J. A. MARX & F. E. HOLDEN.

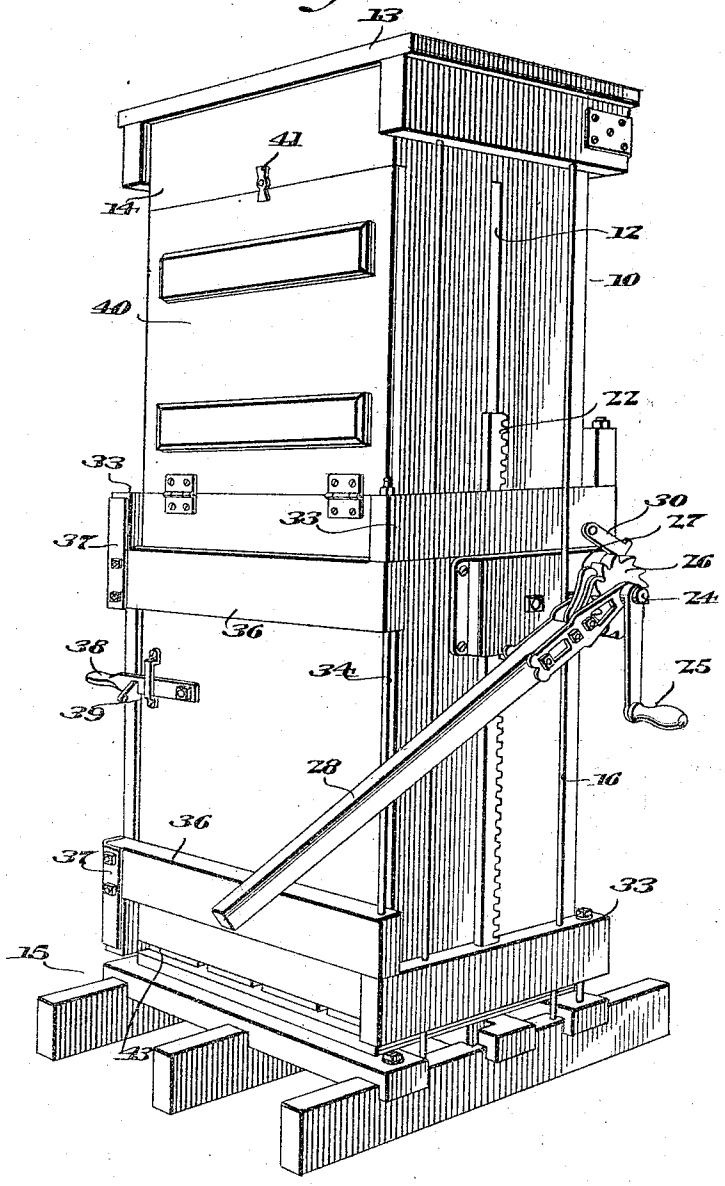
BALING PRESS.

APPLICATION FILED JULY 10, 1914.

1,212,658. Patented Jan. 16, 1917.

4 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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BALING PRESS.

