

No. 645,733.

Patented Mar. 20, 1900.

G. A. LOWRY & W. B. P. MATTOX.

HEAD PLATE FOR PRESSES.

(Application filed Oct. 23, 1899.)

(No Model.)

2 Sheets—Sheet 1.

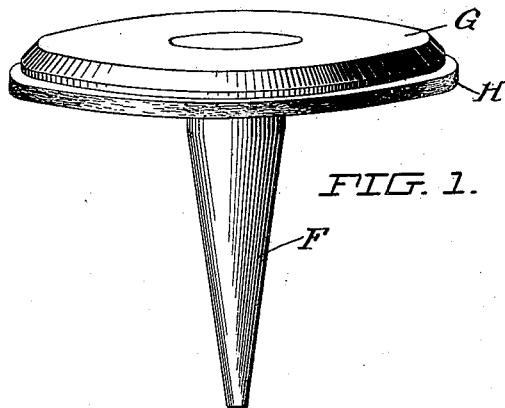


FIG. 1.

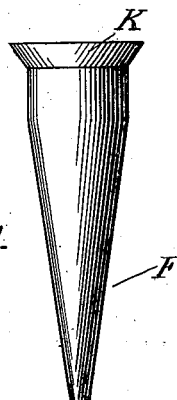


FIG. 2.

FIG. 3.

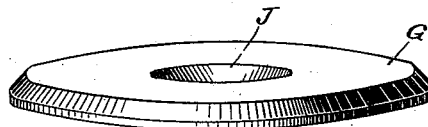


FIG. 4.

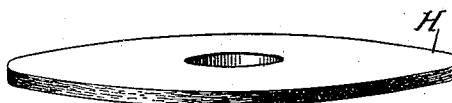
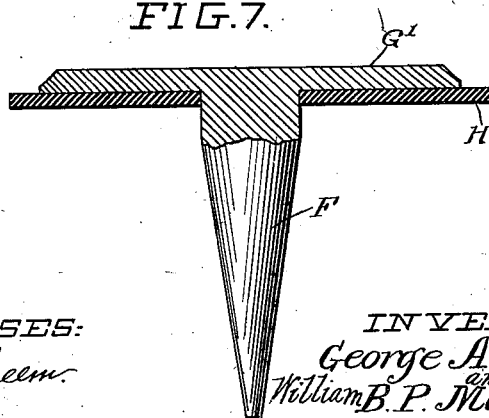


FIG. 7.



WITNESSES:

