

HAY PRESS.

Patented Nov. 7, 1911.

2 SHEETS—SHEET 1.

Witnesses

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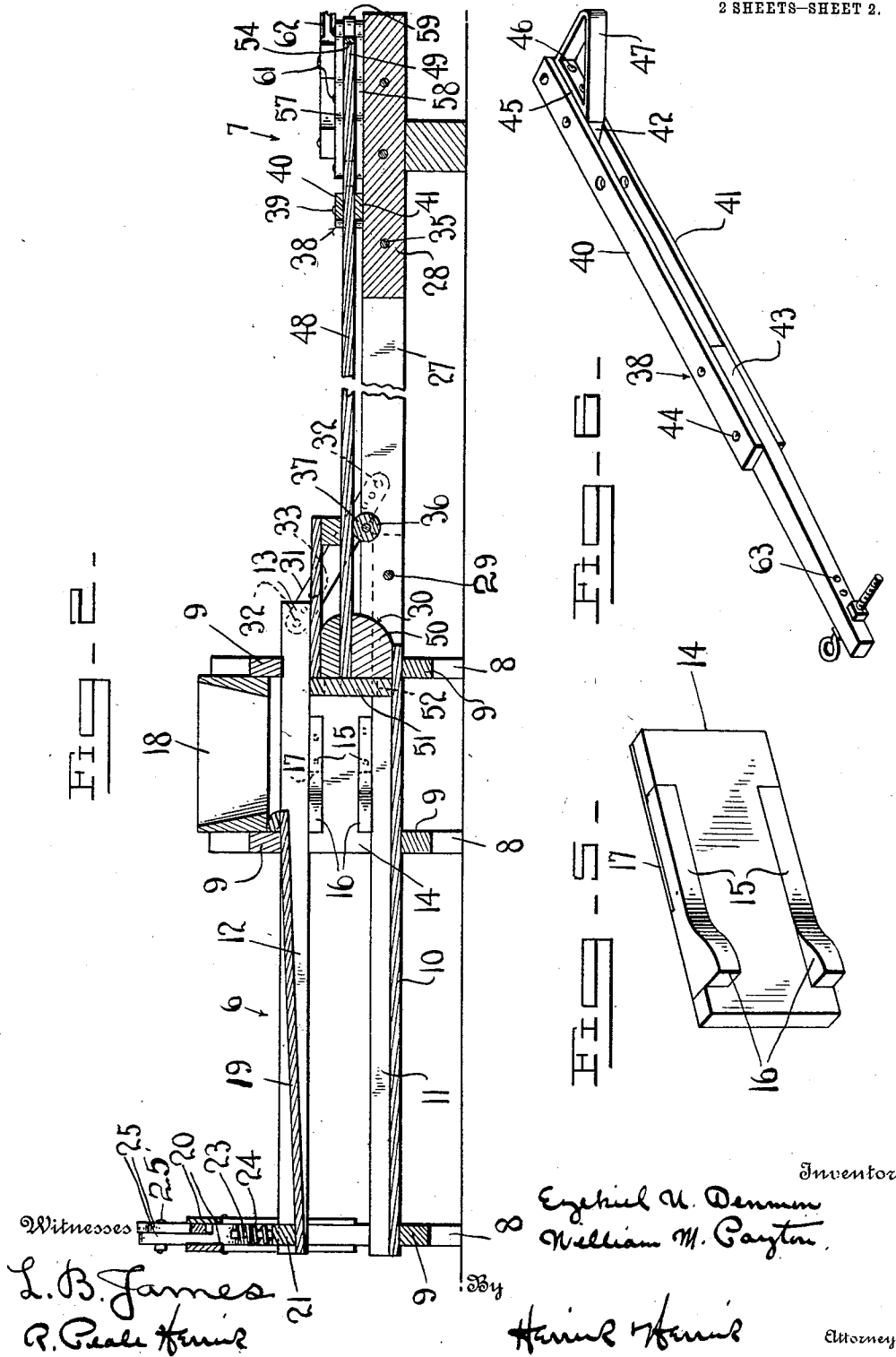
HAY PRESS.

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2 SHEETS-SHEET 2.



Witnesses

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HAY-PRESS.

1,008,021.

Specification of Letters Patent.

Patented Nov. 7, 1911.

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To all whom it may concern:

Be it known that we, EZEKIEL U. DENMON and WILLIAM M. PEYTON, citizens of the United States, residing at Plain Dealing, in the parish of Bossier and State of Louisiana, have invented certain new and useful Improvements in Hay-Presses, of which the following is a specification.

This invention relates to improvements in baling presses.

A further object of the invention is to provide a novel construction of baling box whereby the top thereof may be adjusted with a greater despatch than has been heretofore done.