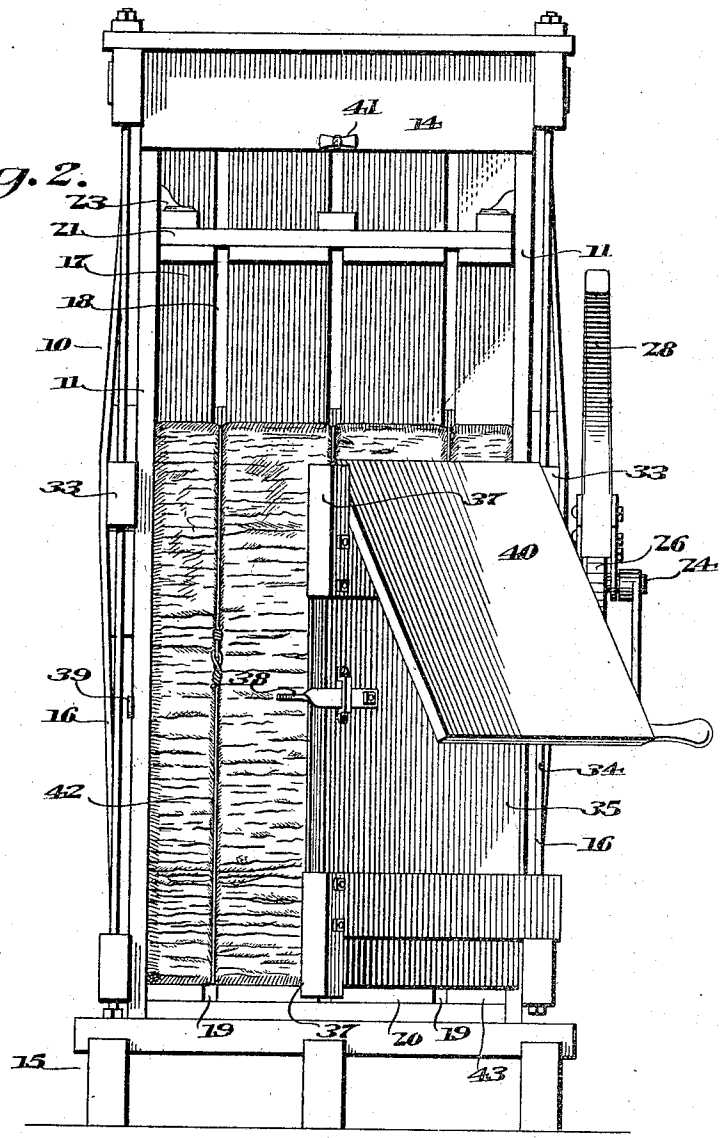
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4 SHEETS—SHEET 2.

Fig. 2.



Witnesses

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4 SHEETS—SHEET 3.

Fig. 3.

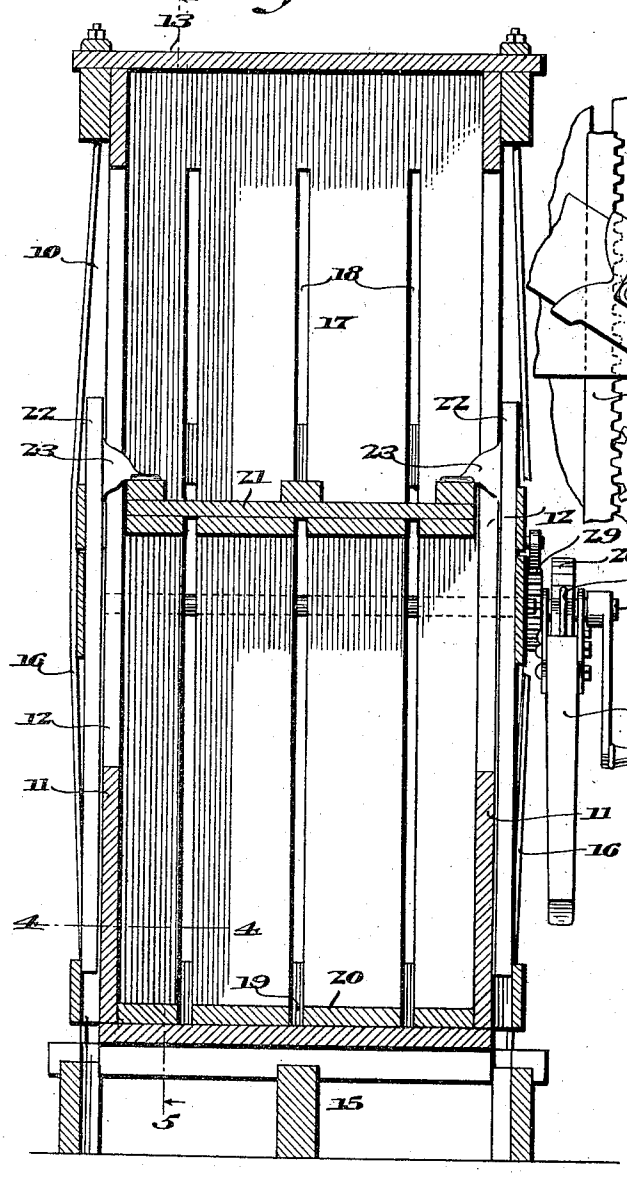
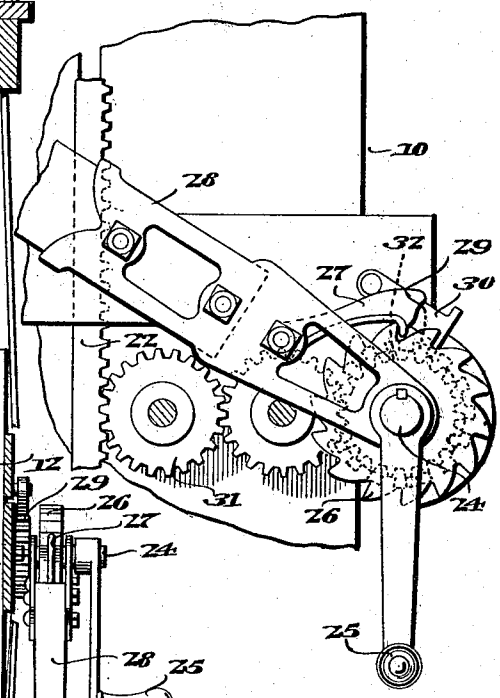