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Ira D. Perry

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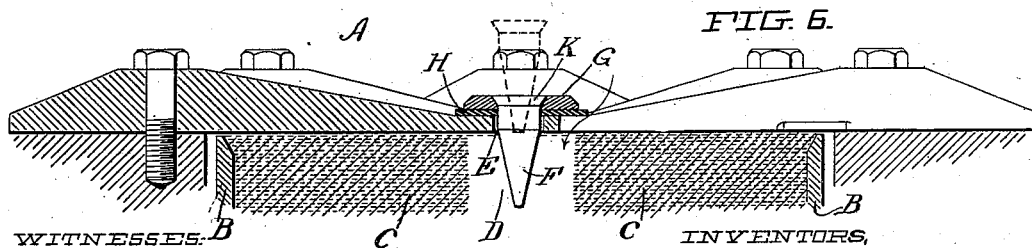
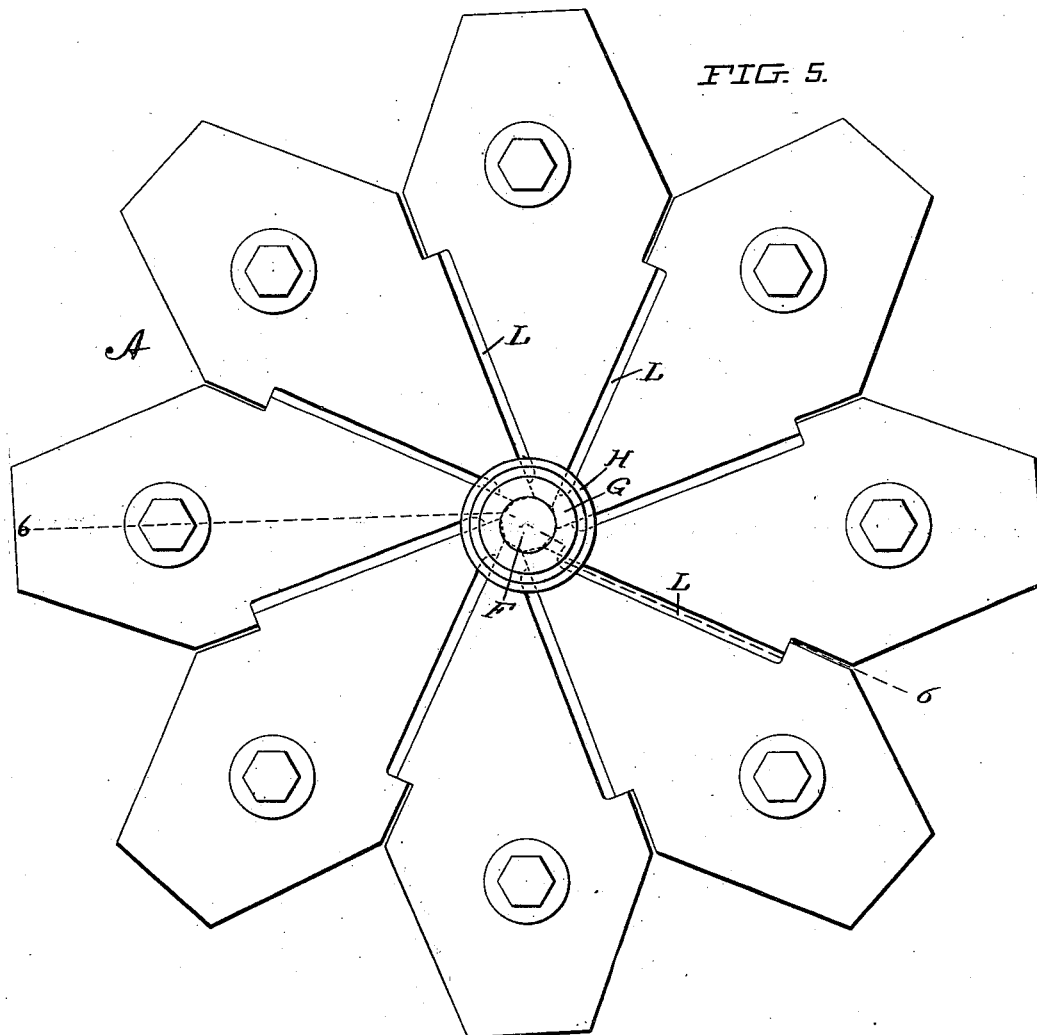
G. A. LOWRY & W. B. P. MATTOX.

HEAD PLATE FOR PRESSES.

(Application filed Oct. 23, 1899.)

(No Model.)

2 Sheets—Sheet 2.



WITNESSES:
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UNITED STATES PATENT OFFICE.

GEORGE A. LOWRY, OF CHICAGO, ILLINOIS, AND WILLIAM B. P. MATTOX,
OF MEMPHIS, TENNESSEE, ASSIGNORS TO THE PLANTERS COMPRESS
COMPANY, OF BOSTON, MASSACHUSETTS.

HEAD-PLATE FOR PRESSES.

SPECIFICATION forming part of Letters Patent No. 645,733, dated March 20, 1900.

Application filed October 23, 1899. Serial No. 734,577. (No model.)

To all whom it may concern:

Be it known that we, GEORGE A. LOWRY, residing at Chicago, in the county of Cook and State of Illinois, and WILLIAM B. P. MATTOX, residing at Memphis, in the county of Shelby and State of Tennessee, citizens of the United States, have invented a new and useful Head-Plate for Presses, of which the following is a specification.

10 This invention relates to head-plates for presses.

The object of the invention is to provide means whereby choking of the feed-slots of caps or head-plates of presses by foreign substances being drawn in with the material being compressed is avoided.

