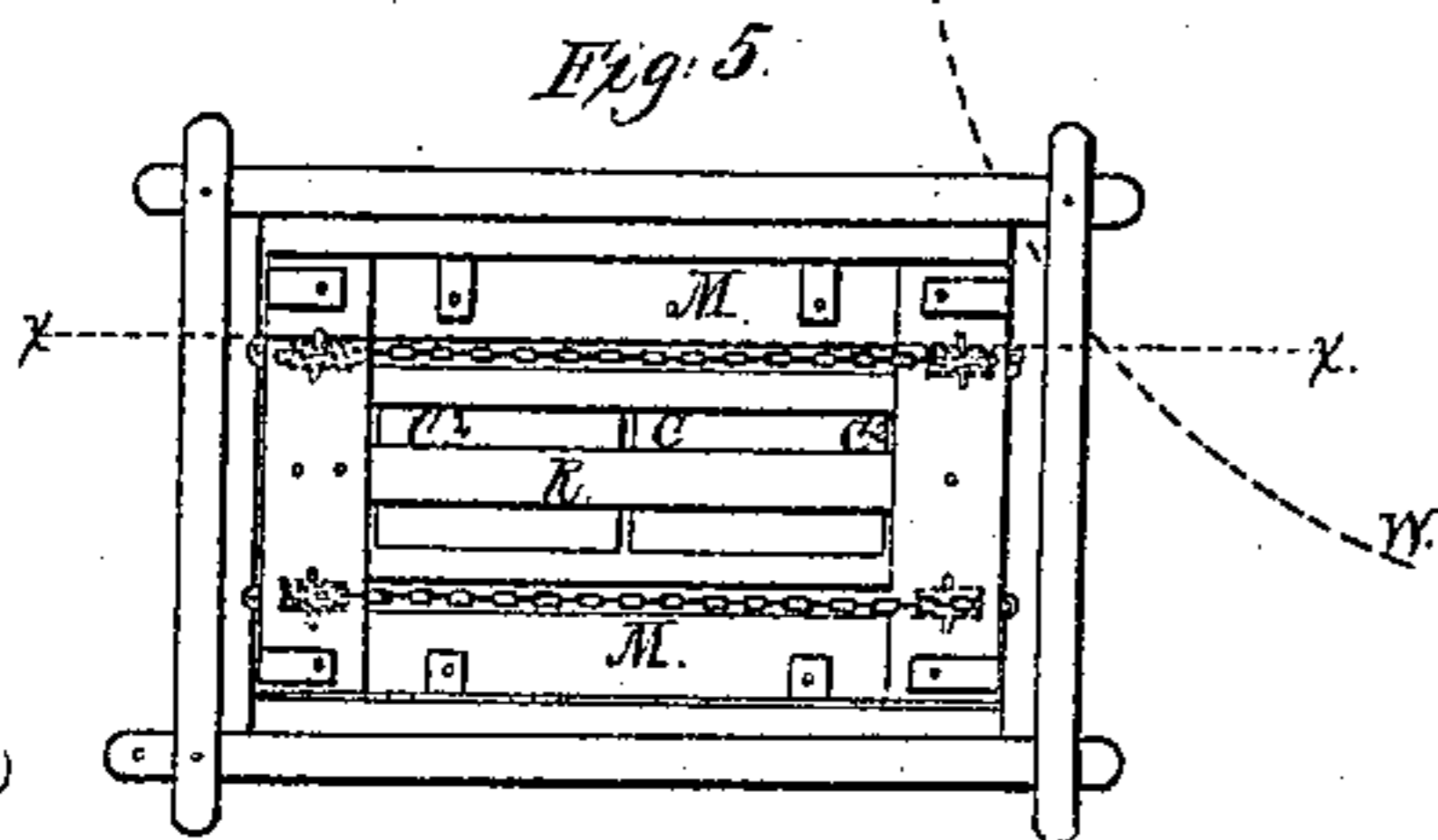
