figs. 1 and 2 of the drawings.

Transverse rods 17 are located at the ends of each baling-chamber below the bottom slats and are removably inserted in openings formed in the longitudinal beams 3, and these rods serve to sustain the binding wires or strands at the points where they bend when extending vertically from a horizontal position. It must be remembered that these rods 17 are removed after the bale has been sufficiently compressed, so as to admit of the binding wires or strands being drawn taut around the bale and bind the latter in the usual manner. After a bale has been bound and removed from its baling-chamber, the rods 17 are placed in position, so as to sustain a new set of binding wires or strands in the manner just described.

The cover 11 is of such width as to be comprised between the longitudinal beams 2 and is supported upon the top edges of the upper side boards 7 and is strengthened by cross-bars 18, whose ends are adapted to rest upon the longitudinal beams 2 and project beyond the side thereof to be engaged by suitable fastenings. At each end of the press is located a pair of hooked fastenings 19, which

project vertically above the longitudinal beams 2, so as to engage with the projecting ends of the extreme cross-bars 18 when the cover is in proper position. It will be understood that when the cover is at one end of the press one pair of the fastenings 19 will engage with one extreme cross-bar, and when the said cover is at the opposite end the other pair of fastenings will engage with the opposite extreme cross-bar of the cover, as will be readily understood. Two pairs of pivoted hooked fastenings 20 are located midway the ends of the press and are adapted to engage with the relatively inner cross-bar 18 and serve, in conjunction with the hooked fastenings 19, to firmly secure the cover in place, and by having these hooked fastenings 20 pivoted they can be turned down out of the way when it is required to slide the cover from one baling-chamber to the other.

The followers 9 are connected together by side feed-screws 21, which extend in parallel relation and have their ends suitably attached to bearing-irons 22, made fast to the ends of the cross-bars 8, and upon these feed-screws are mounted similar gear-wheels 23, which have threaded openings to correspond with the thread of the said feed-screws, and these gear-wheels have tubular journals 24, which obtain bearings in pillow-blocks 25, secured upon transverse beams 26, made fast at their ends to the sides of the press. The inner portion of the tubular journals 24 is enlarged to provide annular shoulders 27, which are comprised between opposite pillow-blocks and bear laterally against the inner sides thereof to prevent any relative longitudinal movement of the gear-wheels upon their respective feed-screws. By means of this construction the pillow-blocks sustain all strain, thereby preventing any binding and straining of the feed-screws except that incident to the engagement of the working threaded faces between these parts.

A master-pinion 28 is loosely mounted upon a short shaft 29, journaled at its ends in bearings provided upon similar transverse beams 26, and said pinion meshes with the gear-wheels 23 to positively rotate the latter when the master-pinion is in gear with the drive-shaft 29. A clutch-sleeve 30 is mounted upon the drive-shaft 29 and is movable thereon in and out of gear with the master-pinion 28 to cause the latter to revolve with the shaft 29 or become ungeared therefrom in a manner well understood, and said clutch-sleeve is operated by a shipper-lever 31, extending within convenient reach of the attendant. A band-pulley 32 is mounted upon the shaft 29 and is driven from a suitable source of power in any desired manner.

When the press is in use, the binding wires or strands are strung in the baling-chamber in the manner set forth, and the material—broom-straw, cotton, hay, &c.—is packed into the baling-chamber thus arranged and is

closed by the cover and the pinion 28 thrown in gear, so as to operate the gear-wheels 23 in the proper direction and move the follower to compress the said material and form the bale, and after the bale has been formed the cover is removed and the bale bound in the ordinary way. During the compression of the bale previously packed into the first-mentioned baling-chamber the second baling-chamber is fitted with binding wires or strands and the material to be baled is placed therein, and after the bale is formed in the first chamber and bound the end-gate is opened and the follower actuated, so as to push the bale therefrom. This operation results in enlarging the second chamber to its fullest capacity and enables it to be properly packed. After the second chamber is properly filled the cover is placed thereover and the actuating mechanism reversed and thrown in gear to compress the bale in the second chamber, thereby leaving the first chamber free to be prepared for the formation of another bale in the manner described. In moving the cover from one chamber to the other it is not necessary to lift the same, as it can be slid upon the upper edges of the top side boards 7, as previously intimated.

In assembling and relatively disposing the operating parts in presses of different styles in accordance with the spirit of the present invention it must be understood that changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

To prevent the spreading of the sides of the press when compressing the bale, it has been found necessary to provide the projecting end portions of the cross-bars 18 with notches 33, into which the hooked fastenings enter and form lateral stays, as will be readily understood.

Having thus described the invention, what is claimed as new is—

In a baling-press, the combination with end baling-chambers and mechanism for alternately compressing the bales therein, of pairs of fixed fastenings at the outer ends of the said chambers, corresponding pairs of pivoted fastenings at the inner ends thereof, and a cover adapted to be slid from one baling-chamber to the other and provided with cross-bars which have their end portions projected beyond the sides of the press and notched to alternately receive the respective fixed and pivoted fastenings whereby the said cover is held in place and the press braced at its open side, substantially in the manner set forth.

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

MELVIN E. BROWN.

Witnesses:

T. H. HARPER,
SCOTT BURGETT.