15 The invention consists, substantially, in the construction, combination, location, and arrangement of parts, all as will be more fully hereinafter set forth, as shown in the accompanying drawings, and finally pointed out in the claims.

Referring to the accompanying drawings and to the various views and reference-signs appearing thereon, Figure 1 is a detached detail view, slightly in perspective, of a center pin and washer embodying the principles of our invention. Fig. 2 is a detached detail view of the centering-pin. Fig. 3 is a similar view of the pin-head. Fig. 4 is a similar view of the washer. Fig. 5 is a plan view of a head-plate or cap for a press, showing the application thereto of the center washer. Fig. 6 is a sectional view of the same on the line 6 6, Fig. 5. Fig. 7 is a view, partly in elevation and partly in section, of a slightly-modified construction of center pin and washer embraced within the scope of our invention.

20 The same part is designated by the same reference-sign wherever it occurs throughout the several views.

In Patents Nos. 581,600 and 581,601, dated April 27, 1897, and Nos. 630,369 and 630,374, dated August 8, 1899, all issued in the name of George A. Lowry, is shown, described, and claimed a press and cap or head-plate therefor for compressing fibrous or other material, wherein are employed a relatively-moving chamber or holder and a slotted cap or head-

plate for one end of said chamber or holder. 50
In the operation of a press constructed in accordance with said patents the chamber or holder is first primed or partially filled by hand or otherwise, so as to produce a certain degree of pressure against the inner surface 55 of the cap or head-plate. Then by relatively moving the chamber or holder and head-plate and supplying additional material to or adjacent to the slot or slots in the cap or head-plate such additional material is caught or 60 engaged by the priming preliminarily introduced to the chamber or holder and is drawn into the chamber or holder in the form of thin, flat, highly compressed or condensed sheets or layers from which the air has been 65 expelled or squeezed out, and these sheets or layers are spirally coiled or imposed upon each other, thus building up a column or bale endwise within the chamber, each increment thus added or drawn in correspondingly augmenting the mass contained in the holder or chamber and advancing the same through said holder or chamber in a highly-compressed state, the compressed mass in the chamber or holder being left with a central longitudinal 75 hole or opening therethrough. It sometimes happens that a seed, stone, or other foreign substance is deposited with the loose material upon or adjacent to the cap or head-plate and is drawn with the material toward the feed-slots. The effect of this is to cause the feed-slots to become clogged or choked. In some cases the seed, stone, or the like during the operation of the press works toward the center of the cap. This is particularly true where 85 the feed-slots are so relatively arranged that the drawing action of the material within the chamber or holder is exerted upon the fresh or loose material in a direction the trend of which is toward the center of the cap, as in 90 the case where the inner ends of the feed-slots terminate at a point in advance of the center of the cap with reference to the direction of relative movement of the cap or head-plate and the chamber. It is one of the purposes 95 of our present invention to provide a construction and arrangement in a press of the character referred to whereby choking or clog-

ging of the feed-slots is avoided and whereby any seed, stone, or other foreign substance which may happen to be carried by the loose material may be disposed of. The desired objects are attained in the construction and arrangement shown in the accompanying drawings, wherein—

Reference-sign A designates generally the head-plate or cap, L the feed-slots therein, and B the chamber or holder, only a portion of the latter being shown in Fig. 6.

C is the bale or compressed mass of material within the chamber or holder, and D the longitudinal central opening or hole there-through. At the center of the cap or head-plate is formed a hole or opening E in alignment with the longitudinal central opening D through the bale. Through the opening E and into hole D is arranged to project loosely a pin F, having a head G, comprising a flat disk, the peripheral edge of which may be beveled, if desired, and as shown. The pin-head G is arranged to rest flatwise upon the upper surface of the press-cap or head-plate, as clearly shown. A disk washer H is interposed between the pin-head G and the surface of the cap or head-plate. If desired and as shown in Figs. 1, 2, 3, and 6, the pin-head and pin may be made in separate pieces. In this case the pin-head is centrally perforated, as at J, Fig. 3, the walls of the perforation being beveled or otherwise suitably shaped to receive the upset end K of the pin, as clearly shown. If desired, however, the pin F' and head G' may be formed integrally, as shown in Fig. 7. For convenience of manufacture and for ease of operation we prefer to form the pin and head in separate pieces.