Fig. 6.



Witnesses

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4 SHEETS—SHEET 4.

Fig. 5.

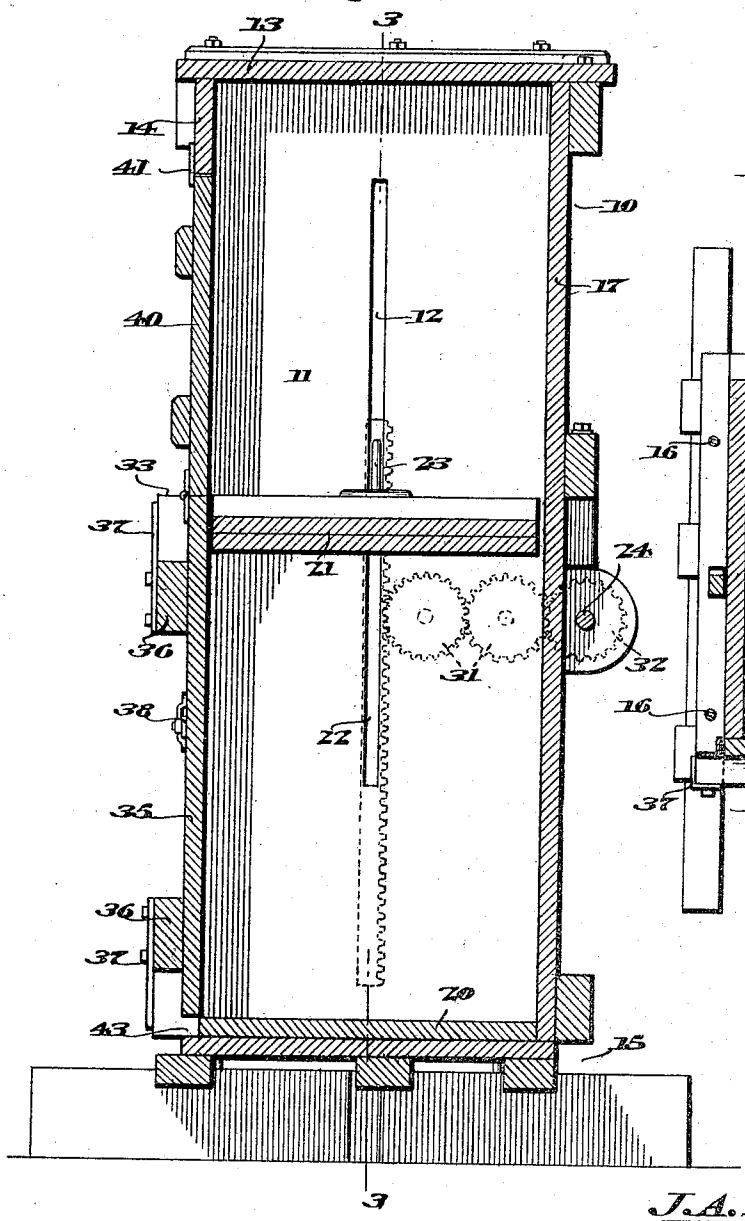
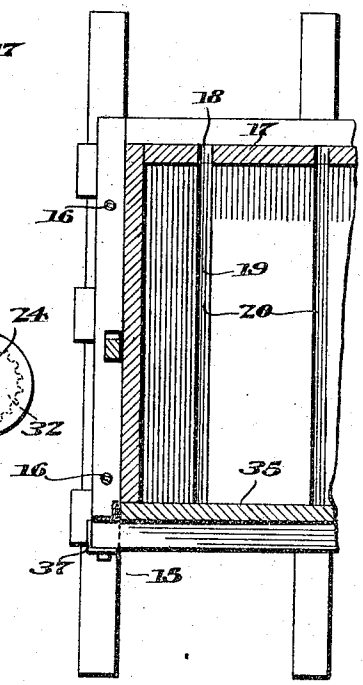