With these and other objects in view, the invention comprises a novel combination of parts hereinafter more fully described and pointed out in the claims hereto appended; it being understood that various changes in the size, proportion, and minor details of construction may be resorted to without departing from or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a plan view of the entire apparatus, Fig. 2 is a longitudinal sectional view thereof, Fig. 3 is a detail perspective view of a portion of the sweep; Fig. 4 is an end elevation of the apparatus; Fig. 5 is a perspective view of one of the side members hereinafter described; and Fig. 6 is detail perspective view of a lever hereinafter described.

Like reference numerals designate corresponding parts in all the figures of the drawings.

Referring to the drawings, the invention comprises a compressing chamber designated as a whole by the numeral 6, and a compressing mechanism designated by the numeral 7. The compressing chamber consists of a plurality of spaced up-right members 8 which are suitably connected near their upper and lower ends by cross members 9 9, thereby forming rectangular frames. These frames are spaced a suitable distance apart and a base board 10 is secured to the lower transverse member 9 of each frame. Suitable longitudinal flanges 11 11 are secured to the said base-board. These flanges extend beyond one of the frames and form a bearing, the purpose of which will be hereinafter more fully described. Longitudinal guide members 12 12 are respectively arranged above the flanges

11 11 and are secured by any well known means to the said spaced frames, and the ends 13 13 thereof project beyond the end frame, and are thereby positioned directly over the said projecting ends of the flanges 11. Adjacent the said end and between the contiguous frames are arranged side members 14 14 which are respectively secured to the said frames between the flanges 11 and the guides 12. Each of these members is cut out at its top and bottom in a longitudinal manner to form a seat for stops 15 15. These stops have inwardly extending angular-shaped heads 16 and are secured to the said members by flat strips of spring metal 17. Suitably arranged within these frames and above the said side members is a rectangular hopper 18 of any suitable construction. Pivoted to the guide members 12 12 and extending rearwardly to the end of the chamber is a compression board 19. Arranged on either side of the up-rights 8 8 of the said outer frame are U-shaped brackets 20 20, which are secured to the said up-rights by any suitable means. Carried by the free end of the compression board is a transverse cleat 21, which is provided with opposite projections 22 22, said projections being arranged between the said bracket members 20 20, above the guides 12 12. A cross-bar 23 is arranged between the said brackets and in a spaced relation to the said transverse cleat 21. Interposed between the said bar and cleat are a plurality of coil springs 24 24, which may be secured in place by any well known means. Cam levers 25 25 are pivotally mounted between the brackets on bearings 26 26 and are adapted to coact with the cross-bar 23, and, through the coil springs, create a tension on the compression board as will be readily understood by those skilled in the art. The levers 25 are held in their adjusted position by means of bolts 25' passing through opening 25'' in the bars 25. These openings are brought successively into alignment with each other by bringing the outer ends of the levers toward each other until they pass one another.

An actuating mechanism is provided which, and without being especially adapted to be employed in conjunction with the before described compression chamber, can be employed with any other compression chamber without any material change of

construction. This mechanism comprises spaced longitudinal bars 27 27 which are connected at one end by a suitable intermediate block 28. The other or free ends
5 of the members are arranged between the projecting ends of the flanges 11, 11, and are pivotally connected thereto by a bolt 29, or any suitable means. The upper corners of said members 27 are preferably scalloped
10 out as shown by reference numeral 30 for a purpose hereinafter described.

Braces 31 31 respectively, connect the extended ends 13 and the longitudinal members 27 by means of bolts 32 or other suitable means. These braces are preferably
15 provided with a plurality of openings 33 so that the position of the said members 27, with respect to the compression chamber, may be adjusted as desired. Arranged at
20 the other end of the said members 27 is a longitudinal off-set projection or base 34, said base, intermediate filling 28 and the members 27 being preferably connected by a common means such, for instance, as bolts
25 35 or other suitable means. A transverse shaft 36 is journaled in the said longitudinal members 27 near the inner ends and is adapted to support a roller bearing 27, said roller bearing preferably projecting above
30 the upper edges of the said members. A lever 38 is fulcrumed on the base 34 by a pivot 39 of any suitable construction. This lever is preferably formed of spaced longitudinal upper and lower members 40 and 41
35 respectively. Spacing blocks 42 and 43 are respectively arranged in the short and long arms of the said lever. These members and blocks are secured in proper relation by bolts 44 or other suitable fastening means. It will
40 be observed that the short arm of the lever extends over the said off-set base 34 and that the long arm of the lever projects across and beyond the said longitudinal members 27. The spacing blocks 42 and 43
45 are spaced apart for a considerable distance and thereby provide a longitudinal opening in the lever. A rearwardly projecting toe 45 is secured to the short arm of the said lever. This toe is preferably formed of
50 metal and is arranged between the longitudinal members of the said lever and connected thereto by bolts 46, or other suitable fastening means. It will be observed that this toe has one side 47 arranged at an ob-
55 tuse angle with respect to the lever, and in alinement with the fulcrum thereof. A plunger 48 is arranged to have its rear end 49 to project through the said opening of the lever. The other end of the plunger
60 bears upon the roller bearing 37 and projects into the front end of the compression chamber. Secured to the inner end of the said plunger on the under side thereof is a transverse curved stop 50, which is adapted
65 to coact with the scalloped portions 30 of

