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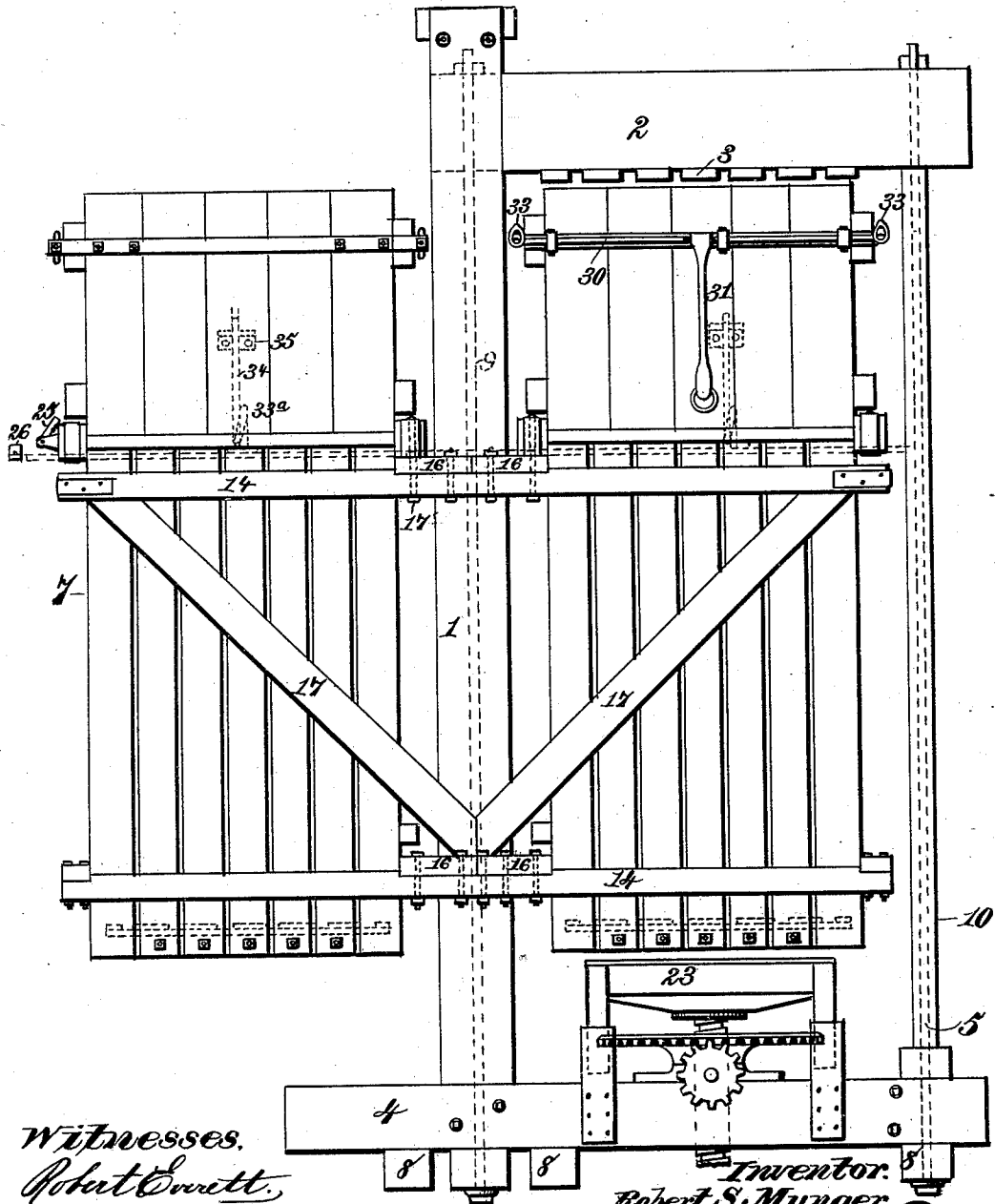
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R. S. MUNGER.
COTTON OR OTHER PRESS.

