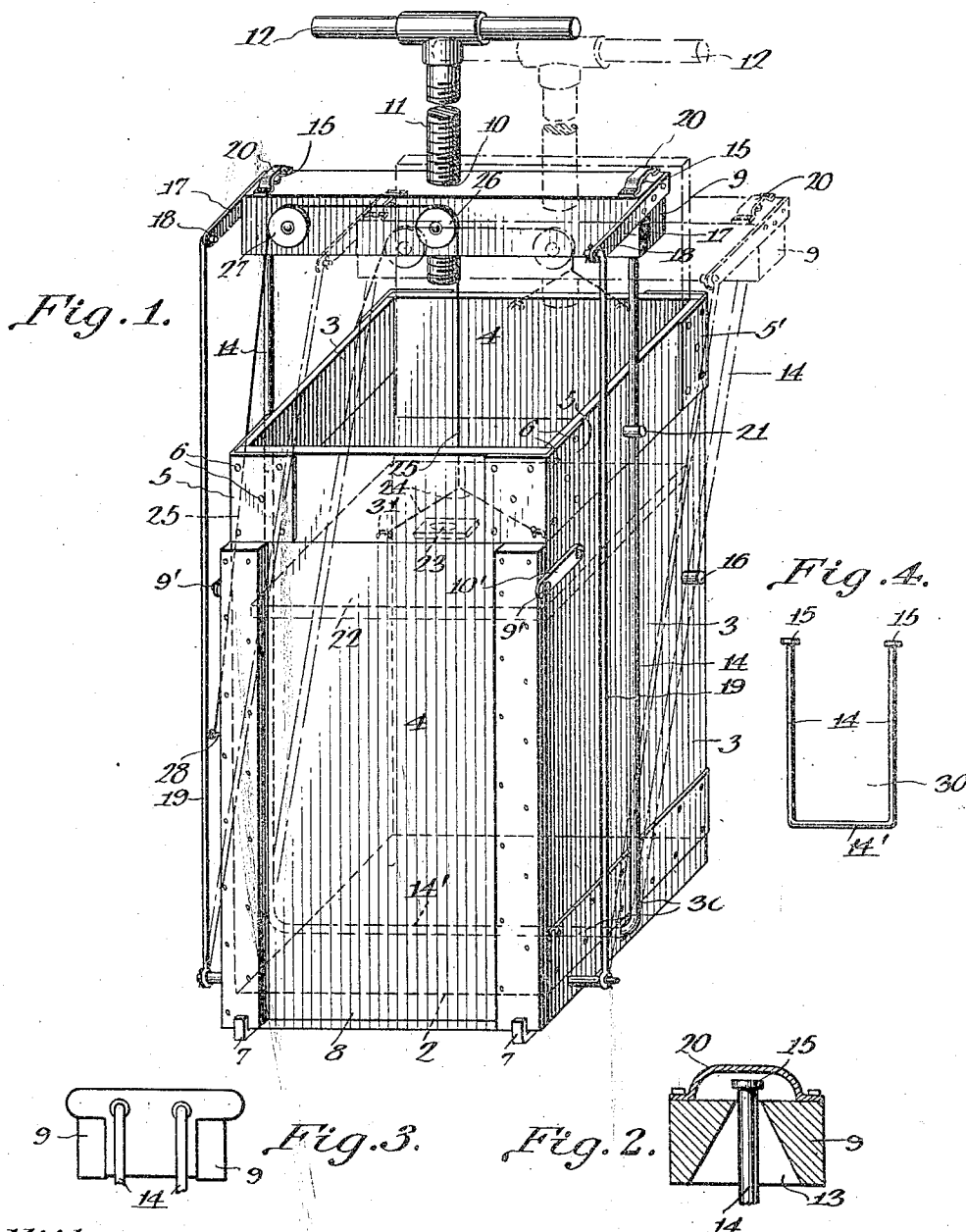


G. WENZELMANN.
BALING PRESS.
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1,054,630.

Patented Feb. 25, 1913.



Witnesses:
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UNITED STATES PATENT OFFICE.

GUSTAVE WENZELMANN, OF GALESBURG, ILLINOIS.

BALING-PRESS.

1,054,630.

Specification of Letters Patent.

Patented Feb. 25, 1913.

Application filed August 19, 1912. Serial No. 715,795.

To all whom it may concern:

Be it known that I, GUSTAVE WENZELMANN, a citizen of the United States, and a resident of Galesburg, in the county of Knox and State of Illinois, have invented a new and useful Baling-Press, of which the following is a specification.

