

(No Model.)

J. H. MCGOWAN.

HYDRAULIC PRESS.

No. 348,568.

Fig. 1. Patented Sept. 7, 1886.

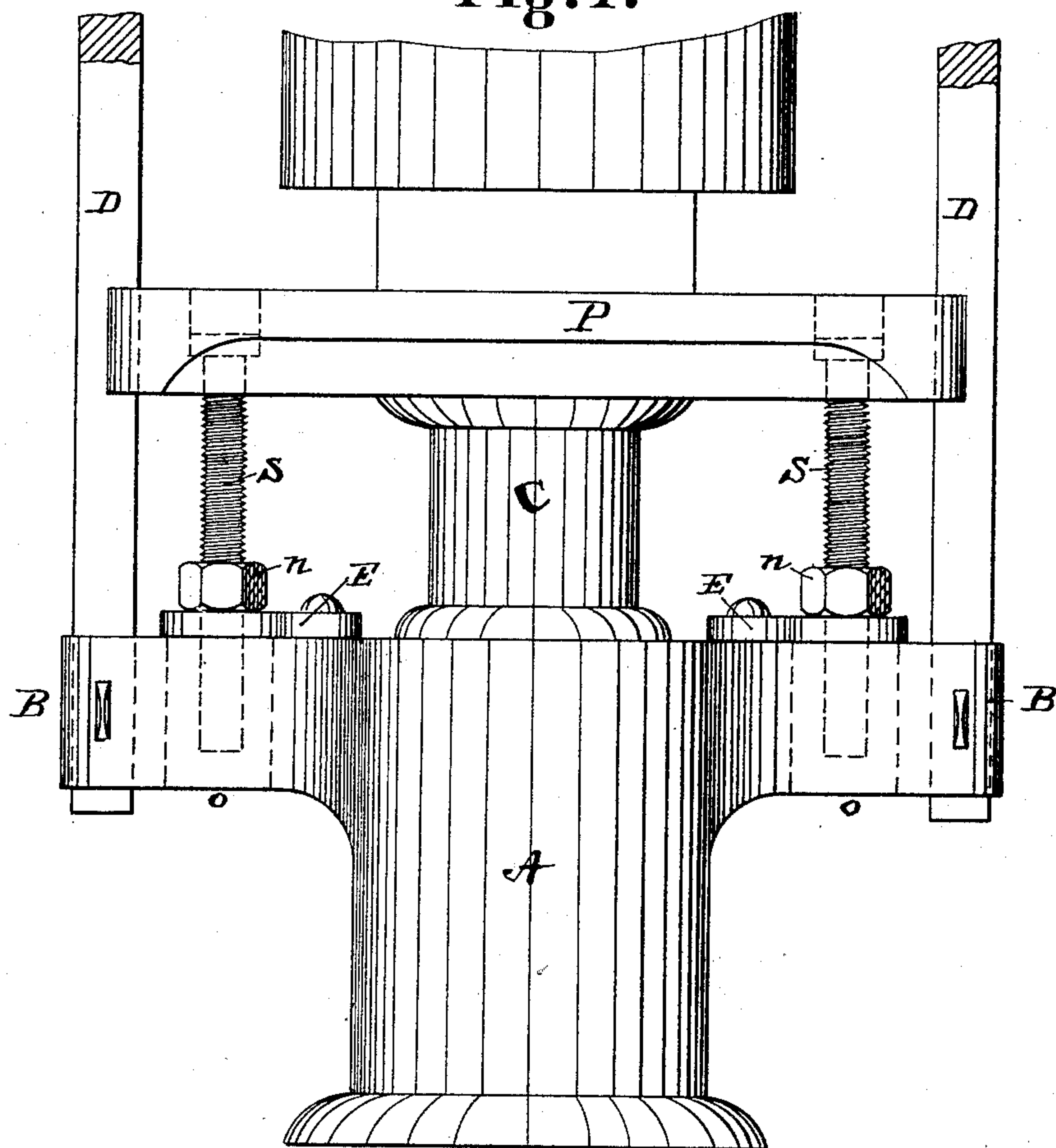


Fig. 2.