No. 308,789.

Patented Dec. 2, 1884.

FIG. 1.



Witnesses,
Robert Everett,
J. L. Coombs

Inventor,
Robert S. Munger,
By James L. Norris, Atty.

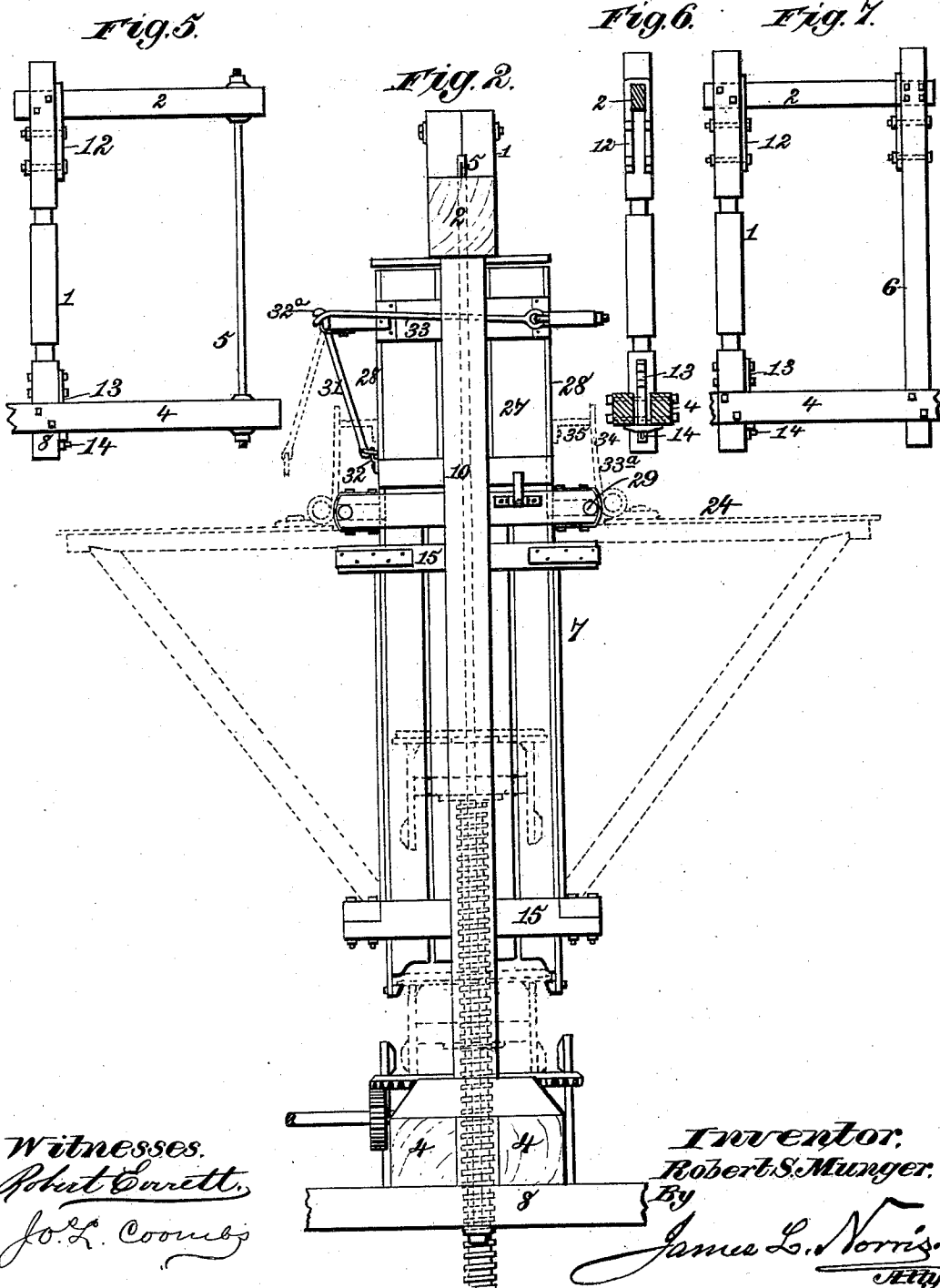
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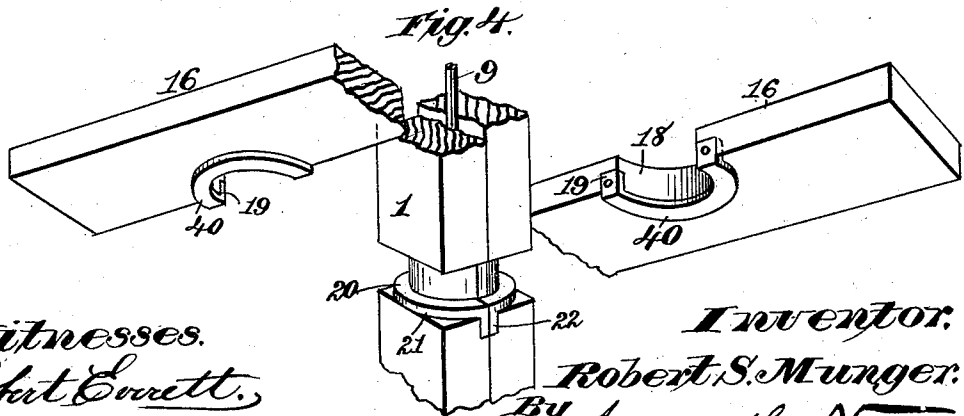
