No. 659,799. Patented Oct. 16, 1900.

L. MATTHEWS.

BALING PRESS.

(Application filed Jan. 29, 1900.)

(No Model.)

Fig. 1.

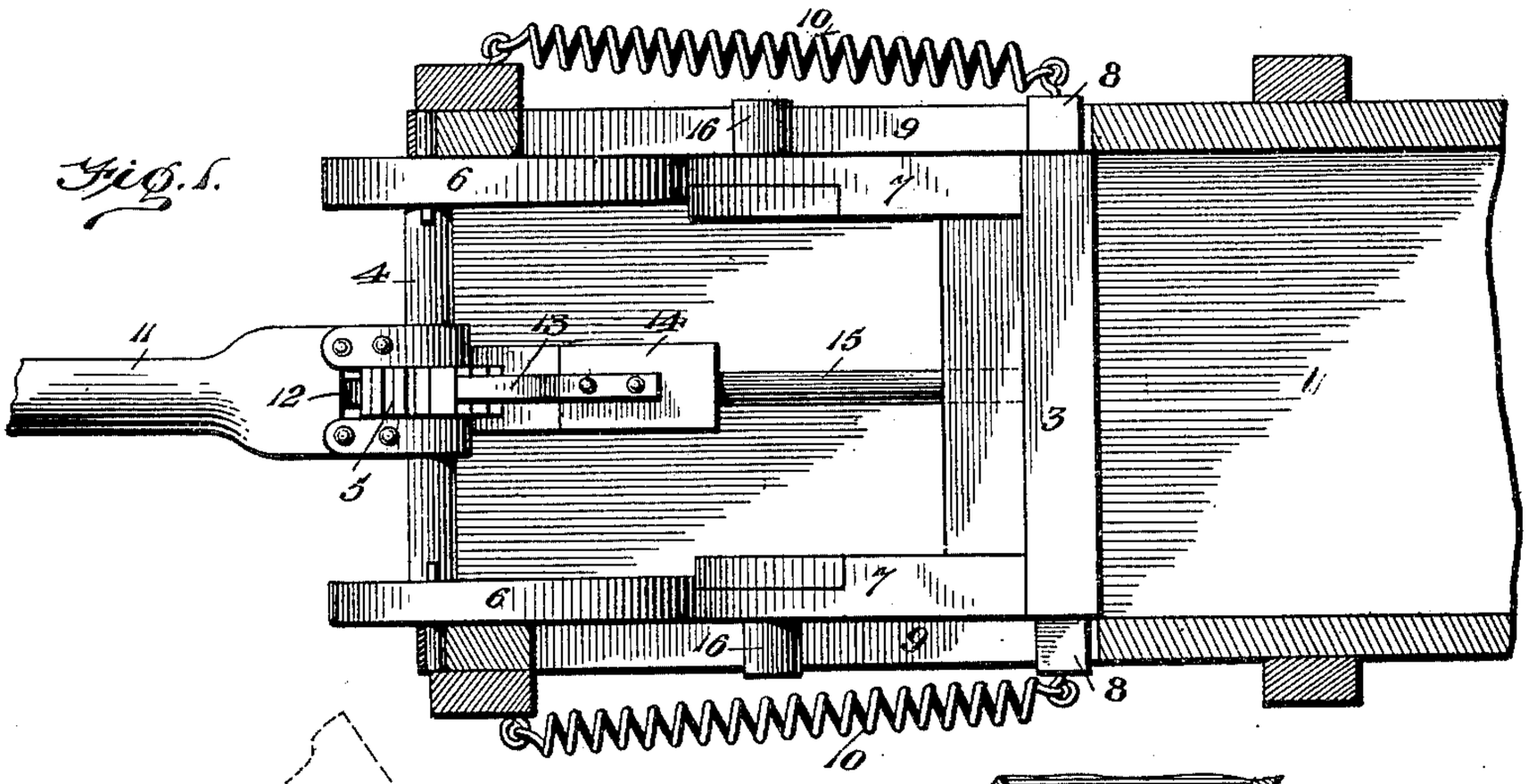


Fig. 2.

