

No. 719,591.

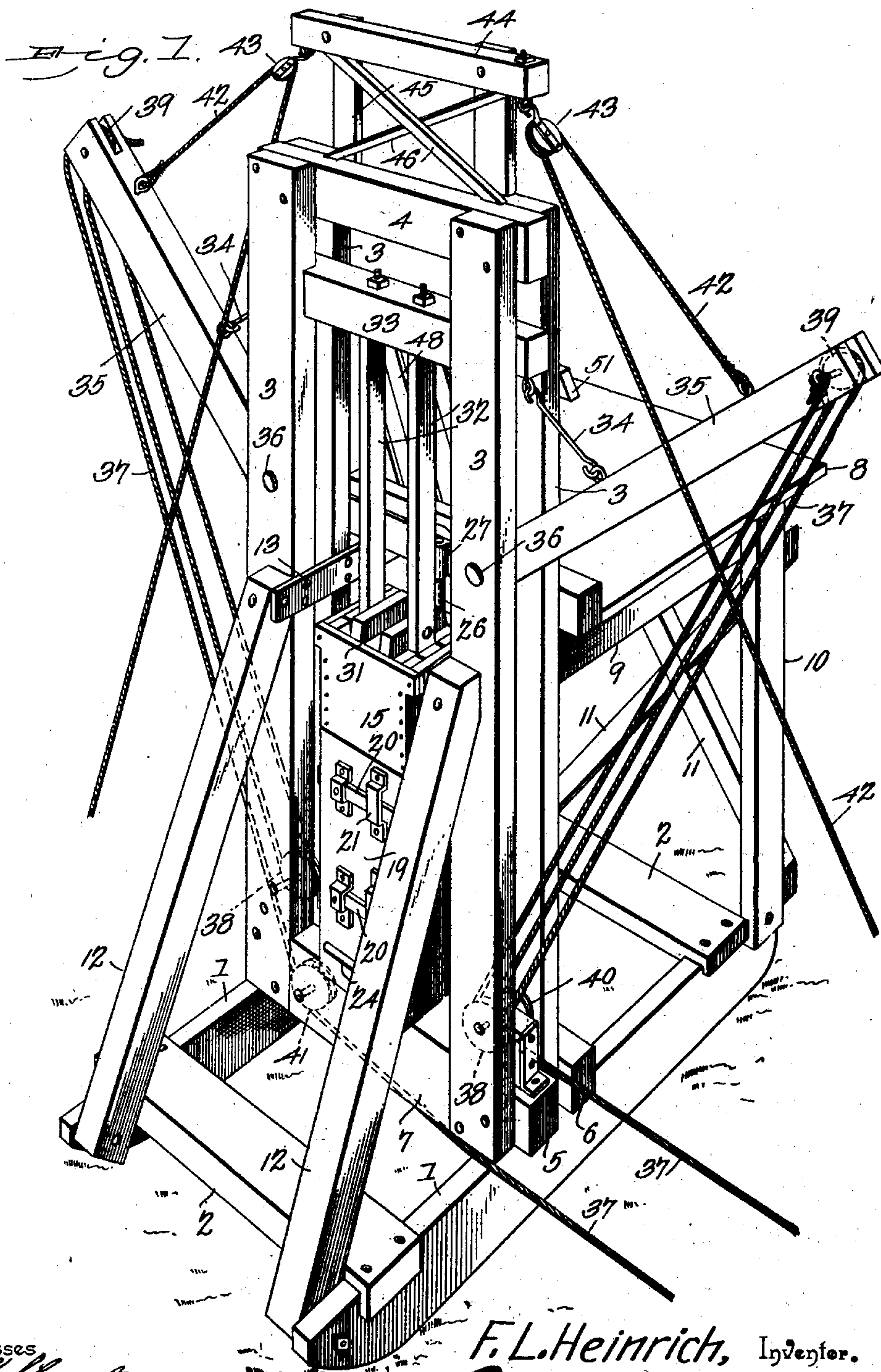
PATENTED FEB. 3, 1903.