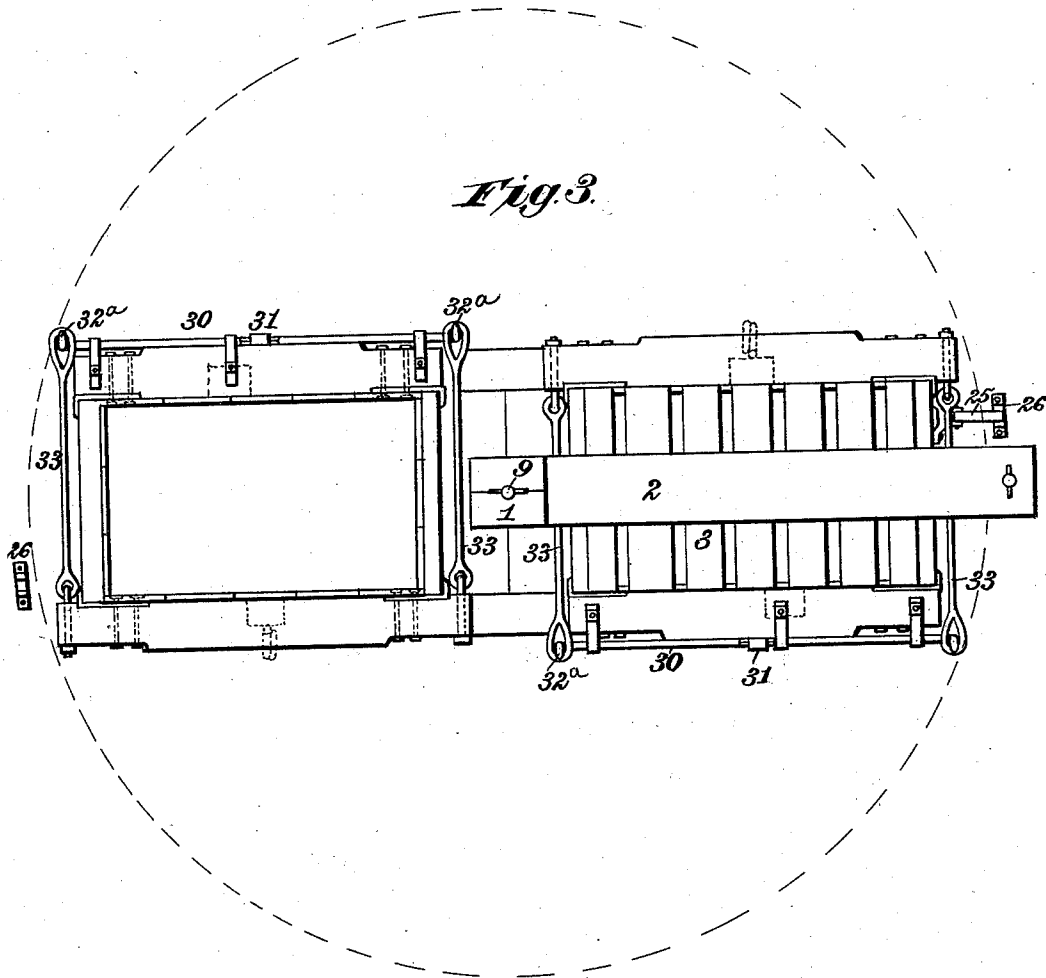
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Robert S. Munger.
 By *James L. Norris,*
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UNITED STATES PATENT OFFICE.

