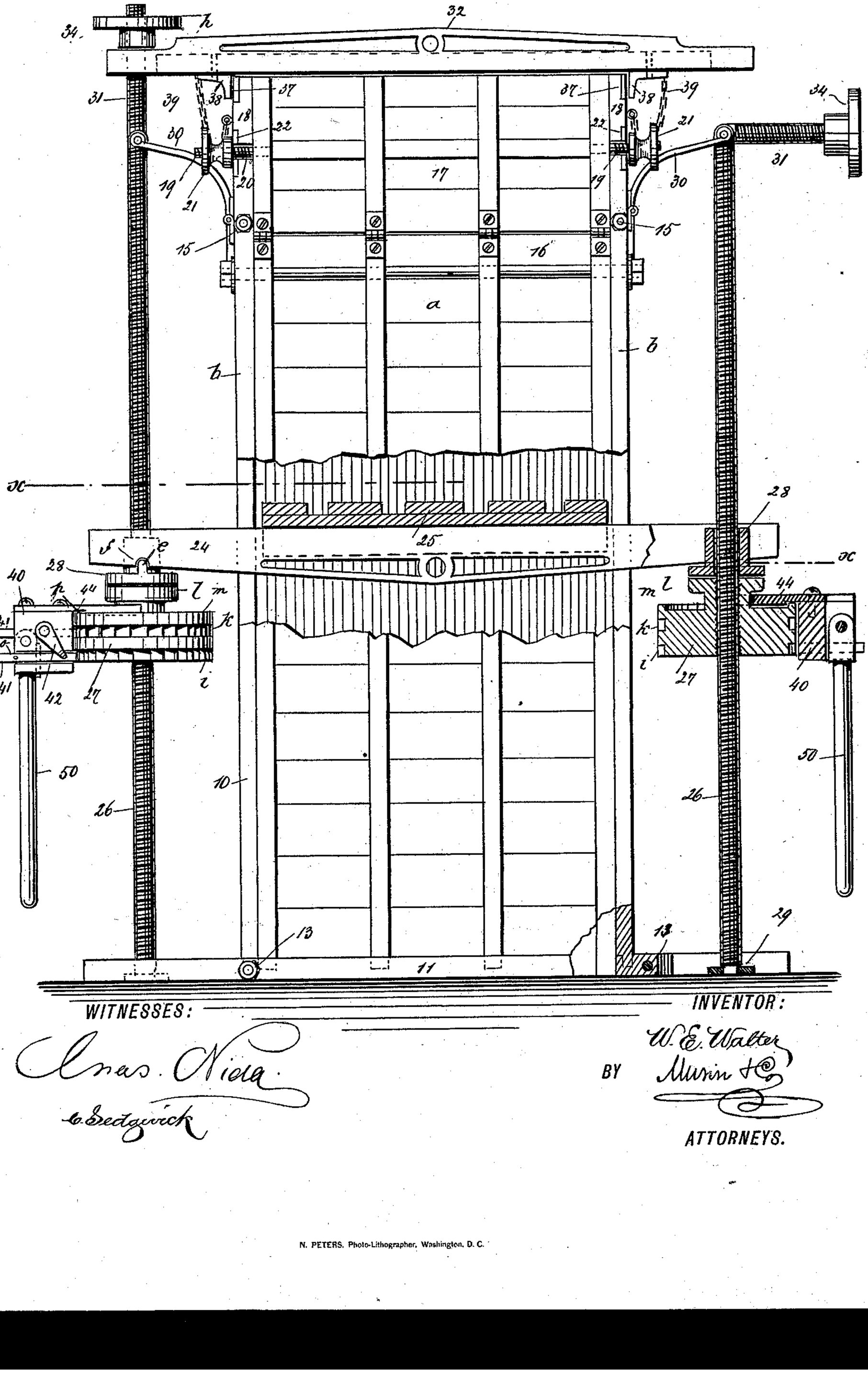
(No Model.) 3 Sheets—Sheet 1.

W. E. WALTER.

BALING PRESS.

No. 406,680. Patented July 9, 1889.

Fig: 1.



WITNESSES:

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C. Sedgwick

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(No Model.)