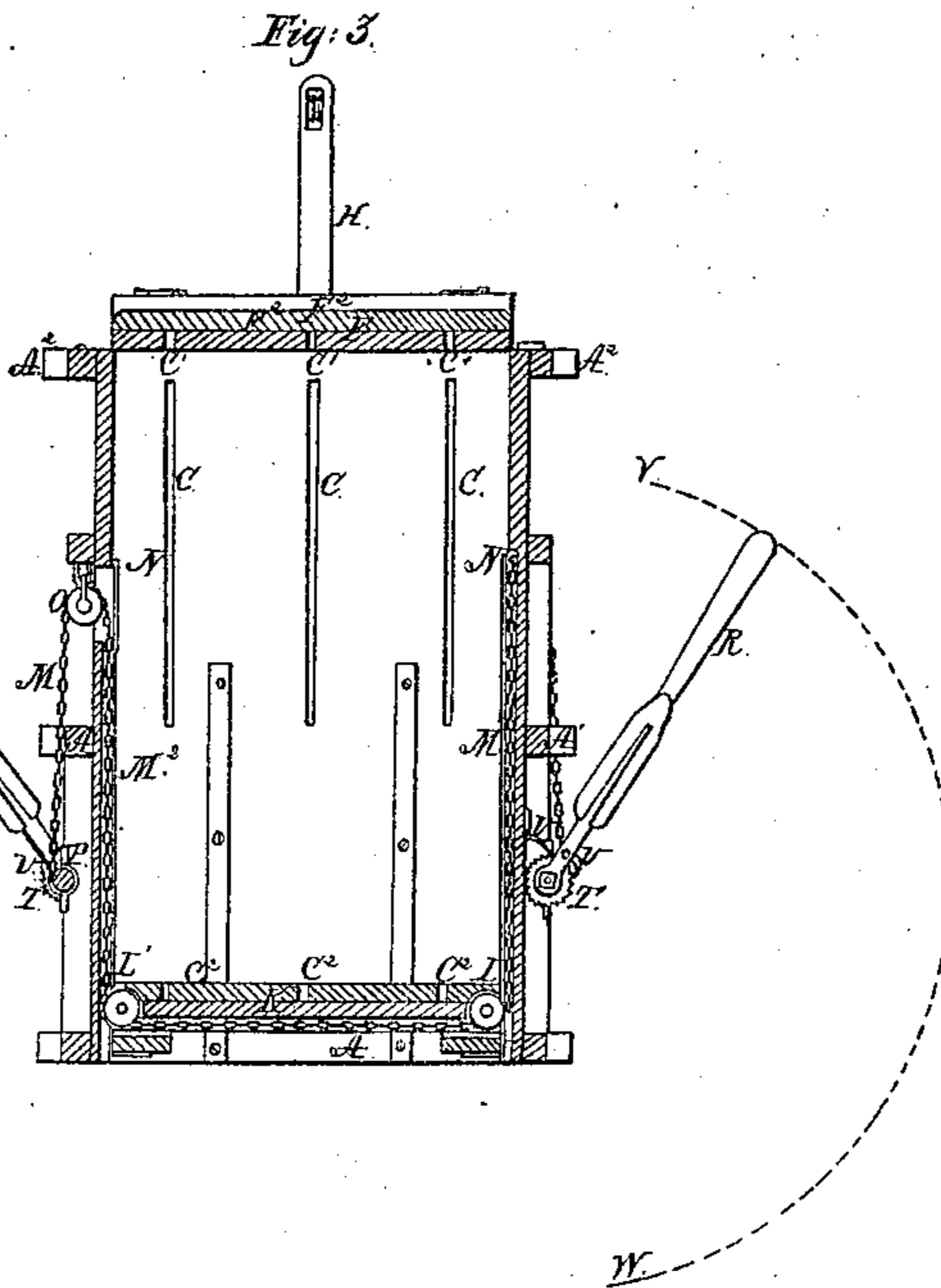