ROBERT S. MUNGER, OF MEXIA, TEXAS.

COTTON OR OTHER PRESS.

SPECIFICATION forming part of Letters Patent No. 308,789, dated December 2, 1884.

Application filed May 31, 1884. (No model.)

To all whom it may concern:

Be it known that I, ROBERT S. MUNGER, a citizen of the United States, residing at Mexia, Texas, have invented new and useful Improvements in Cotton and other Presses, of which the following is a specification.

This invention relates to that class of cotton-presses in which duplex bale or press boxes arranged to swing upon centers are adapted to be brought in line with a stationary platen and a movable follower, parts of the invention, however, being also capable of use in connection with press-boxes having movable doors or sides.

The invention consists in a double bale-box which is arranged to swing upon a center-post that forms part of the supporting-frame in which said double press is mounted. Said center-post is composed of two vertically-split sections, and has circular bearings formed at suitable points thereon for receiving corresponding sockets on the double bale-box, so as to permit the latter to swing or turn on said center-post. The circular bearings on the center-post are composed of two vertically-bisected shells or members, which have a bottom flange that rests on an offset or shoulder formed on the center-post, and is provided with lugs or spurs which enter the center-post. Cross-bars on the press-box frame have semi-circular recesses or cuts which receive the circular bearings on the center-post, and on the bottom of said recess are applied metal wear plates or rings that turn in contact with the flanges of the circular bearings.

The invention also consists in locking and releasing mechanism for the hinged sides or doors of the press-box, which comprises a transverse or horizontal shaft that is journaled in bearings on one of the press-box doors, and has a central downwardly-projecting lever or arm and end hooks or projections. The latter are adapted for engagement with eye rods or bars jointed to the opposite press-box door, so that when the parts are thus interlocked and the lever of the rock-shaft is suitably secured the doors on the opposite sides of the press-box will be firmly held by one and the same locking mechanism. By releasing the lever of the rock-shaft from the press-box, to which it has been temporarily fastened, the expansive force of the bale causes the lever

and rock-shaft to operate or turn in such a manner as to release the eye rods or bars, and in this manner both press-box doors are gradually released and allowed to drop down for allowing the bale to be removed. Other minor details of the invention are also embraced in the invention, and will be hereinafter more fully described, and then set forth in the claims.

In the drawings, Figure 1 is a side elevation of a cotton-press embodying my improvements. Fig. 2 is an end elevation of the same. Fig. 3 is a plan or top view. Fig. 4 is a detail view showing the construction of center-post for the bale-boxes and the sectional bearings. Figs. 5 to 7, inclusive, represent modifications of the frame-work in which the press-boxes are mounted.