My invention relates to that general type of presses which is shown and described in the patent for baling presses issued to me September 10, 1912, No. 1,038,248, which type is commonly employed for compressing paper, rags, etc., and in which the material to be baled is first placed within the compression chamber or press-box, then compacted by a rammer, (which does not concern the invention,) and which material receives final compression from a power-actuated follower or platen.

I have in the accompanying drawing shown a screw-beam and a screw-actuated follower, but comprehend my invention as covering and including, in certain of its aspects, any substitutes therefor, as, for instance, lever-actuated compression means.

It is one of the principal objects of the invention to provide for swinging the cross-beam or screw-beam, whereby it may be quickly and with a minimum effort be swung from its operative position to the rear side of the press-box, out of the way of the operator during the time he is filling or charging the press-box and while he is ramming the material therein contained. In this connection it is an object that the means for carrying out the ends above recited be of such nature that the beam may with equal facility be replaced in operative position.

It is an object to provide a disconnected platen and screw, and to provide means attached preferably to the screw-beam for raising and lowering the former. In this connection a subsidiary object is to provide for tilting the platen on edge at the outer and rear side of the press-box, and there securing it, not obstructing the open end thereof and entirely out of the way of the operator while he is filling the box or ramming the material therein contained, but from which position he may with facility and ease replace it in its normal position.

It will be noted that the last described features of my invention are particularly applicable to press-boxes of a considerable height. When such are used, the operator stands upon a platform or other support,

which, inasmuch as it has not to do with my invention, has not been illustrated.

That the elements constituting the above recited means be durable, strong and simple, but withal effective, and that they be economic of manufacture and sale, are prime requisites, and to provide such means for carrying out these ends constitutes another object.

In carrying out the objects of the invention generally stated above, it will be understood, of course, that the essential features of my invention are susceptible of changes in details, structure, and structural arrangements, certain practical and preferred arrangements of which are illustrated in the accompanying drawings, in which:

Figure 1 is a perspective; Fig. 2, a transverse sectional elevation of the screw beam, a part of one of the swinging frame-rods and its housing shown in elevation, and all parts enlarged with reference to Fig. 1; Fig. 3, a modification, an end view; and Fig. 4, a detail of the bail-like or U-shaped swinging frame.

To the end of carrying out the hereinabove recited objects the invention consists in means for generally improving the construction and increasing the capacity, utility and efficiency of the device over presses of like character heretofore provided.

The individual parts or elements are uniformly designated by the same reference numeral throughout the several figures. Coming now to a detailed description thereof, 2 indicates the floor, 3, 3, the sides, and 4 the back wall of the press-box, which may be united by brackets 5, 5' and nails 6 or in any other suitable manner. A pair of hooks 7 are suitably secured to the lower portion of said box and their upturned ends constitute keepers for the lower edge of a removable door 8 provided on its edges with pins 9' which are engaged by hooks 10' hinged to the sides of the box. These elements are shown and more fully described in my application aforesaid, and will require herein no further description. Moreover, in so far as my present invention is concerned they are essential only in their relationship thereto, as any suitable and preferred type and character of box may be employed.

9 designates the screw beam, provided with the usual threaded aperture 10 for engagement of the ordinary screw 11, which latter is actuated by the handle 12. At each

end the beam is provided with a bell-shaped or conical opening 13 in which the upper portion of the stem of a swinging frame rod 14 having an enlarged head 15 plays freely, the head lying above the apex of said opening and being of sufficient size as to not drop thereinto and of a length to rest above the top of the beam. The lower ends of said rods are pivoted in the sides of the box and integral with a cross-bar 14' disposed beneath the floor thereof, said rods and bar thus forming a U-shaped swinging bail or frame 30.

16 is a stop pin for limiting the rearward movement of each rod 14 and thereby of said beam.

20 is a housing for the rod-head.

17 indicates either one of a pair of brackets, each having an eye 18. Each is suitably secured to an end portion of the beam. The upper end of a balance or guide-rod 19 is engaged with each of said eyes, while their lower ends pivotally engage the bottom portions of the box. It will be evident that this construction (of the parallel sets of rods) will maintain the beam in the horizontal position shown by the dotted lines in Fig. 1 when said beam is swung rearwardly. For the purposes of this specification either the loop 30, or said loop and the rods 19, or the pairs of duplicate rods shown in the modification, or even one pair of the latter (on opposite sides of the press-box)—which modification will be presently described—may be variously termed a swinging or a rocking frame. A stop-pin 21 limits the forward movement thereof.