3 Sheets—Sheet 2.

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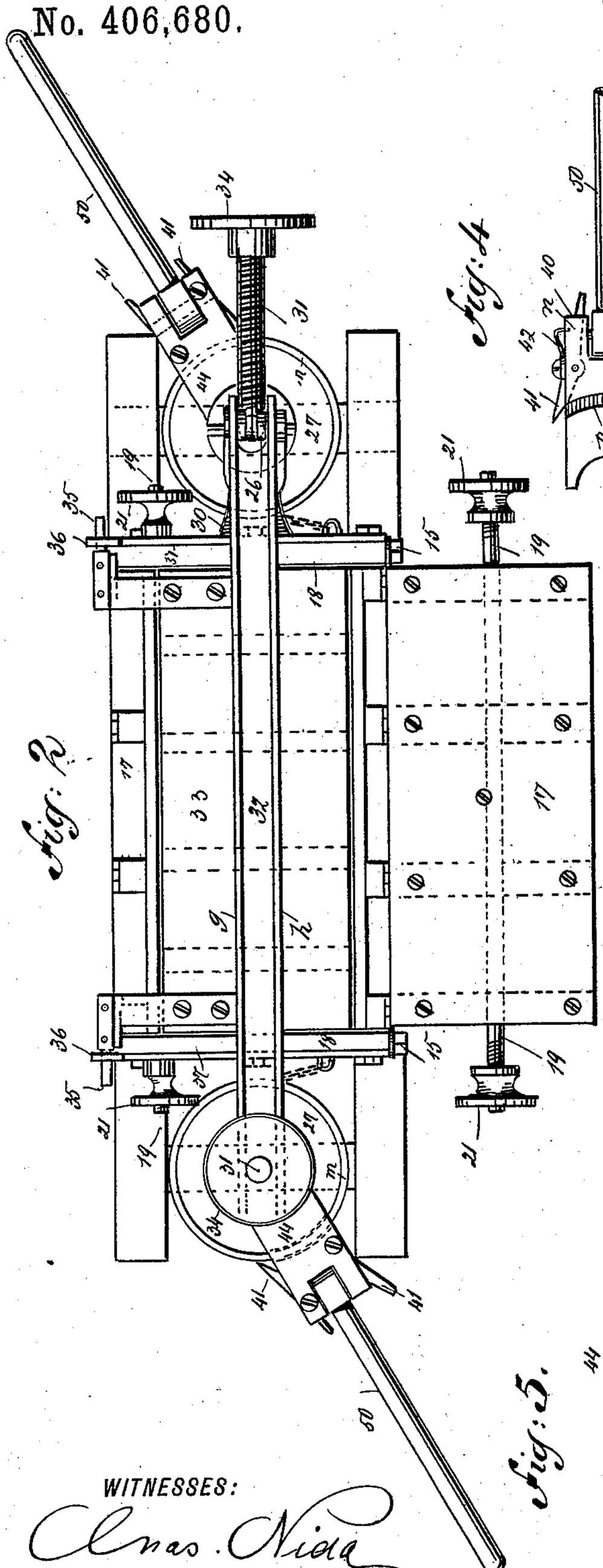

Fig. 2.

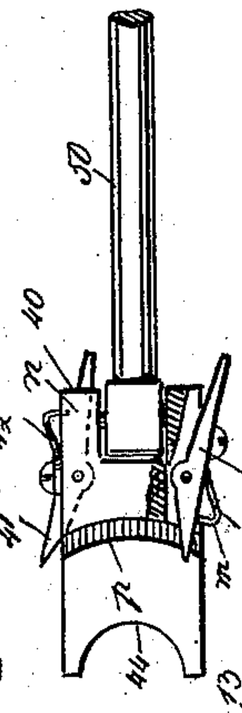

Fig. 4.