A stationary frame-work in which the press-boxes are mounted consists of the vertical standard or column 1, having at the top a beam, 2, which extends at right angles from one side of said standard, and has a platen, 3, for the press-box, fastened thereto in any approved manner. The lower end of the standard 1 is secured to a base or sill, 4, and at the outer end of said base-sill is arranged a vertical tie-rod, 5, as is seen in Figs. 1 and 5, or a standard, 6, as is shown in Fig. 7. The upper end of this tie-rod or standard is secured to the beam 2, extending from the top of the standard 1, and all the members specified comprise a strong and substantial frame which contains the press-boxes 7. It should be observed that the base-sill 4 also rests upon additional sills 8, and that the upper end of the standard 1 is suitably secured to the beams of the structure or house in which the press is located. The standard 1 is composed of two vertically-divided sections, through which may pass a tie-rod, 9, that also extends through the base-sill 4 and top beam, 2, nuts being applied to the screw-threaded ends of said tie-rod. The tie-rod 9, that connects the base-sill 4 with the top beam, 2, may have an encircling sheathing, 10, of wood, as shown in Fig. 1, or be left unsheathed, as shown in Fig. 5.

As shown in Fig. 1, the top beam, 2, is mortised into the standard 1, and is held in place by the tie-rod 9, that passes through said standard and the top beam.

In Fig. 5 the top beam is mortised into the

standard 1, and is secured by transverse bolts and a vertical plate or shoe, 12, that fits over the top beam and is bolted to the standard 1. The bottom of the latter also is fitted between
 5 a double base-sill and is held by transverse bolts and an anchor-plate, 13, having a key, 14, passed through the same beneath the sill, as is seen in Fig. 6.

In the construction shown in Fig. 7 the
 10 standard 1 is secured in the same manner as in Fig. 6, and the outside standard, 6, also is fastened to the base-sill and top beam in substantially the same way as said standard 1.

The frame in which the duplex press-boxes
 15 7 are mounted consists of the longitudinal beams 14^a, the end beams, 15, and the central bars, 16. These parts are arranged to form two rectangular top and bottom frames, which are connected and braced by diagonal struts, 17, as is seen in Fig. 1. The beams 14^a extend
 20 sufficiently far beyond the press-boxes to receive the end beams, 15, which are secured thereto by bolts, or by suitable straps and rivets. The bars 16 rest on opposite sides of the
 25 central standard, 1, and are supported at their ends upon the longitudinal beams 14^a, being secured thereto by suitable bolts, 17^a, or other fastening devices. The vertical face of the
 30 central portion of each bar 16 is provided with a semicircular recess or cut, 18, at the bottom of which is applied a semicircular metal plate, 40, that is made with vertical ears 19, let into the bar 16.

At the points of the standard 1 where the bars 16 are fitted I form reduced portions
 35 which are encircled by the cylindrical sleeves 20, that are formed of two vertically-bisected shells or members, as is clearly seen in Fig. 4. These shells are made in sections, so that they
 40 can be easily fitted on the divided or sectional standard, and they have each a bottom flange, 21, which rests upon a shoulder or offset formed by the reduced portion of the standard
 45 1. An ear or lug, 22, on the under side of the flange 21 is let into the wood of the standard and serves to hold the shell in position. It is apparent that the aforesaid bisected shell constitutes a smooth anti-friction bearing on
 50 which the wear-plates on the bars 16 can turn or rotate.

By providing the metal bearing and wear plates, as just stated, I effectually overcome
 all liability of the binding of the press-boxes and am enable to rotate the same freely and
 55 uniformly at all times.

The duplex press-boxes are open at the top and bottom, and are designed to be brought
 under the top platen and over the bottom follower, 23, as is seen in Fig. 1. When either
 60 box is in this position, the follower can be operated and entered into the box for compressing the cotton between said follower and the top platen.