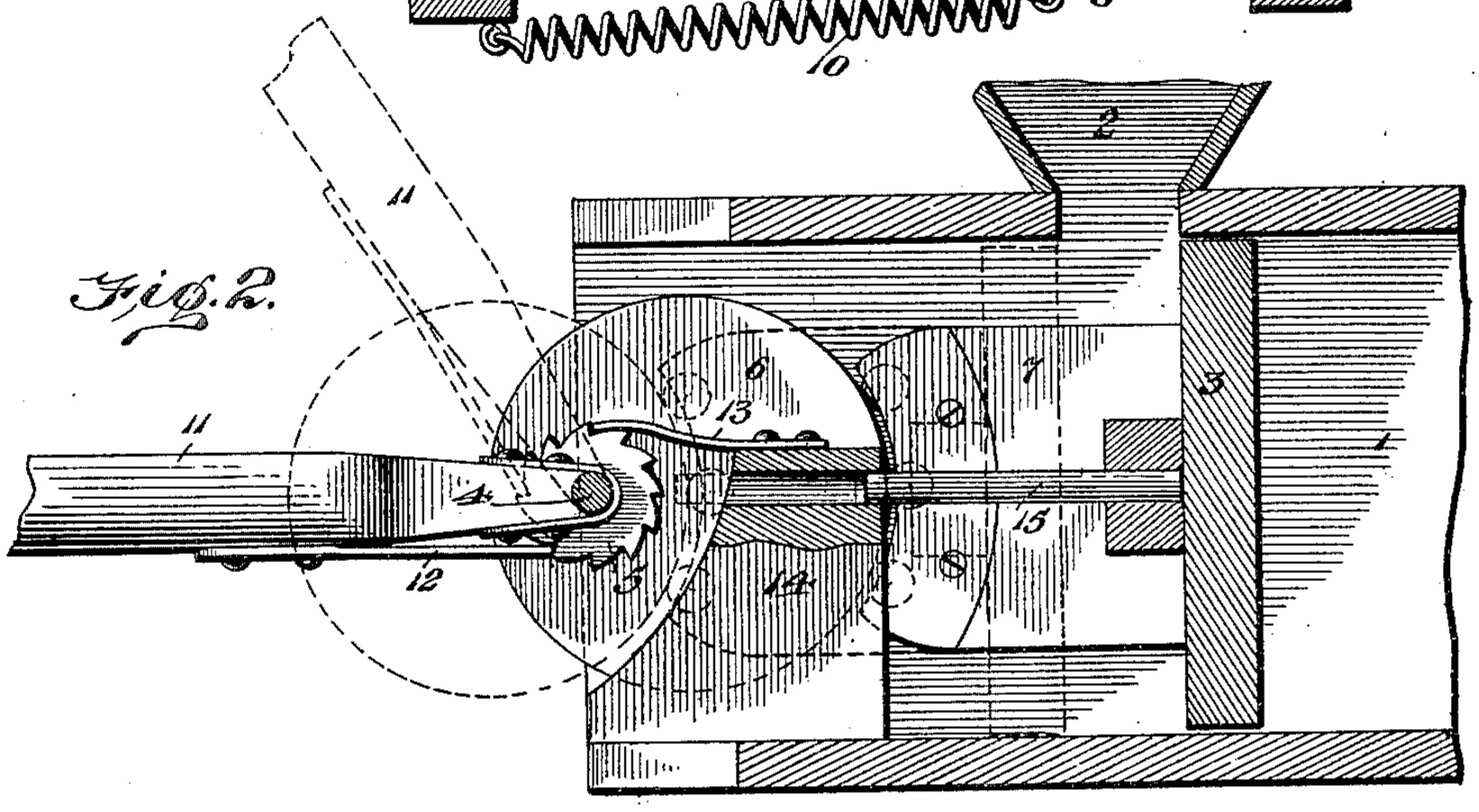
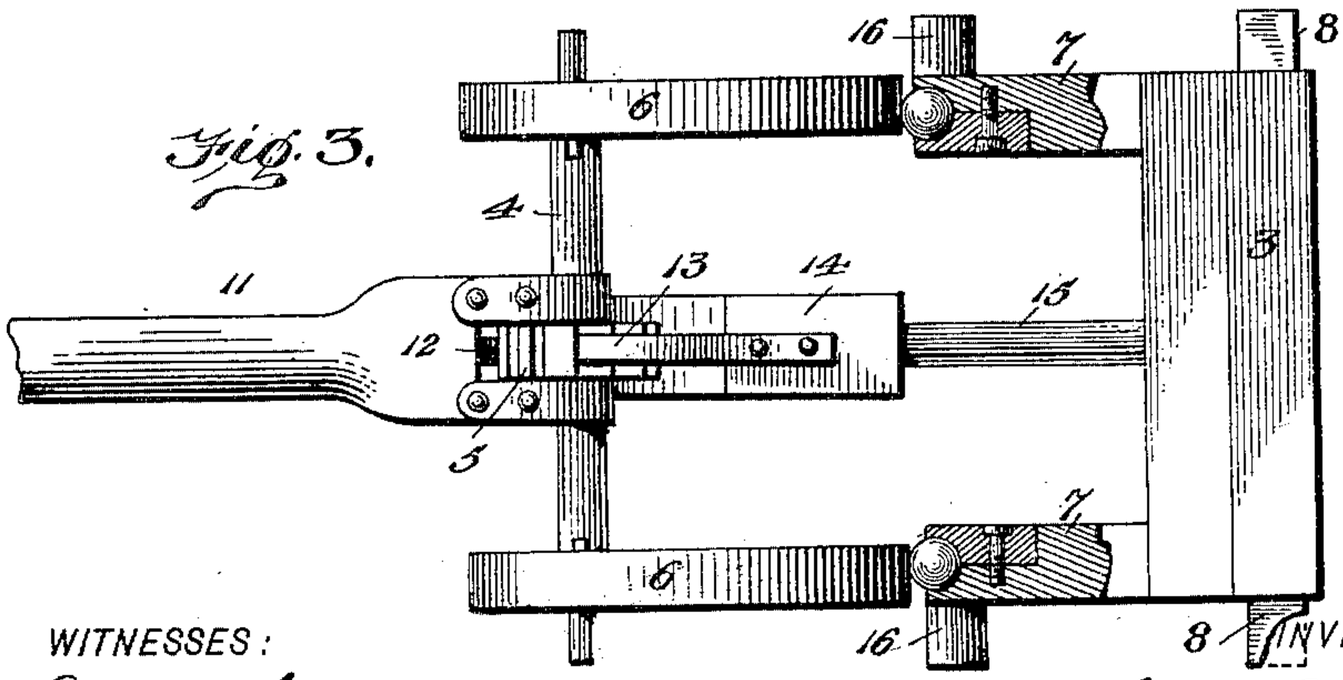