the said longitudinal members 27. A head 51 is secured to the plunger by any suitable means and is provided on its opposite sides with recesses 52, which register with the said inwardly projecting stops 15.

The outer end of the plunger is provided with an angular projection or cam 53 and the said end is preferably inclosed by a metallic wearing plate 54, said plate being
70 secured to the plunger by any suitable means. An L-shaped stop 55 is secured to the extreme end of the base and is adapted to limit the outward movement of the said plunger. A vertically rotatable roller bearing 56 is secured to one of the members 27
75 at a point opposite and slightly in rear of the fulcrum of the lever, the cam 53 of the plunger engaging the said roller upon the inward movement of the said plunger and thereby shifting the free end of the
80 plunger toward the fulcrum of the lever.

A sweep is provided which consists of spaced upper and lower bars 57 and 58, which are provided at their free ends with roller bearings 59. A central spacing block
85 60 is employed between the members and the bar is pivotally mounted on the projecting base 34 by a bolt 61, said pivot or bolt 61 being arranged in alinement with the fulcrum of the lever and consequently out
90 of the normal path of movement of the plunger. A tongue 62 is connected to the bar in any suitable manner.

A plurality of openings 63 are formed in the end of the long arm of the lever and are
100 adapted to receive an adjusting screw 64. A forwardly extending rod 65 has one end connected to the said adjusting screw and the other end to the plunger by fastening
105 means 66 of any suitable construction.

From the foregoing, it will be observed that, as the sweep is rotated, one of the roller bearings 59 will engage the free end
110 of the plunger and force the same inwardly. During its forward movement it of course compresses the material which has been fed through the hopper into the compression chamber, and as the movement is continued the off-set cam 53 coacts with the roller
115 bearing 56 and forces the free end of the plunger laterally in the direction of the fulcrum of the lever. When this position has been reached the said roller bearing 59 leaves the end of the plunger and engages the toe of the lever. As the said roller
120 moves along the said toe, the long arm of the lever is caused to move rearwardly and thereby return the plunger to its normal position. Upon the said roller becoming dis-
125 engaged from the toe of the lever, the opposite roller will immediately proceed to engage the end of the plunger. This movement will be of course repeated as often as desired. It will be observed in this connection that for every revolution of the
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sweep the plunger is given two complete movements. It will furthermore be observed that the plunger has practically a straight line of movement which decreases, materially, the wear and tear on the same over those now in general use.

When it is desired to move the apparatus from place to place the compression chamber and the actuating mechanism may be disengaged with considerable despatch and when it is desired to associate the two parts it may be done so with considerable ease and without the necessity of employing any machinist.

15 What we claim is:—

1. In a device of the character described, the combination with a frame comprising a pair of spaced members, of a base board extending from one side of said frame, spaced longitudinal guide members above said base board, a compression board hingedly supported by the guide members and having its free end projecting within said frame, a transverse cleat carried by the free end of the compression board, the opposite ends of said cleat being mounted to travel between the spaced members of the frame, a cross bar arranged between the members of the frame and in spaced relation to said cleat, springs interposed between said cross bar and cleat, and cam levers pivotally mounted between the spaced members of the frame in position to engage the cross bar to thereby

compress the springs and yieldingly hold the free end of the compression board. 35

2. A compression chamber for baling presses, comprising a plurality of spaced frames, a base-board supported by the said frames, spaced longitudinal guide members also supported by the frames above the base-board, a compression board hingedly supported by the guide members, and having its free end projecting within one of the said frames, spaced U-shaped brackets secured to the last mentioned frame, a transverse cleat carried by the said free end of the compression board and provided with opposite projections which are slidably mounted within the brackets and above the guide members, a cross-bar arranged between the brackets and in spaced relation to the said cleat, a plurality of springs interposed between the said cross-bar and cleat, and cam levers pivotally mounted between the brackets and adapted to engage the cross-bar for compressing the springs and thereby yieldingly hold the free end of the compression board. 40 45 50 55

In testimony whereof we affix our signatures in presence of two witnesses.

EZEKIEL URIAH DENMON.
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Witnesses:

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