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

JOSEPH A. MARX AND FLOYD E. HOLDEN, OF SAGINAW, MICHIGAN, ASSIGNORS TO LENMAR MANUFACTURING COMPANY, OF SAGINAW, MICHIGAN.

BALING-PRESS.

1,212,658. Specification of Letters Patent. Patented Jan. 16, 1917.

Application filed July 10, 1914. Serial No. 850,196.

To all whom it may concern:

Be it known that we, JOSEPH A. MARX and FLOYD E. HOLDEN, citizens of the United States, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented new and useful Improvements in Baling-Presses, of which the following is a specification.

The invention relates to baling presses, and particularly to that class of baling presses for use in baling waste paper and the like in which the plunger or follower is movable in a box or receptacle whereby the product to be baled can be pressed and shaped into a compact mass or package.

The invention contemplates, among other features, the provision of a baling press of a simple construction and which can be readily operated by persons not skilled in the art of baling and in which, furthermore, the mass or article to be baled can be subjected to great pressure in order to squeeze or press the same into a compact form.

Still further objects of the invention reside in the provision of a baling press involving improvements over a patent for a baling press granted to Joseph A. Marx January 7, 1913, Number 1,049,889.

In the further disclosure of the invention reference is to be had to the accompanying drawings, constituting a part of this specification, in which similar characters of reference denote corresponding parts in all the views, and in which:

Figure 1 is a perspective view of the baling press showing the same in position for use; Fig. 2 is a front elevation showing the front face partially open, with a finished bale inside the press; Fig. 3 is a vertical transverse sectional view taken on the line 3—3 in Fig. 5; Fig. 4 is a horizontal sectional view taken on the line 4—4 in Fig. 3; Fig. 5 is a vertical sectional view taken on the line 5—5 in Fig. 3; and Fig. 6 is a fragmentary side elevation of the operating mechanism.

Referring more particularly to the views, I provide a box 10 which has sides 11 thereof provided with longitudinal slots 12, the box having a closed top 13 which is rigid thereon and which has a depending front portion 14. The box 10 is supported on a base 15 to which are secured suitable reinforcing rods 16 arranged to project upwardly and secured in the top 13. The back 17 of the box is provided with a series of longitudinal slots 18 which register with slots 19 formed in a bottom 20 of the box, said bottom reposing upon the base 15.

Movably arranged within the box is a follower 21 to which are secured rack bars 22 operating in the slots 12 of the sides 11 of the box, said rack bars having projecting arms or trackets 23 preferably formed with the rack bars and in rigid connection with a follower 21 to support the follower within the box.