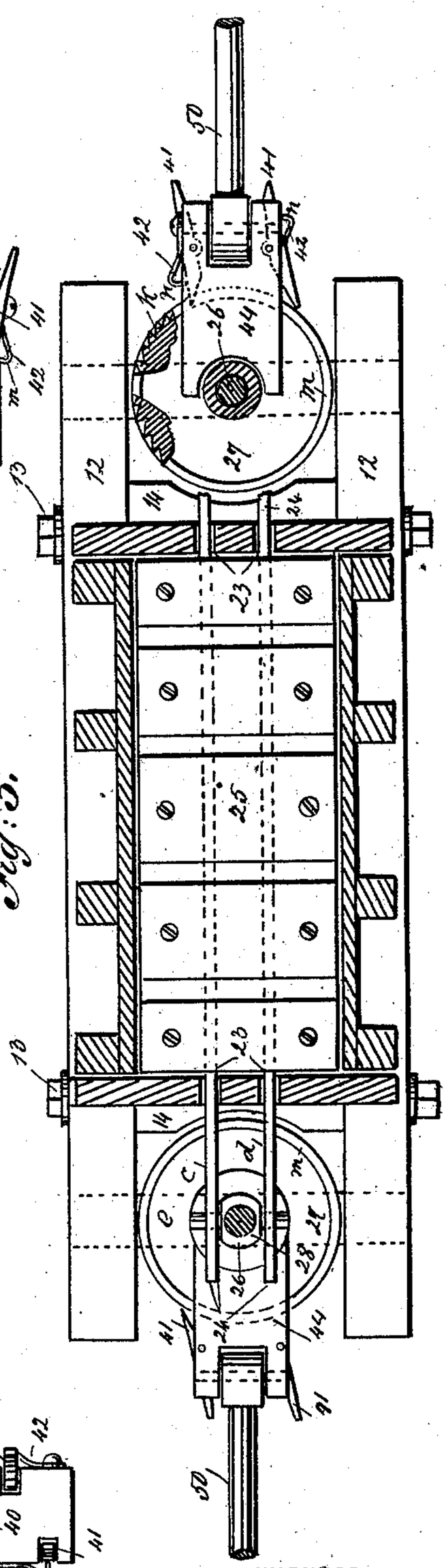

Fig. 3.

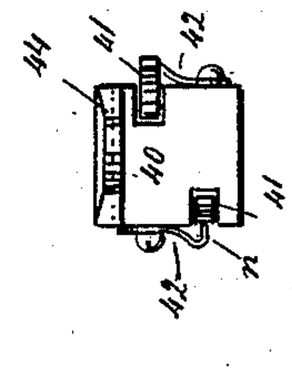

Fig. 5.

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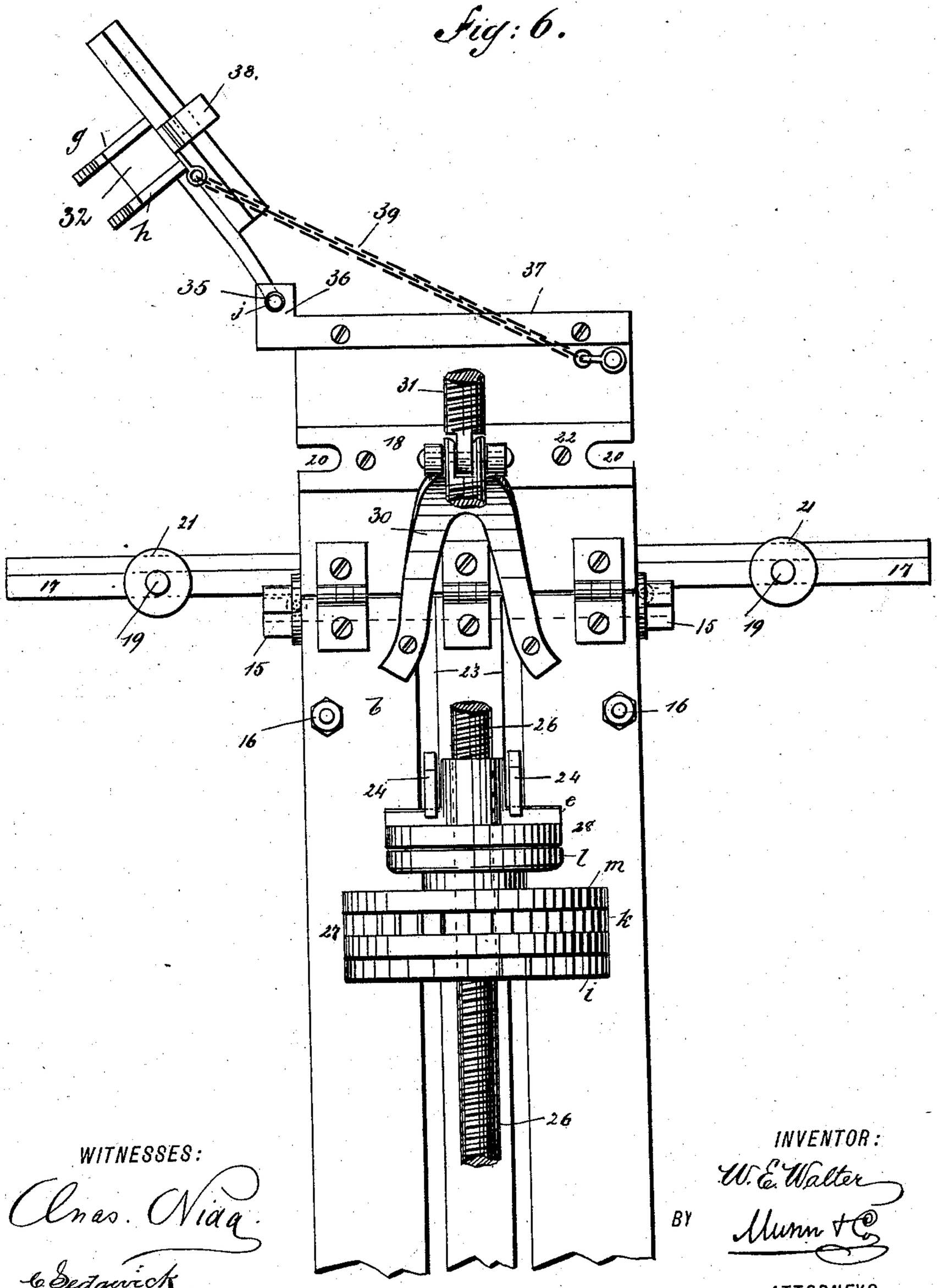
Fig: 6.