F. L. HEINRICH.
BALING PRESS.

APPLICATION FILED SEPT. 5, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
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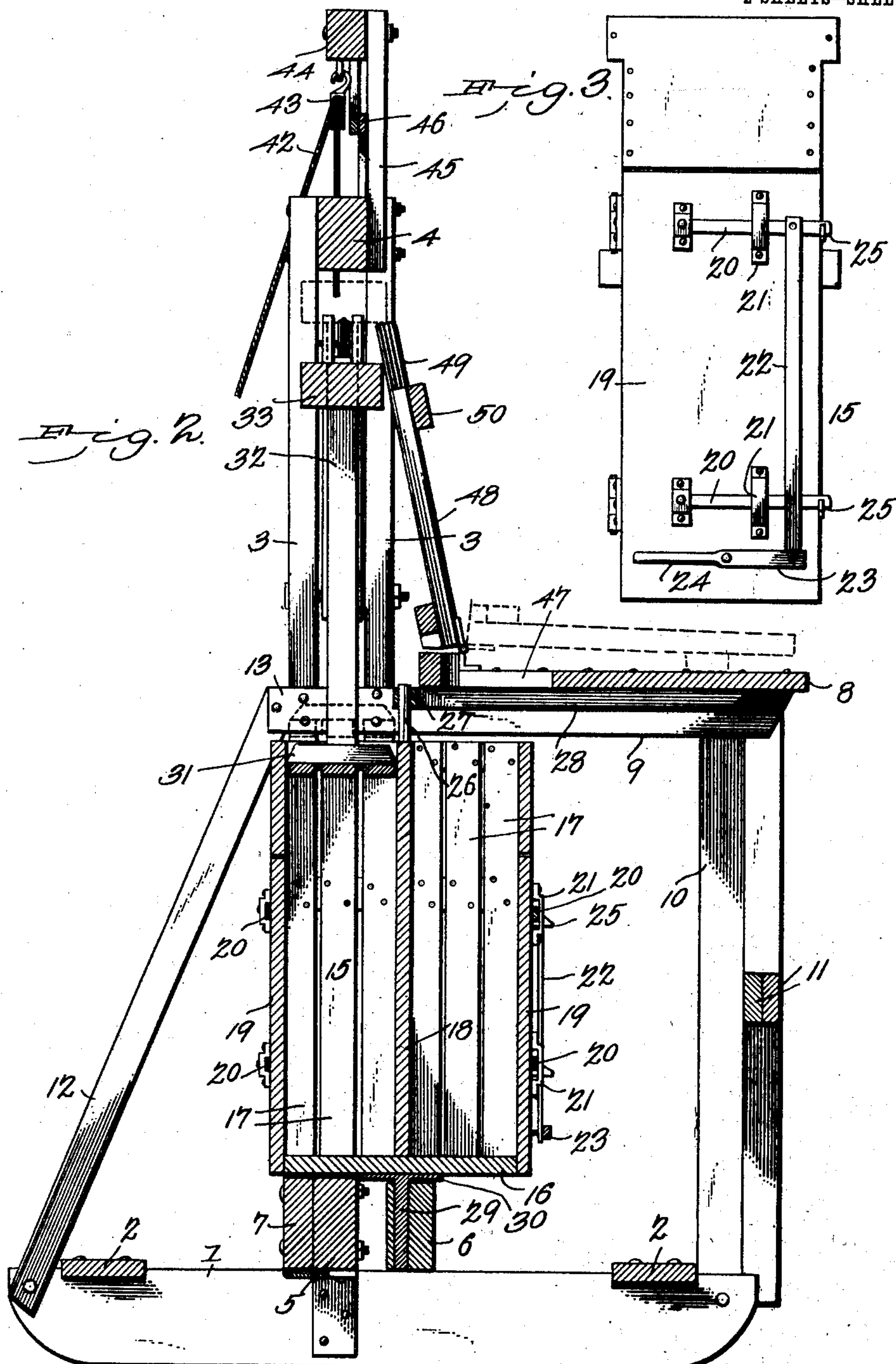
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UNITED STATES PATENT OFFICE.

FERDINAND L. HEINRICH, OF HIGH HILL, TEXAS.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 719,591, dated February 3, 1903.

Application filed September 5, 1902. Serial No. 122,223. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND L. HEINRICH, a citizen of the United States, residing at High Hill, in the county of Fayette and State of Texas, have invented a new and useful Baling-Press, of which the following is a specification.

This invention relates to baling-presses for baling hay, cotton, and the like; and it has for its object to provide a device of this class which shall possess superior advantages in point of simplicity, durability, and general efficiency.

To this end my invention comprises a frame structure mounted on skids or runners, so that it may be easily moved from one place to another, said frame structure supporting a double press-box which is mounted revolvably, so that either of its casings may be engaged by the vertically-movable follower, for the operation of which simple means are provided.