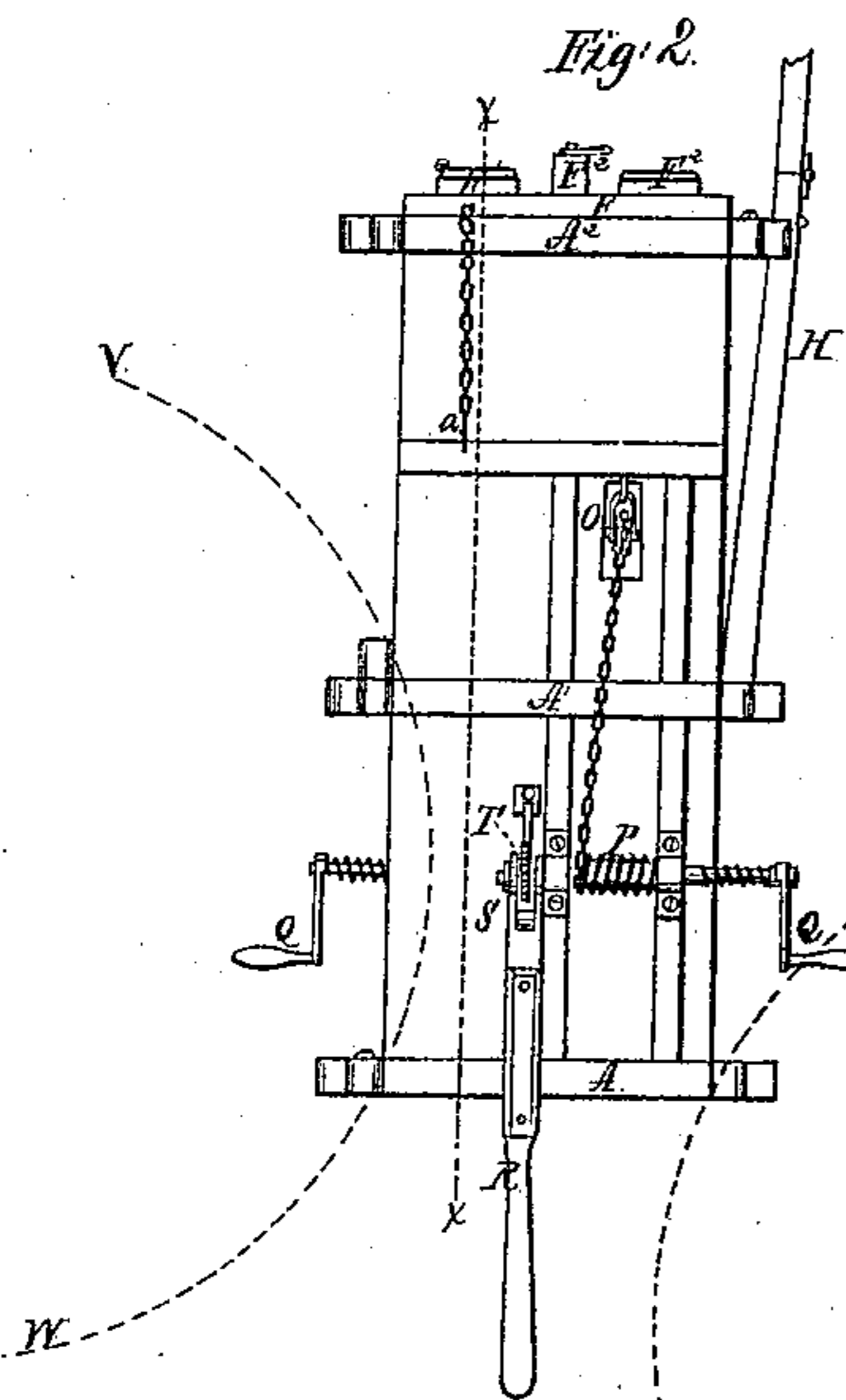