WITNESSES:

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INVENTOR:

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UNITED STATES PATENT OFFICE.

WILLARD E. WALTER, OF SILVER CITY, IDAHO TERRITORY.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 406,680, dated July 9, 1889.

Application filed December 5, 1888. Serial No. 292,707. (No model.)

To all whom it may concern:

Be it known that I, WILLARD E. WALTER, of Silver City, in the county of Owyhee and Territory of Idaho, have invented a new and Improved Baling-Press, of which the following is a full, clear, and exact description.

The object of this invention is to provide a portable hand baling-press, and one that shall be applicable for use in the baling of cotton, wool, broom-corn, hay, or any other material that is usually done up in bales.

The invention consists in the particular construction and arrangement of parts, as hereinafter fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a side view of my improved baling-press, parts being broken away and parts being shown in section. Fig. 2 is a plan view of the press, one of the side doors being shown as it appears when folded down and one of the hinged sections of the threaded rods or bars being shown as it appears when moved from engagement with the press-head truss. Fig. 3 is a sectional plan view on line *x x* of Fig. 1, parts being broken away. Fig. 4 is an inverted plan view of one of the pawl-carrying levers by means of which the double ratchet-nuts are operated. Fig. 5 is a face view of the pawl-carrying lever-head; and Fig. 6 is an end view of the upper portion of the press, the sides and head being shown open, a portion of the screw being broken out.

In the drawings, 10 represents a box-like structure, which is mounted upon a bed-frame 11, consisting of sills 12, that are united by heavy bolts 13, the sills being spaced by blocks 14. In order to give sufficient strength to the structure 10 to enable it to resist the pressure to which it is subjected during the operation of baling, I connect the side walls of said structure by means of bolts 15, and I connect the end walls of the structure by bolts 16, that are arranged as clearly shown in the drawings. To each side wall *a* of the structure 10, I hinge a door 17, and to each of the end walls *b*, I hinge other doors 18, and in order that the doors 17 and 18 may be rigidly held in planes that are parallel with those occupied by the sides and ends to which the doors are hinged I provide the doors 17 with bolts 19, which enter slots or recesses 20, formed in the doors 18, the bolts 19 being engaged by hand-nuts 21, which may be brought to bear hard against wear-plates 22, that are seated within the outer faces of the doors 18.

The end walls *b* are slotted, as shown at 23, to provide for the passage of a double truss 24, upon which truss is mounted a follower 25. Between the ends of the sections *c* and *d* of the truss 24, I mount threaded shafts 26, which shafts carry double ratchet-nuts 27, that bear against headed wear-sleeves 28, said sleeves extending upward between the sections *c* and *d*, and being provided with lugs *e*, that fit in recesses *f*, formed in the under sides of said sections. The upwardly-extending portions of the sleeves 28 are cut away, so that they will fit between the sections *c* and *d*, as will be seen from an inspection of Fig. 3. The lower ends of the shafts 26 are supported by bed-plates 29, while the upper ends are supported by brackets 30. To the upper end of each of the shafts 26, I hinge a threaded rod 31, and these rods pass up between the sections *g* and *h* of an upper double truss 32. The said truss is connected to the press-head 33, the ends of the rods 31 being engaged by binding-nuts 34. These nuts, when turned down upon the upper edges of the two sections of the truss 32, will hold said truss to place, this position of the nuts being shown upon the left in Fig. 1; but if it is desired to free the nuts from engagement with the truss they are turned up toward the ends of their rods, after which they may be thrown to the position shown upon the right in Fig. 1.