The invention further consists in certain structural details of the device, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view showing a baling-press constructed in accordance with the principle of my invention. Fig. 2 is a vertical sectional elevation of the same. Fig. 3 is a detail side view of the press-box.

Corresponding parts in the several figures are designated by similar characters of reference.

Skids or runners 1 1, connected by transverse braces 2 2, support uprights 3 3, two of which are disposed at each side of the frame, said pairs of uprights being connected at their upper ends by a cap-piece 4, interposed between said uprights.

5 and 6 designate two additional transverse braces connecting the runners near the center thereof, one of said braces 5 being disposed between the lower ends of the uprights 3, and to the face thereof is secured an additional brace-piece 7, serving as a support for the side of the press-box in which material is being compressed.

8 designates a platform which is supported upon horizontally-disposed braces 9, the inner ends of which are firmly secured to the uprights 3 3 about the middle of their height

and the upper ends of which are supported upon uprights 10, rising from one end of the base-frame, composed of the runners and related parts. A pair of cross-braces 11 are also used in order to insure the requisite strength. Inclined braces 12 also connect the uprights 3 with the outer end of the base-frame, said braces being connected at their upper ends to plates 13, which also serve to increase the stability of the attachment of the inner ends of the horizontal braces 9.

The press-box 15 may be described as being an ordinary box having a solid bottom 16, slatted sides 17, and provided with a central transverse partition 18, whereby it is subdivided into two compartments each of the required size to form a bale of proper dimensions. The outer or front sides of the compartments are provided with hinged doors 19, each of which is provided with a pair of pivoted latch members 20, located, respectively, near the upper and lower ends of the doors, confined by keepers 21 and connected by means of a link-bar 22, the lower end of which has pivotal connection with a lever 23, the latter being provided at the opposite side of its fulcrum with a treadle 24, by means of which the link-bar 22 may be raised so as to simultaneously disengage the latch members 20 from catches 25, which are suitably attached to the sides of the press-box compartments. Their weight, together with that of the connecting-rod 22, will be sufficient to restore said latch members to operative position.

The press-box is provided with a gudgeon secured to the under side of the bottom thereof and stepped in the transverse brace 6. A bearing for the upper end of the press-box is formed by a pintle 26, extending upwardly from the partition 18 and journaled in a keeper 27, which may be attached to the rear of the platform 8 or one of its supporting-cleats 28. The gudgeon at the lower end of the press-box, which is designated 29, is provided at its upper end with a bearing-flange 30, so that the press-box may be rotated with but slight frictional resistance.

The follower 31, which is of ordinary construction, is adapted to fit either compartment of the press-box. Said follower is connected, by means of arms 32, with a cross-head 33, the ends of which are vertically slidable be-

tween the pairs of the uprights 3 3. The ends of said cross-head are connected, by means of links or toggles 34, with levers 35, which are fulcrumed upon pins or bolts 36, extending transversely through the uprights, between which the said operating-levers are disposed. These levers are operated to force the outer ends of the cross-head carrying the follower in a downward direction by means of ropes 37, attached at the outer ends of said levers, reeved over pulleys 38 and 39, disposed, respectively, between the lower ends of the uprights 3 and at the outer ends of the levers 35, said ropes being passed downward from the pulleys 39 and over additional pulleys 40 and 41, which may be disposed in any suitable position to enable the draft ends of the ropes to be carried in the same lateral direction from the machine practically parallel to each other, as will be clearly seen in Fig. 1 of the drawings. The ends of the ropes may be united, or they may be separately attached to a singletree if the press is to be operated by a draft-animal, or to any other suitable operating means which it may be preferred to employ.

For the purpose of raising or elevating the levers 35, the follower, and other related parts I avail myself of ropes 42, suitably attached to the upper sides of the levers, passed over pulleys 43 at the outer ends of a crown-bar 44, and thence downwardly, where they may be operated by hand or in any convenient manner. The crown-bar 44, just referred to, is supported upon a pair of uprights 45, rising from the cross-bar 4 of the frame and additionally secured by means of diagonal braces 46, this crown-bar being merely in the nature of an upward extension to enable the levers 35 and their related parts to be elevated to the requisite height.