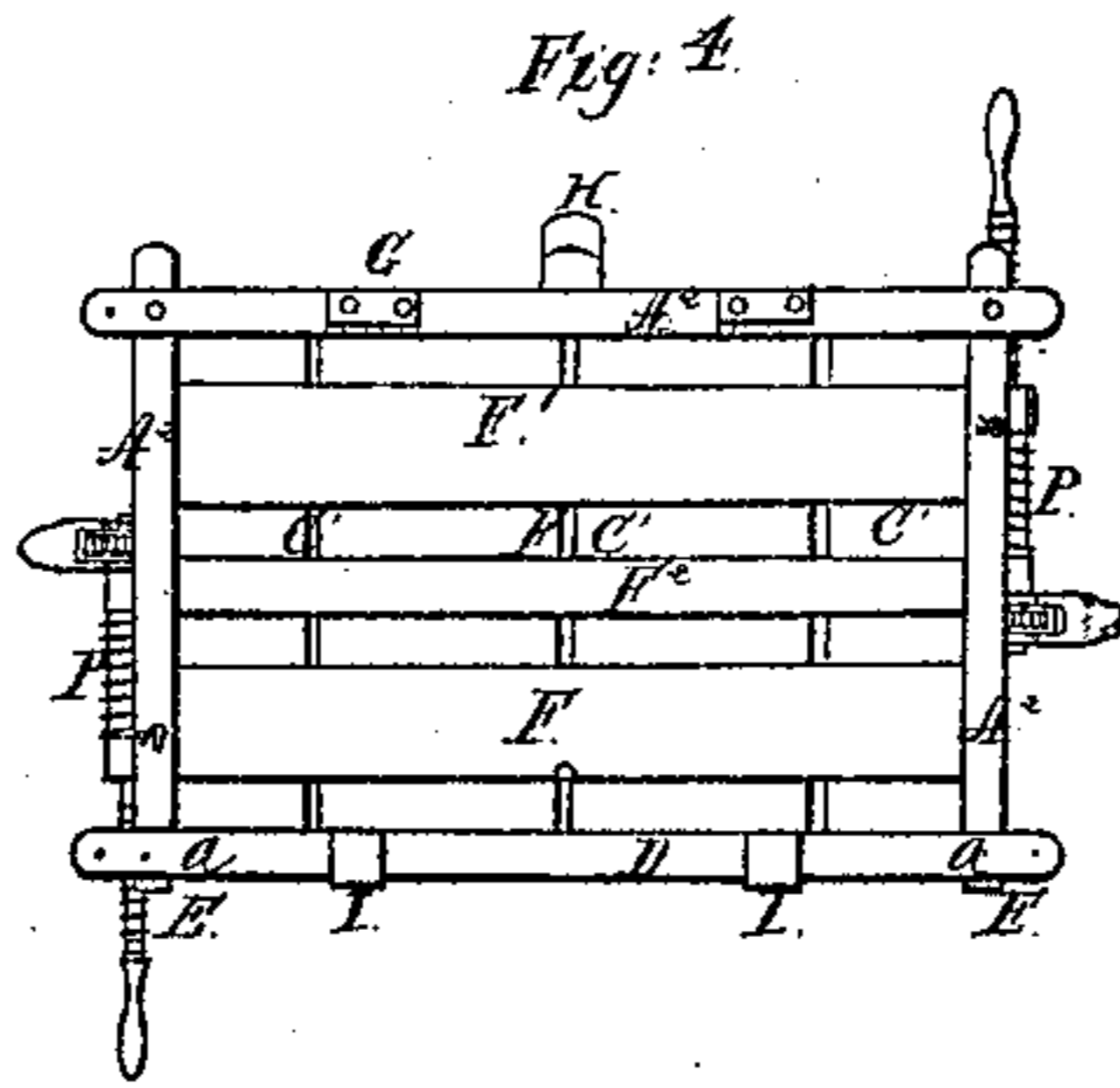