Fig. 3.



WITNESSES:

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LUTHER MATTHEWS, OF PARIS, TENNESSEE.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 659,799, dated October 16, 1900.

Application filed January 29, 1900. Serial No. 3,199. (No model.)

To all whom it may concern:

Be it known that I, LUTHER MATTHEWS, a citizen of the United States, residing at Paris, in the county of Henry and State of Tennessee, have invented certain new and useful Improvements in Baling-Presses, of which the following is a specification.

The invention herein is directed to the type of baling-presses in which the follower is actuated by an eccentric and lever; and the objects of my improvement are to give a uniform action of a pair of eccentrics upon the follower, and thereby render it easier to be actuated by a hand-lever, and to provide for keeping the follower in true free movement, so that there will be no tendency to cramp in its movements in the press-box. These objects are especially important in a hand-operated press. Otherwise the labor would be too much.

The particular matter in which the improvement resides will be pointed out in the claims herein.

The accompanying drawings illustrate my improvement, and in which—

Figure 1 shows in horizontal section so much of a baling-press in which the follower-actuating eccentrics are seen as engaging arms on each end of the follower and the latter supported centrally from any tendency to cramp. Fig. 2 is a vertical longitudinal section of the same, and Fig. 3 is a top view of the follower and its connected operating and guiding parts.

