

W. H. REYNOLDS.
Cotton-Presses.

No. 138,583.

Patented May 6, 1873.

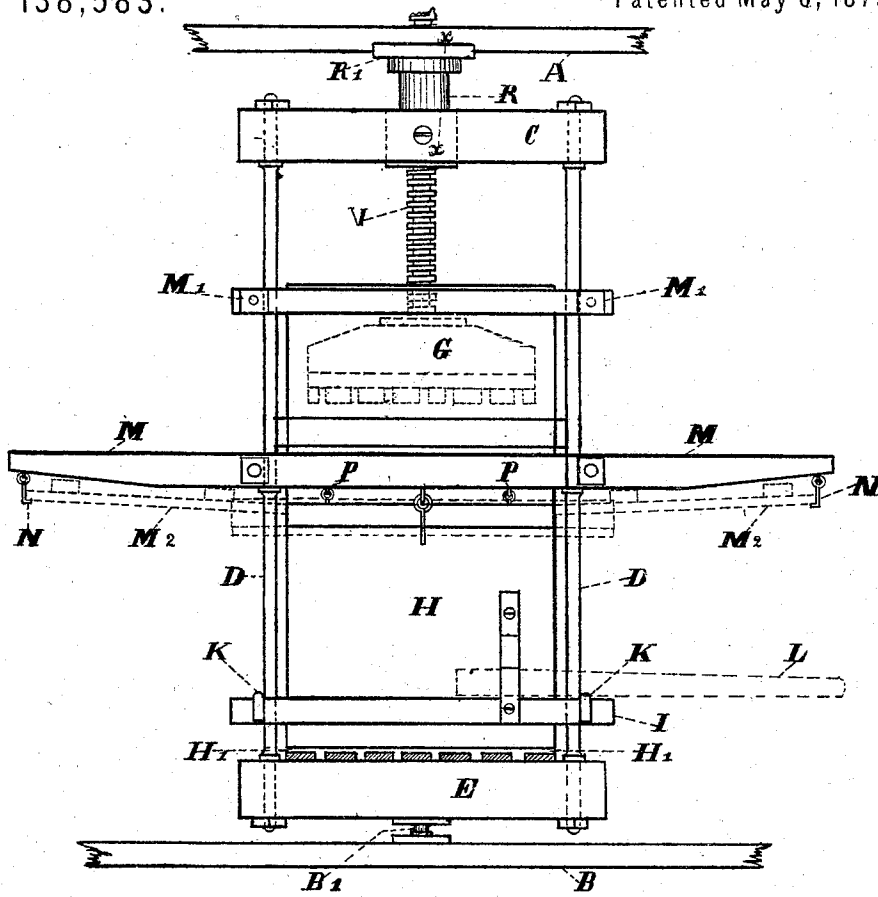


Fig. 1

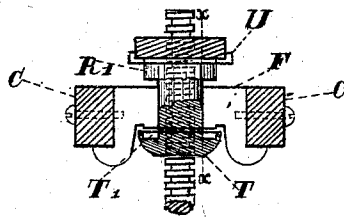


Fig. 2

Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM H. REYNOLDS, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN COTTON-PRESSES.

Specification forming part of Letters Patent No. **138,583**, dated May 6, 1873; application filed February 25, 1873.

To all whom it may concern:

Be it known that I, WILLIAM H. REYNOLDS, of the city of New Orleans, State of Louisiana, have invented a new and useful improvement in Cotton-Presses, of which the following is a specification:

This invention relates to that class of cotton or baling presses in which the press-box is intended to revolve in combination with a vertical screw-rod while pressing cotton or other fibrous material.

The first part of my invention relates to the combination and arrangement, with a revolving press-box, of horizontal outriggers on the outer sides of the press-box and about midway up the box, for supporting the attendants while filling the press-box with the material to be pressed. They are also to sustain the up-swinging doors both in their vertical and horizontal positions. The second part of my invention relates to the combination and arrangement, with a revolving press-box, of up-swinging doors. The object of this part of my invention is to save time and labor in shipping in and unshipping and removing the doors away to a place of safety to prevent their being broken while rolling a bale out from the press or by the accidental turning of the press box; also to allow, in their vertical hanging, of an aperture between the lower end of the doors (when shut) and the top surface of the press-box bottom, for the free introduction and adjustment of the bagging used in covering the bale. The third part of my invention relates to a combination and arrangement, with a revolving press-box frame and its supporting frame, of an automatic lubricating device and preserver of the lubricating material. The object of this part of my invention is to insure constant and automatic lubrication of the parts difficult to be got at, so that in filling of the cup containing the lubricating material, a quantity will be supplied to suffice for two or more days' work of the press.

In the drawing annexed, with the letters of reference marked thereon and made part of this specification, in which like letters indicate like parts in both figures, Figure 1 is a front view of the press with the improvements attached; it also shows a mid-

dle section of the top beam and bottom sill that holds the press-box up in position. Fig. 2 is a section view of the metallic arch, wooden arch-beams, and screw-rod, nut and journal, cut through, as shown at dotted line *x x* in Fig. 1—reference being had to the drawing.