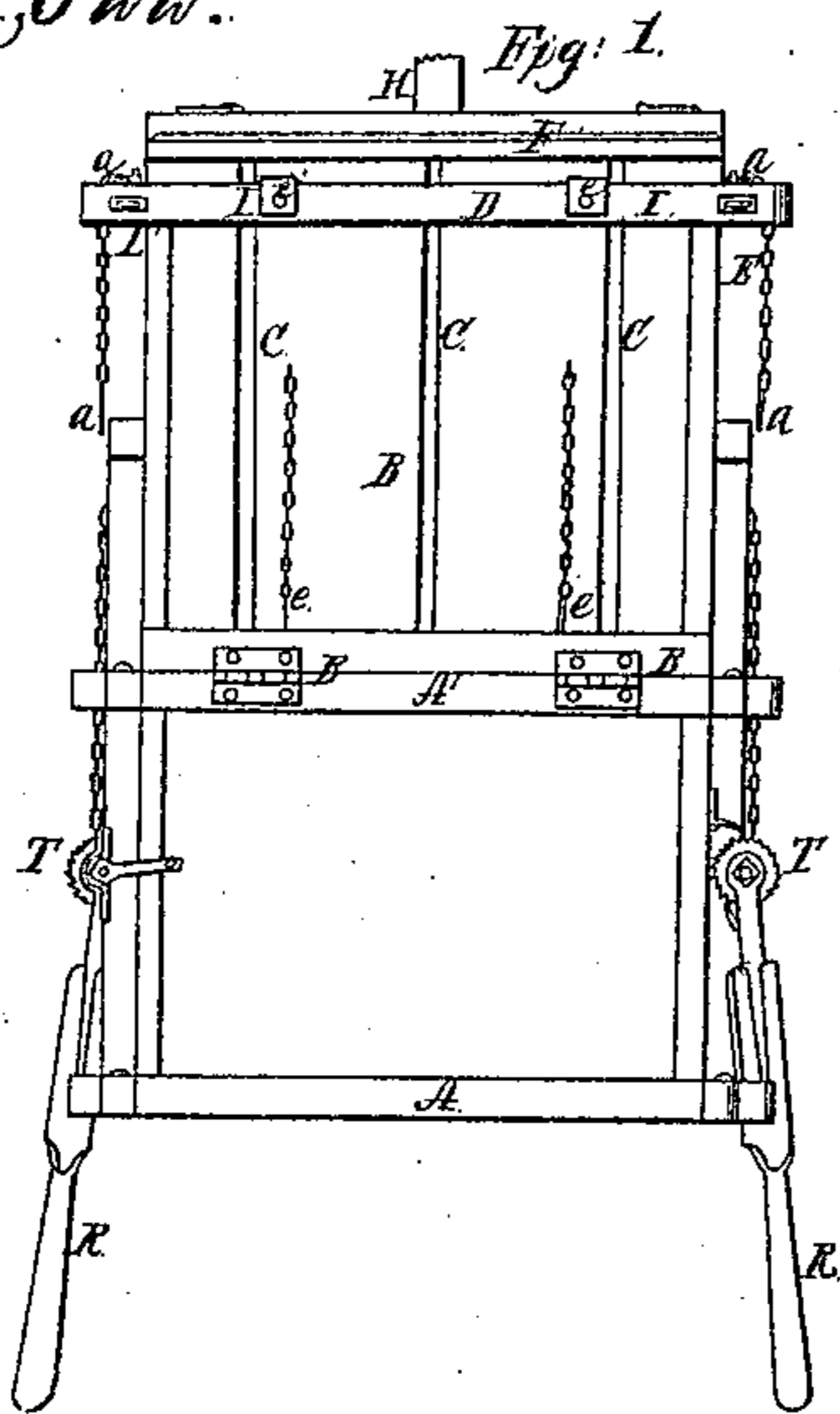