The press-head 33 is provided with pintles 35, which enter eyes *j*, formed in projections 36, that are made integral with plates 37, said plates being secured to the doors 18 in the position shown in the drawings. As an additional security against the outward bulging of the doors 18, I provide the truss 32 with lugs 38, which bear against the plates 37, as shown best in Fig. 1. To prevent too wide an opening of the press-head, I provide it

with stay-chains 39, said chains being secured to the press-head and to the doors 18.

The ratchets 27 are each provided with two sets of opposing ratchet-teeth *i* and *k*, with heads *l* and with flanges *m*, the heads *l* bearing against the heads of the sleeves 28. In order that the ratchets 27 may be properly operated, I provide lever-heads 40, which carry pawls 41, said pawls being mounted in recesses formed in the side faces of the lever-heads, and in connection with the pawls I arrange springs 42, having inwardly-extending points *n*, which may be brought into engagement with either the outer or the inner ends of the pawls, the springs being pivotally connected to the lever-heads, and the pawls being provided with recesses *o*, which the points *n* enter.

To the upper side of each lever-head I secure a plate 44, that is arranged to extend beneath the head *l*, and on the under side of the plates 44, I form grooves *p*, which grooves receive the flanges *m* of the ratchets 27. To the lever-heads 40, I pivotally connect lever-arms 50.

In operating the press above described the side doors and the press-head are thrown open, and the ratchet-nuts 27 are turned down, so that the follower 25 may be lowered to a point near the bottom of the structure 10. Then the baling-chamber A within the structure and above the follower 25 is filled with the material to be compressed, and, the chamber A having been so filled, the doors 17 are moved to the position in which the parts are shown in Fig. 1, the nuts 21 being turned hard home, while the rods 31 are moved to the position shown upon the left in Fig. 1, and their nuts 34 are turned hard down upon the heads 32. The lever-heads 40 are then applied to the ratchet-nuts 27, the springs 42 being brought into engagement with the forward ends of the pawls 41, which will engage the proper ratchets to advance the nuts 27, while the springs of the other pawls are brought into engagement with the rear ends of the said pawls, thus holding these pawls out of engagement with their ratchets. The levers 50 are then reciprocated, and the nuts 27 are thereby caused to advance, forcing the follower upward. After the material within the chamber A has been sufficiently compressed the binding wires or cords are fastened, the springs of the lever-heads are reversed, and the levers are reciprocated to slightly retract the nuts 27, so as to relieve the press-head from all undue pressure. After this undue pressure has been removed the nuts 34 are turned up and the rods 31 are moved down to the position shown on the right in Fig. 1, after which the press-head may be moved so as to clear the upper end of the press. The nuts 21 are then turned off and the side doors 17 are turned down, the end doors 18 being free to move slightly outward, thus freeing the bale, which may then be readily removed from the press.

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

1. In a baling-press, the combination, with a follower, of a supporting-truss, threaded side shafts passing loosely through the ends of the truss, wear-sleeves on the shafts below the truss and supporting the latter, and ratchet-nuts on the shafts below the sleeves, substantially as herein shown and described.

2. In a baling-press, the combination, with a follower, of a supporting-truss, threaded side shafts, ratchet-nuts carried by the shafts, and wear-sleeves through which the shafts pass, said sleeves being formed with ribs which enter recesses formed in the truss ends, substantially as described.

3. In a baling-press, the combination, with a structure 10, united by cross-bolts, of doors hinged to the side and end walls of said structure, a means for binding said doors to place, a press-head hinged to two of the doors, a follower, and a follower-advancing mechanism, substantially as described.

4. In a baling-press, the combination, with a follower, of a truss by which said follower is supported, threaded shafts, ratchet-nuts mounted upon said shafts, the truss ends overlapping the nuts, a press-head, a truss secured thereto, threaded rods hinged to the threaded shafts, and nuts carried by said threaded rods, the nuts being arranged to engage the ends of the truss that is arranged in connection with the press-head, substantially as described.

5. In a baling-press, the combination, with the structure 10, of the hinged side doors 17, the hinged end doors 18, provided with the recesses 20, the bolts 19, secured to the doors 17 and adapted to enter the recesses 20 of the doors 18, and the nuts 21 on said bolts, substantially as herein shown and described.

6. In a baling-press, the combination, with the ratchet-nuts 27, provided with the ratchet-teeth *i k*, the heads *l*, and the flanges *m*, of the recessed lever-heads 40, the pawls 41, pivoted in the recesses of the said heads, the pivoted springs 42, and the lever-arms 50, pivoted to the heads, substantially as described.

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Witnesses:
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CHAS. M. HAYS.