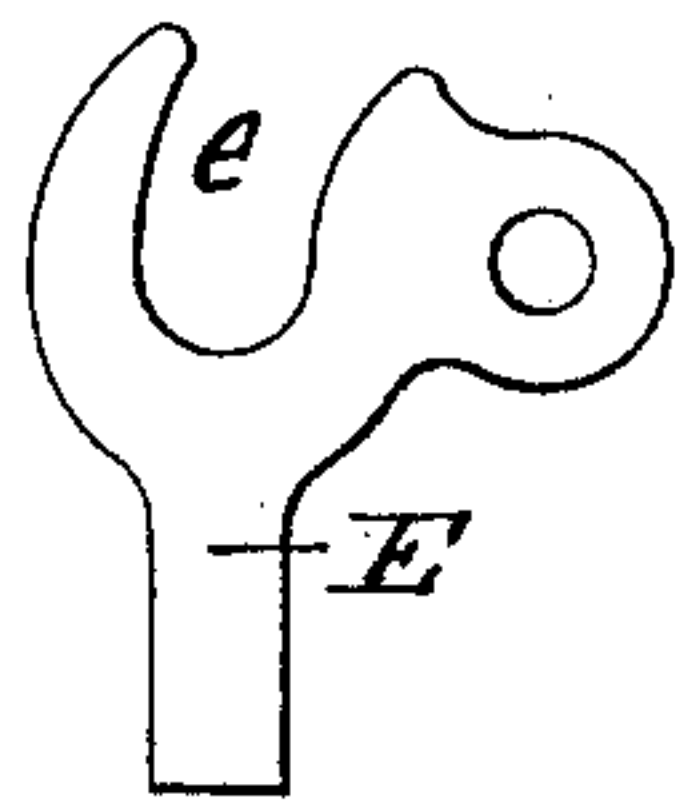


Fig. 3.