A represents the top beam of the press-frame, which has attached to it, on its underside, the screw-rod, nut, and journal R, which are all combined in one piece. B represents the bottom sill of the frame with the gudgeon B' on the upper side of it. This gudgeon gives support upwards to the entire weight of press-box, and the material being pressed until the compressure of the bale is nearly completed; then the weight is transferred from the gudgeon onto the collar or boss T, on the lower end of the journal R, and metallic arch F, as will be hereafter explained. The press-box is of the usual shape, constructed of wood, and suspended within the vertical space formed by the erection of the four vertical rods D D. These are metallic rods connected rigidly at their upper ends with the four different ends of the two wooden arch-beams C C, and their lower ends are joined rigidly with the four different corners of the press-box bottom E. This press-box is securely fastened together at its upper-end by outside clamp-battens and screw-bolts, as seen at M' M', and about midway down the box on its outside is surrounded by the outriggers M M, which serve in their central part as battens, and at the same time they clamp the box and vertical rods together by the aid of a collar forged on each rod to suit; and the whole is secured rigidly together by screw-bolts, the same as is seen at M' M'. By this means the box is suspended vertically by the metallic rods, with its lower end up, from the press-box bottom, leaving an aperture H' H'. The batten portion of these outriggers sustains the doors H vertically in place by eye-bolt hinges P P, and the doors are held up in a horizontal position by the outriggers and hooks N N as shown by the dotted lines M² M². It will be observed in shutting these doors down, that their upper ends turn in a rabbet formed in the back of the batten portion of

the outriggers for relieving the hinges from all outward strain while pressing a bale. These doors are also provided on their outside, near their lower ends, with battens secured on each door, but the battens on the front and rear doors have their ends left projecting beyond the square of the box, as shown at I. These ends are hooked with two metallic clamp-hooks to hold the lower end of the press-box together in shape while pressing a bale, as shown at K K, until it has been sufficiently pressed; then unhook the clamp-hooks from the ends of the battens, swing the doors up to the outriggers and hook them there by hooks N N; secure the bale in shape by ties or hoops and discharge the bale from the press as follows: The follower G, which is rigidly secured to the lower end of the screw-rod V, is raised up from the bale by turning the press-box with lever L, to unscrew until the follower has been screwed above the top of the press-box; the bale is then rolled out; the doors are shut down and secured in place by the battens and clamp-hooks; the cloth for bale-covers is introduced and adjusted on the bottom of the press-box through the aperture H' H', and the attendant is standing on the top of the outriggers filling the press-box with cotton as it is brought and handed up to him in baskets until the box is full; then he turns the follower by hand, screwing it down until it enters the press-box; then applies power at lever L to turn the box in such a direction as will screw the follower down to press the bale; and, while thus alternating between screwing and unscrewing the press, the automatic lubrication and its device is in full operation, as follows: The screw-rod nut formed so as to serve as a vertical journal for the eye of the metallic arch F to revolve around. This journal is about three inches longer than the depth of the eye through the metallic arch and has a collar or boss, T, formed on its lower end. The collar or boss has its top face recessed so as to form a vertical lubricating-cup at the lower end of the journal, as seen at T'. The upper end of the journal is slipped into the collar R', formed on the plate, and flanges U, and secured there by a pin or tap bolt, and the plate and flanges are secured by bolts to the under side of the beam A, holding up the nut-journal and lubricating-cup in place. It is always to be understood that on the under

side, immediately around the eye in the metallic arch, it has been turned to a shape to correspond with the recess or lubricating-cup formed at the lower end of the journal R, and in erecting the press it is so adjusted vertically by the gudgeon as to bring the top of the metallic arch near the under side of the collar R', and on the application of a heavy pressure at the under side of the follower, as is the case in completing the pressing of a bale of cotton, the top beam A is forced or bowed up in its center, and the collar or boss T is forced up with it until brought in contact with the under side of the metallic arch, and the turned part is in the cup T' in contact with the lubricating material, and when the pressure is relieved from the bale the beam A resumes its natural shape, and in doing so it shoves the journal R down through the eye in the metallic arch, which has just been in contact with the lubricating material in the vertical cup T', and the two motions—vertical on the journal, and rotating of the eye—will give perfect and constant lubrication of the parts, and the lubricating material when it flows to the bottom of the journal is caught in cup T' for use again.

I claim as new and useful, and desire to secure by Letters Patent, as an improvement upon my patent of July 11, 1871, No. 116,869—

1. The combination of two or more outriggers, as described, upon a revolving press-box with their central parts embracing said box, and attached to the vertical rods and supporting the press-box, substantially as described, for the purposes set forth.

2. The combination and arrangement, upon a revolving press-box, of the outriggers M M and eyebolt-hinges P P mounted upon the up-swinging doors H, the whole arranged and operating in connection with hooks N N to control the doors in a horizontal position, substantially as described, and for the purposes set forth.

3. The combination and arrangement, with a revolving press-box frame, of the automatic lubricating devices, all constructed substantially as described, for the purposes set forth.

WILLIAM H. REYNOLDS.

Witnesses:

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JAMES B. MURTAGH.