Journaled on the rear of the box is a horizontal shaft 24 terminating at one end in a suitable handle 25. Keyed on the shaft is a ratchet wheel 26 over which is adapted to operate a pawl 27 mounted to swing on an operating lever 28 and whereby, when the operating lever is raised, the pawl will freely operate over the wheel 26 and when the lever is lowered the pawl catching in one of the teeth of the ratchet wheel 26 will impart rotation to the shaft 24. A second ratchet wheel 29 is keyed on the shaft 24 adjacent the ratchet wheel 26 and a locking pawl 30 is mounted to swing upon the box 10 and adapted to coöperate with the ratchet wheel 29 to hold the shaft against rotation reverse to the rotation imparted thereto by the lever 28. On both sides of the box 10 there are journaled intermeshing toothed wheels 31 and one of the wheels on each side meshes with a toothed wheel 32 secured at each end of the shaft 24, it being thus seen that when the shaft is operated rotation will be imparted to the intermeshing toothed wheels 31 on each side of the box. Each of the other toothed wheels 31 of the pair on each side of the box meshes with one of the rack bars 22 so that when the lever 28 is operated the resulting action will consist in a downward movement of the follower 21, carried by the rack bars, within the box 10. When it is desired to raise the follower in the box the pawl 27 is thrown out of engagement with the ratchet wheel 26 and the handle 25 is then rotated in the opposite direction to reverse the rotation of the toothed wheel 31 and move the rack bars upwardly to return the follower to an upward position in the box. Horizontal braces 33 project across the sides 11 of the box and mounted to swing on the box by a suitable vertical rod 34 carried by a plurality of the braces on one side of the box, is a door 35 having

cross pieces 36 rigid therewith and which project beyond the door and at their free ends carry locking members 37 in the nature of angle irons and which locking members are adapted to engage projecting ends of the side braces 33 on the other side of the box when the door is in closed position, thus preventing the sides of the box from bulging. The door is secured in locked position by a suitable lever 38 engaging a hook 39 on the box, and it will be apparent that when the lever is unlocked the door can be swung into an open position as shown in Fig. 2.

Mounted to swing vertically on the door 35 is an upper closure 40 which closes the upper part of the front of the box and which, meeting with the front portion 14 of the top, is adapted to be held in closed position when the door 35 is closed by a suitable catch 41 on the depending portion 14 of the top, said catch being in the nature of any desirable form of locking element. Now it will be apparent that the casing of the door 35 not only secures the sides against bulging by means of the locking members 37 engaging the forwardly projecting portions of a plurality of the side braces on one side of the box, said door being pivoted on the cross braces on the other side of the box, but the said door also carries the swinging closure 40 which closes the upper portion of the box and which, with the door and depending portion 14 of the top, forms the entire front of the box.

In the use of the baling press described suitable wires 42 are arranged to lie in the slots 19 and the waste paper is then forced into the box through the opening which will be formed in the front thereof when the closure 40 is swung into open position, the door 35 being at this time closed and locked, with the follower 21 in its uppermost position in the box. When a suitable amount of waste paper has been arranged in the box beneath the follower the closure 40 is secured in locked position by the catch 41 and then by operating the lever 28 the follower will be moved downwardly into the box to press the waste paper into a compact mass and form. The ends of the wires 41 project through the rear slots 18 and through an opening 43 formed by spacing the lower end of the door from the bottom 20. When the waste paper has been compressed to the desired form the door 31 is swung open and the wires are then passed around the waste paper and secured as shown in Fig. 2, thus forming the completed bale. It will of course be understood that the wires can be arranged in any other convenient position on account of the provision of the slots through which the wires pass and whereby the wires can be suspended in the box if desired.

It will be clearly understood that various slight changes can be made from the construction shown herein without departing from the spirit of the invention; that the drawings simply set forth the preferred form of the device and that the scope of the invention is defined by the appended claim.

Having thus described our invention, we claim:

A baling press comprising a box having a hinged front and slotted sides, a follower, a pair of exteriorly arranged rack bars having portions passing through the slots of said sides and bearing under said follower, gears meshing with said rack bars, plates mounted upon said sides and holding said rack bars in the slots, a shaft supported by said plates and directly connected to both gears, means for rotating said shaft and brace rods connected to said box and certain of which bearing upon said plate to prevent outward movement thereof.

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

JOSEPH A. MARX.
FLOYD E. HOLDEN.

Witnesses:
CARL C. ROGNER,
PETER WIEDUHOLD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."