When the parts are assembled in proper relation, it will be observed that the washer H extends outwardly over the inner ends of the feed-slots L in the head-plate or cap, as clearly indicated by the arrow in Fig. 6. Therefore when any seed, stone, or the like is worked toward the inner end of a feed-slot during the operation of the machine such seed, stone, or the like will finally drop through the feed-slot under the edge of the washer and through the central hole D in the compressed material, thus avoiding any choking or clogging of the feed-slot and getting rid of the foreign substance or body without carrying the same into the body of the compressed mass. It will be readily understood that the peculiar action of the press in drawing the material through the feed-slots in thin sheets, from which the air is squeezed out or expelled, also facilitates the detachment of the material from any seed, stone, or other foreign body, and by the provision of the center washer, as above described, such body, seed, or the like is gotten rid of by being worked toward the center of the cap and finally falling through the inner end of the slot and through the central hole in the bale. By loosely mounting the pin F F' in the cen-

tral opening E of the cap or head-plate when the press chamber or holder is originally primed or filled preliminary to the compressing and feeding operation such pin will be elevated through the opening E, as shown in dotted lines in Fig. 6, and hence will offer no obstruction to the pressure of the priming against the inner surface of the cap or head-plate, and when the compressed column begins to form in the chamber or holder the formation of the central hole or opening in the mass of compressed material will permit the pin to again descend into its proper position to form a centering device for the pin-head.

By arranging the washer to extend over the inner ends of the feed-slots in the head-plate it will be seen that no material will be fed through such covered ends of the feed-slots, hence permitting the foreign body to readily drop through such feed-slot at that point.

In the case where the cap or head-plate is composed of sections, as shown and as described and claimed in Patent No. 630,374, above referred to, the centering-pin and its head and the washer form a neat finish for the abutting ends of the sections, as clearly shown in Figs. 5 and 6.

Having now set forth the object and nature of our invention and a construction and arrangement embodying the principles thereof and having described the purpose, function, and mode of operation of our invention, what we claim as new and useful and of our own invention, and desire to secure by Letters Patent, is—

1. A cap or head-plate for presses having feed-slots and a central opening, in combination with a center pin arranged in said opening, and a washer carried by said pin and arranged to extend over the inner ends of said feed-slots, as and for the purpose set forth.

2. In a press, a cap or head-plate having feed-slots, and a chamber or holder, in combination with a center washer or disk arranged to extend over the inner ends of the feed-slots in the cap or head-plate, as and for the purpose set forth.

3. In a press, a chamber or holder, a slotted cap or head-plate for one end thereof, these parts being relatively movable, in combination with a center pin and washer for said head-plate or cap, said washer arranged to extend over the inner ends of the slots in said head-plate, as and for the purpose set forth.

4. A cap or head-plate, having one or more feed-slots, and a central opening, in combination with a center pin arranged to project loosely through said opening, and a washer extending over the inner ends of said feed slot or slots, as and for the purpose set forth.

5. A slotted cap or head-plate for presses, having a central opening therethrough, in combination with a center pin arranged to project through said opening, a head for said pin, and a washer interposed between said

head and the cap or head-plate, said washer arranged to extend over the inner ends of the slots in said head-plate, as and for the purpose set forth.

- 5 6. A slotted cap or head-plate for presses, having a central opening therethrough, in combination with a centrally - perforated washer and head, and a centering-pin arranged to project loosely through said central opening and perforations, said washer arranged to project over the inner ends of the slots in said head-plate, as and for the purpose set forth.

15 In witness whereof I, the said GEORGE A. LOWRY, have hereunto set my hand, this 27th

day of September, 1899, in the presence of the subscribing witnesses.

GEORGE A. LOWRY.

Witnesses:

WM. M. RHEEM,

DANIEL W. HOWLAND.

I, the said WILLIAM B. P. MATTOX, have hereunto set my hand, this 2d day of October, 1899, in the presence of the subscribing witnesses.

WILLIAM B. P. MATTOX.

Witnesses:

N. B. BEAKLEY,

J. K. BRODIE.