The platform 8 of the device is provided with an opening 47, through which material may be supplied to the compartment of the press-box which is temporarily disposed below said opening. Said platform is also provided with a hinged grating 48, having outwardly-extended arms 49 and provided with a cross-brace 50, the ends of which are extended to form arms 51, adapted to rest against the adjacent uprights 3 when the grate 48 is in the raised position. (Indicated in Fig. 1 of the drawings.) The arms 49 are of such a length that when the cross-head is at the upper limit of its movement the said arms will engage the under side of the cross-head and thus retain the latter and its related parts in an elevated position, as indicated by dotted lines in Fig. 2, by reference to which it will be seen that the follower 31 is at this time clear of the press-box, which latter may thus be rotated on its pivot until the other compartment has been brought into alinement with the follower. The extended ends 51 of the cross-brace 50 will by engaging the uprights 3 prevent the grating from swinging forward between the uprights 3. When the

machine is not in use, the grating 48 may be swung down to a supported position upon the platform 8.

The operation of this invention will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed.

The material to be compressed is fed through the opening 47 into the compartment of the press-box below said opening. When this compartment has been filled, the press-box is rotated on its pivots until the compartment just filled has been brought into alinement with the follower and the empty one into alinement with the opening 47. The cross-head is then released from the supporting-arms 49, draft is applied to the ropes 37, and the follower will thus be forced downwardly into the compartment of the press-box, compressing the material contained therein while the other compartment is being filled. When the material has been sufficiently compressed, the bale is tied and removed through the front door of the first compartment, which may be readily thrown open by simply stepping on the treadle 24. The levers 35, carrying the cross-head and follower, are then raised until the upper limit is reached, when the cross-head will automatically engage the arms 49 and be supported thereon while a half-revolution is given to the press-box, thus exposing the empty compartment below the filling-hole and the full compartment under the follower, after which the operation is repeated. It will thus be seen that the operation of my improved press is a continuous one, involving no loss of time, and thus providing at small expense a baling-press of great power and capacity.

I desire it to be understood that while I have exhibited the preferred form of my invention I do not restrict myself with regard to the structural details thereof, but reserve to myself the right to any changes, alterations, and modifications which may be resorted to without detracting from the utility of the device or departing from the spirit and scope of my invention.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a baling-press, the combination of a frame, a press-box, a follower having a cross-head and hinged supporting means to engage the cross-head and to retain the follower in a raised position.

2. In a baling-press, the combination of a frame, having a platform, a press-box disposed below said platform, a follower having a cross-head and supporting means hinged to the platform to engage the cross-head and to retain the follower in a raised position.

3. In a baling-press, the combination of a frame having a platform, a press-box disposed below an opening in said platform, a follower having a cross-head, and a grating hinged to the platform and adapted to be tilted

against the frame to engage the cross-head and to support the follower in a raised position.

4. In a baling-press, a supporting-frame, a double press-box mounted rotatably in said frame, a vertically-movable follower having a cross-head connected therewith by means of vertical arms, hinged supporting means for said cross-head adapted to support it with the follower clear of the press-box, and a platform having a feed-opening alining with the compartment of the press-box not engaged by the follower.

5. In a baling-press, a base-frame, pairs of uprights rising from the sides of the same, a cross-head vertically slidable between said uprights and supporting a follower, a double press-box mounted rotatably in the frame, a platform supported above the press-box, and having a feed-opening, and a grating hinged to said platform and serving when raised to prevent the material that is to be compressed from entering between the uprights, said grate being provided with a cross-brace having extended arms adapted to rest against the sides of the uprights and with arms extending from its free edge to engage the under side of the cross-head and thereby maintain the latter with its related parts in a raised position.

6. In a baling-press, a base-frame, pairs of uprights rising vertically from said base-

frame, a cross-head vertically movable in said uprights, a double press-box mounted rotatably on the frame, a follower supported by the cross-head and adapted to engage either compartment of the press-box brought in alinement therewith, levers pivoted between the pairs of uprights, toggles connecting said levers with the ends of the cross-head, and means whereby said levers may be simultaneously operated to force the cross-head with its related parts in a downward direction.

7. In a baling-press, a base-frame, uprights rising from the same, a cross-head carrying a follower mounted slidingly between said uprights, levers pivoted between the latter, toggles connecting said levers with the cross-head, means for operating the said levers to force the cross-head in a downward direction, a press-box disposed to receive the follower which is connected with the cross-head, a crown-bar supported upon uprights rising from the main frame, and tackle connecting said crown-bar with the levers for the purpose of elevating the latter.

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

FERDINAND L. HEINRICH.

Witnesses:

FERDINAND K. SCHINDLER,
ISIDOR WIND.