It should be observed that a platform or
 65 floor, 24, (indicated by the dotted lines in Fig. 2,) extends from the press-boxes and revolves therewith, said floor being adapted to be locked

to a stationary floor of the press-house by means of pivoted catches 25 on the press-box frame and sockets or shoes 26 on said station-
 70 ary floor.

The upper section of each press-box is composed of the stationary end panels, 27, and the hinged side doors, 28, that are hung upon the
 horizontal journals 29, arranged at the bottom
 75 of said doors. In this manner it is evident that the doors can be turned into a vertical position for forming a closed press-box, and swung down into a horizontal position for
 80 gaining access to the interior of the press-box when removing the pressed bale. The side doors are held in a closed or raised position by means of a locking mechanism which acts upon both doors, and is so arranged that the
 85 latter are gradually released at both ends to permit them to be let down for opening the press-box.

The locking and releasing mechanism comprises a horizontal rock-shaft, 30, which is
 90 journaled on the outer side of one of the press-box doors, and has a central lever-shaped extension, 31, that extends in a downward direction, and is adapted to engage with a hook or stop projection, 32, on the press-box door. The ends of the shaft 30 terminate in upward-
 95 ly-turned hooks 32^a, which are adapted to receive eye rods, straps, or bars 33, carried by the opposite press-box door. It is evident from Fig. 3 that these eye-rods are jointed to one of
 100 the press-box doors, and that they can be fitted or swung onto the hooks of the rock-shaft 30. When the parts are thus engaged and the lower end of the lever 31 is held by its stop devices the press-box doors are held firmly down
 105 so as to allow the follower to work in a closed press-box formed in this manner. When the pressed bale is to be removed, the lever 31 is released, and thereupon the expansive force of the bale will effect an oscillation of the
 110 rock-shaft and throw the hooks thereon out of engagement with the eye-rods. The doors are thus gradually released without any attendant jar or noise, and are free to be lowered into a horizontal position by virtue of
 115 their bottom hinge-joints, and in this manner it is evident that one and the same mechanism suffices to hold the doors on both sides of
 the press-box until the time when said mechanism is released in the manner indicated.

For assisting the raising and lowering of
 120 the press-box doors, which, it may be stated, are quite heavy, I provide springs 33^b at each side of the press-box, which bear upon the middle portion of the door they assist in closing. These springs are of any desired form
 125 capable of exerting proper pressure upon the door.

I have in the drawings indicated a spring that is attached to the platform surrounding
 the bale-box, and is of a coiled shape, having
 130 a vertical arm, 34, that bears upon or is fitted in a forked or slotted bracket, 35, on the press-box door.

It is evident that when the door is turned

on its hinges and lowered the spring is compressed and is held in such condition by the weight of the superimposed door. When the latter is being raised, the spring exerts a lifting pressure upon the same and materially lessens the labor of lifting the door, which is of great importance when the weight and frequent manipulations of the door are taken into consideration.

10 What I claim is—

1. In a cotton-press, the combination of the vertically-divided standard having the cylindrical bisected shells or bearings provided with a bottom flange and fastening-lugs, with the revolving press-box frame having a socket encircling said bisected bearings and provided with metal wear-plates, substantially as described.

2. In a cotton-press, the combination of the press-box having two hinged side doors, and a rock-shaft journaled at one of the hinged doors,

and provided with a central lever and end hooks, and the eye rods or bars connected at one end with one door, and at the other end adapted to engage with said hooked rock-shaft for holding the doors closed and simultaneously and gradually releasing both ends of said doors, substantially as described.

3. In a cotton-press, the combination, with the press-box having a hinged door turning on a horizontal axis and arranged to be raised and lowered, of a spring bearing upon said door and connected with the press-box or press-frame for assisting the raising and closing of said door, substantially as described.

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

ROBERT S. MUNGER.

Witnesses:

JAMES L. NORRIS,
JOS. L. COOMBS.