S. Colahan,

Hay Press.

N^o 34,622.

Patented Mar. 11, 1862.



Witnesses:

J. Brainerd
W. H. Burrows

Inventor:

Samuel Colahan

UNITED STATES PATENT OFFICE.

SAMUEL COLAHAN, OF CLEVELAND, OHIO.

IMPROVEMENT IN HAY-PRESSES.

Specification forming part of Letters Patent No. 34,622, dated March 11, 1862.

To all whom it may concern:

Be it known that I, SAMUEL COLAHAN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Hay-Presses; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a front view. Fig. 2 is an end view. Fig. 3 is a vertical section in the direction of the lines X X in Figs. 2 and 5. Fig. 4 is a top view, and Fig. 5 is a view of the under side.

Like letters refer to like parts in the several views.

The nature of my improvement relates to the general arrangement of the parts composing the machine, to the mechanical devices for obtaining the power, and the use thereof in pressing hay, cotton, hemp, wool, flax, and other similar substances.

In the accompanying drawings, A A' A² represent the frame-work of the machine, consisting of rectangular frames made of timber about three by four inches diameter, and halved and bolted together or otherwise secured at the corners. One of these frames, A, is placed at the bottom; one, A', at the middle, and A² at the top. Three sides are lined with plank running up and down, and the front or fourth side is lined but half-way up, as seen in Fig. 1, or to the top of the middle frame, A'. The interior of the press has the capacity for holding a sufficient quantity of hay or other material for one bale. The front frame, A', to the top is occupied by a door, B, the hinges of which are at the bottom of the door, as seen at B', and are secured by screws to the piece A', as shown in Fig. 1. Both the door and the opposite portion of the back part of the press are pierced with vertical slits C, for the purpose of introducing the binding-cords around the pressed bale. The upper piece, D, of the door B is mortised at each end, as at E, Fig. 1, and there being tenons upon the corresponding ends of the pieces A². When the door is closed, the tenons enter the mortises at E, and are secured by a pin, a, as shown in Figs. 1, 2, and 4. The top F is made strong by timbers F' F², and the lining is secured crosswise, and provided with transverse slits

C' C' C' for the introduction of the binding-cords, which slits agree in position with those previously named, and shown at C in Figs. 1 and 3. The cover is hinged to the piece of timber A², as seen at G G in Fig. 4. When the cover is opened, it rests against the standard H, which rises at the back part of the machine for that purpose. This standard has a pulley in the top, over which a cord passes to raise the cover, in order to remove the pressed bale. Upon the front edge of the cover are iron hooks I I, Fig. 1, which embrace the outside of the timber D, where they are secured by the pins e e, which penetrate the timber D through the holes e' e', thus giving additional security to the front door, and preventing the cover from rising while in the act of pressing. The bottom K is made in a manner similar to the cover, with slits C² C² C² running transversely and agreeing in position with those shown at C C'. The length and breadth of the bottom is such that it will slide up and down with ease inside of the body of the press. At about a quarter of the distance from each corner of the timbers of the bottom are placed friction-wheels L L', there being four in all. A chain or rope, M, is secured to the inside of the press about midway of the upper half, as seen at N, Fig. 3, at opposite sides obliquely from each other. Each of these ascends in a casement, M', Fig. 3, passes under the wheel L, along the bottom K to the wheel L', up another casement, M², Fig. 3, over the sheave O, Figs. 2 and 3, thence to the windlass P, which is placed horizontally about midway of the lower half of the press, and provided with spiral grooves in which the chain or rope winds. On the outer end of each of these windlasses P (there being one on each side) is a crank, Q, Fig. 2, by means of which the press is operated in lowering the bottom, and in raising it through the first quarter of the distance it rises in the act of pressing.

R R represent levers, there being one attached to the inner end of each of the windlasses P. The fulcrum end is slotted, as seen at S in Fig. 2, and embraces the ratchet-wheel T, which ratchet-wheel is placed upon and secured to the windlass P. A pawl, U, is attached to the lever R near the ratchet-wheel, and takes hold of and falls into the angular teeth in the wheel, so that when the lever R is

caused to pass from V to W the windlass P is rotated upon its axis, and the rope or chain M wound up upon the windlass P, and when both levers are worked in concert the bottom K is elevated with great power till it reaches the height of the sheaves O. A pawl, U', attached to the side of the press above the ratchet-wheels, serves to keep the windlass from turning backward while the lever R is being raised from W to V in taking a new hold upon the wheel T.

The mode of using this press is as follows: The bottom K is placed at the lowest part of the frame, as in Fig. 3. The top is then raised and the interior of the press filled with hay or other material to be pressed, and the top again closed and secured by means of the pins in the hooks I, the door B being closed, as seen in Fig. 1. Then the windlass is turned by means of the crank Q until the further con-

densation of the material to be pressed becomes difficult by this means. I then apply the power of the levers R until the required amount of density is produced. The binding-cords are now introduced through the slits C C' C'', and secured around the bale, when the top can be raised, the door opened, and the bale removed.

What I claim as my improvement, and desire to secure by Letters Patent, is—

The special arrangement of the chain or rope M, pulleys L L', sheave O, and windlass P, in combination with the lever R, pawl and ratchet-wheel U T, and bottom K, when these parts are arranged and operated as and for the purpose specified.

SAML. COLAHAN.

Witnesses:

W. H. BURRIDGE,
J. BRAINERD.