22 designates a platen or follower, preferably provided with a centrally disposed metallic screw-centering plate 23 on its upper face. Secured to eyes 31 in said platen are the ends of a cord or chain 24, to the midlength of which is secured one end of a draw cord 25, the flight of which traverses a sheave 26 on the beam and preferably a second sheave 27, likewise thereon. Any suitable means, as a pin 28, is provided for securing the free end of the cord 25.

In Fig. 3 I have shown a somewhat modified form of the device. The structure here illustrated comprises a pair of like parallel rods 14 pivotally engaged with the beam and press box in so evident a manner as to require no specific description.

The operation: When the operator wishes to place material in the press-box he will first turn the screw in a direction to elevate its point sufficiently to clear the edge of the back of the press-box, and will then swing the beam rearwardly, on the swinging frame, to the dotted line position shown in Fig. 1. The platen or follower may then be raised by drawing on the cord 25. The order of these operations, may, of course, be reversed. To leave the opening in the

press-box entirely free from obstruction the platen is thrown over on its edge in rear of the box, as indicated by the dotted lines in Fig. 1, whereupon the operator may engage the free end of the cord 25 with its securing means 28. Upon the box having been charged and the charge having been rammed, the operator will disengage the cord from its securing means, throw the platen into operative position, and turn the screw to engage its end with the centering plate. The continuation of this operation will of course cause the material to be compressed in the ordinary manner. Suitable means, of any preferred character, may be provided for securing the completed bale. Comprising no part of my present invention, I have not deemed it necessary to either illustrate or describe it.

It is to be noted that the bail 30 serves a two-fold purpose—first, to swing the beam, and second, to prevent it rising to an immoderate or inordinate height when the bale is being compressed by the action of the screw. A single pair of rods 14, on opposite sides of the box, is sufficient to accomplish said functions, but in order to maintain the beam in a horizontal position I prefer to use the second pair, either in the form shown in the principal figure or in the modification. When the beam is swung to its rearmost position the housings will prevent it from slipping downwardly on the rods 14 when but one set thereof is employed.

Having thus described the nature of my improvements and the best means of which I know for carrying them into effect, I claim as my invention the following, namely:—

1. The combination with a press-box, of a screw-beam provided with a conical aperture at each of its end portions, and rods pivoted at one end to the press-box and their other ends projected through said apertures.

2. The combination with a press-box, of a screw-beam provided with a conical aperture in each of its end portions, and rods pivoted at one end to the press-box and their other ends projected through said apertures, each of said rods having a head disposed above the apex of said aperture, for preventing immoderate upward movement of said beam.

3. The combination with a press-box, of a screw-beam, and a swinging frame comprising pairs of rods pivotally connected with said box and beam, said pairs lying on opposite sides of the box.

4. The combination with a press-box, of a screw-beam, swinging rods engaged with the end portions of said beam and with said box, and balance-rods substantially paralleling said rods and in pivotal engagement with said beam and box, whereby,

when the beam is swung rearwardly the pairs of rods will maintain it substantially in a horizontal position.

5 5. A baling press comprising a press-box having an open end, a screw-beam crossing said end, means for engaging said beam and box, compression means engaged with said beam, a platen actuated downwardly only by said compression means, a sheave mounted on said beam, and a cord secured to said platen and traversing said sheave.

10 6. A baling press comprising a press-box having an open end, a screw-beam crossing said end, a screw operatively engaged with said beam, a platen actuatable downwardly only by said screw, a sheave on said beam and a cord traversing it and one of its ends secured to said platen for raising the latter independently of said screw.

15 20 25 7. A baling press comprising a press-box having an open end, a screw-beam crossing said end, a screw operatively engaged with said beam, a platen actuatable downwardly only by said screw, a sheave on said beam, a cord traversing it for raising the platen

independently of said screw, and means whereby said platen may be held suspended and entirely out of the said box.

8. The combination with a press-box, of a screw-beam, and a U-shaped bail connected with said box and beam, the cross-bar of said bail disposed beneath the floor of said box.

9. The combination with a press-box, of a compression-beam, and a swinging frame comprising pairs of rods pivotally connected with said box and beam, said pairs lying on opposite sides of the box.

10. The combination with a press-box, of a swinging compression beam, and means for maintaining said beam in a horizontal position during its swinging movement.

In testimony whereof I hereto set my hand in presence of two subscribing witnesses, at Galesburg, Illinois, this 15th day of August, 1912.

GUSTAVE WENZELMANN.

Witnesses:

FRANK L. CONGER,
MERLE F. CLINE.