The press-box 1 is of the usual bale-chamber form and is provided with a top opening 2, through which the hay is fed into the bale-chamber to be formed into continuous bale-sections by the reciprocating action of the follower or plunger 3 in the usual manner. A shaft 4, having a ratchet-wheel 5, is mounted horizontally at the sides of the open end of the box and has fixed on each end thereof an eccentric 6 of circular form, while the follower has at each end an arm 7, projecting toward and constantly engaging the eccentrics. These arms move against the inner walls of the box and are provided with studs 8 8, which project into slots 9 in the sides of the box and support the follower in its horizontal movements. The eccentrics being true circles are mounted to project equally on the same side of the shaft, while the follower-arms are made to have concave bearings on the eccentrics, the arms for this purpose being made quite wide and have an edge concave bearing of about a quarter of a circle upon the peripheries of the eccentrics. To reduce the friction, I prefer to provide ball-bearings in the concave ends of the arms, and these balls may be seated and confined in any suitable way. Springs 10 maintain the engagement of the follower-arms with the eccentries, and being connected to the follower and to the frame serve to retract the follower after it has completed its full compressing function. In this retracting function the follower also assists in turning the eccentrics back to their starting position; but as the operation of the press is continuous the hand-lever keeps the eccentrics turning. The hand-lever 11 is mounted to stand outward and to swing freely on the shaft, being forked to allow it to be raised and lowered over the ratchet, and is provided with a ratchet-pawl 12, preferably arranged to engage the under side of the ratchet-wheel, whereby to cause the rotation of the shaft by the downward-pressing movement of the lever. A check-pawl 13, engaging the ratchet-wheel, is provided on a fixed pillar 14 for holding the follower as it is intermittently driven forward to compress the bale. As a means of keeping the follower from cramping and for rendering its movements easy within the box-walls I provide a guiding-rod 15, fixed to and projecting centrally from the follower and sliding in a bearing in the pillar 14, so that the follower under the movements of the eccentrics is held from rocking and from being twisted to the side or up or down. Adjacent to this central guide-support for the follower I may provide studs 16 on the follower-arms at their eccentric-engaging ends, and these studs sliding in the box-slots resist the tendency of the arms to be lifted by the eccentrics.

It is obvious that the ratchet-arm may engage the ratchet-wheel from the upper side of the lever. It is also obvious that roller-

bearings may be substituted for the ball-bearings and that the central guide-rod may be fixed in the pillar.

I claim—

1. In a baling-press and in combination with a press-box and a reciprocating pressing-follower having an arm projecting from the rear side at each end, of a shaft having on each end an eccentric of circular form engaging the follower-arms a ratchet-wheel on the shaft between the eccentrics, a hand-lever loose on the shaft having a pawl engaging the ratchet-wheel, and coil-springs connecting the follower and box-frame whereby the said circular eccentrics are caused to force the follower inward by a direct uniform pressure upon its arms.

2. In a baling-press and in combination with a press-box and a reciprocating pressing-follower having an arm at each end terminating in a concave bearing, of a shaft having at each end an eccentric of circular form, engaging the concave arms, a ratchet-wheel on the shaft, a hand-lever loose on the shaft having a pawl engaging the ratchet-wheel, coil-springs connecting the follower and box-frame and studs on the ends of the follower and at the ends of the arms slidable in slots in the box-frame.

3. In a baling-press and in combination with a press-box and a reciprocating pressing-follower having an arm at each end terminating in a concave bearing, of a shaft having at each end an eccentric of circular form engaging the concave arms, a ratchet-wheel on the shaft, a hand-lever loose on the shaft having a pawl engaging the ratchet-wheel, a guide-rod fixed central in the follower, and a fixed pillar forming a guide-support for the follower-rod, and coil-springs connecting the follower and box-frame.

4. In a baling-press and in combination with a press-box and a reciprocating pressing-follower having an arm at each end of a shaft having at each end an eccentric of circular form engaging the arms, a ratchet-wheel on the shaft, a hand-lever loose on the shaft, having a pawl engaging the ratchet-wheel, studs on the ends of the follower and at the ends of the arms slidable in slots in the box-frame, a guide-rod central in the follower, a fixed pillar forming a guide-support for the follower-rod and coil-springs connecting the follower and the box-frame.

In testimony whereof I affix my signature in presence of two witnesses.

LUTHER MATTHEWS.

Witnesses:

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R. F. KENT.