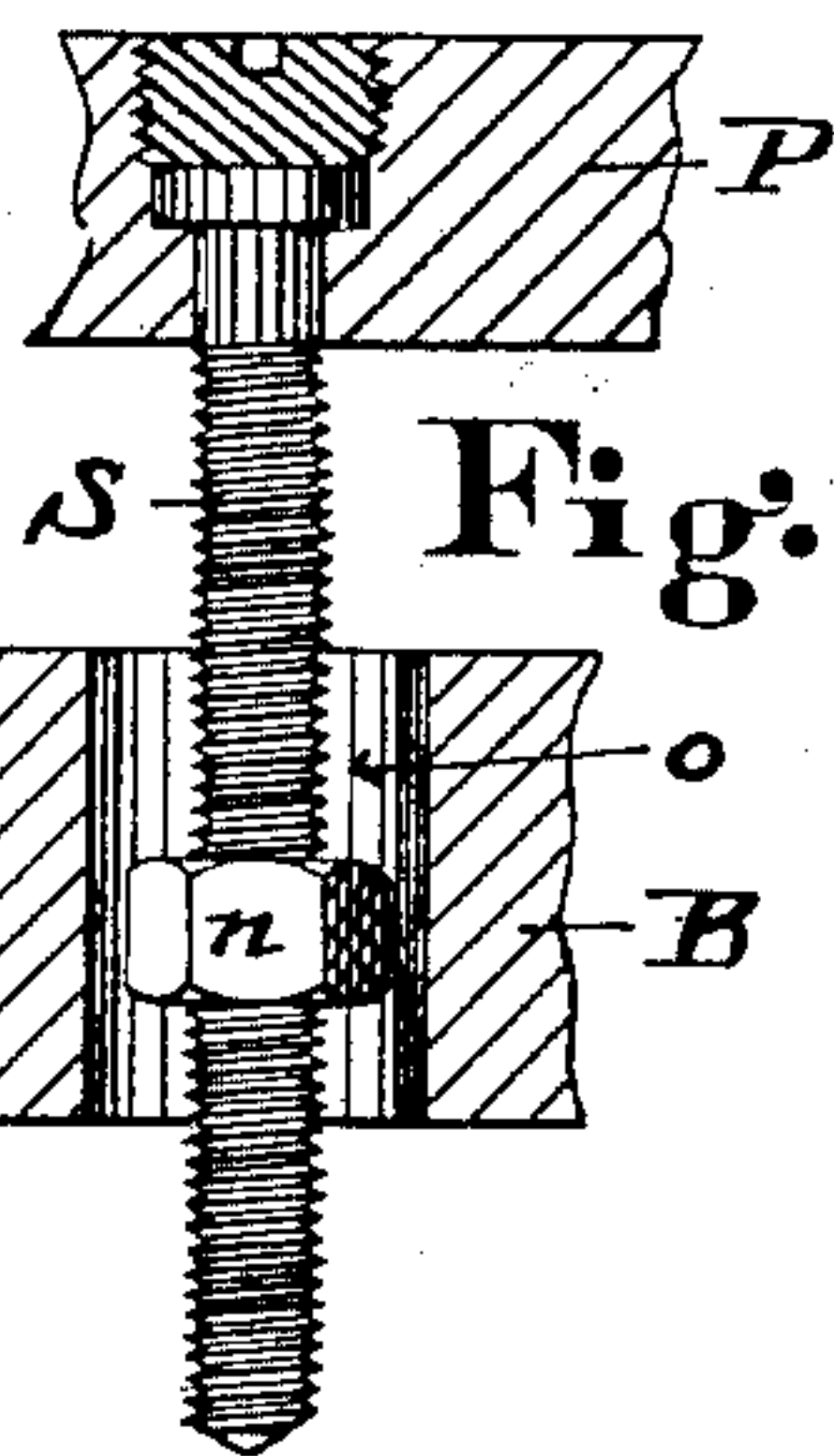
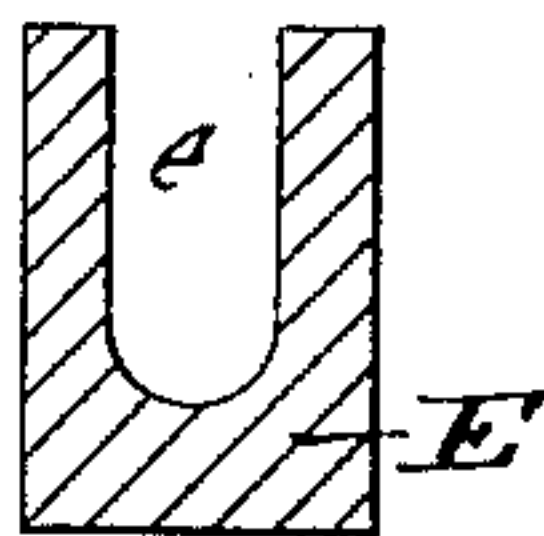


Fig. 4.

Attest.

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UNITED STATES PATENT OFFICE.

JOHN H. MCGOWAN, OF CINCINNATI, OHIO.

HYDRAULIC PRESS.

SPECIFICATION forming part of Letters Patent No. 348,568, dated September 7, 1886.

Application filed October 29, 1885. Serial No. 181,235. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. MCGOWAN, a citizen of the United States, residing near Cincinnati, in the county of Hamilton, State of Ohio, have invented new and useful Improvements in Hydraulic Presses, of which the following is a specification.

My invention relates to hydraulic presses, its object being to enhance the convenience of their use in respect to the means employed for maintaining the platen at a given height reached in the pressing operation without the expenditure of the pressing force in such maintenance—as, for example, in compressing tobacco-plugs for boxing, where it is desirable to maintain them in a given state of compression for a certain period, during which it is more economical to apply the pressing force to other presses without the loss of time and power which would ensue if the force had to be maintained during such interval. Among the means used for this purpose, screw-standards secured to the platen and projecting downward through the base-bar of the press and provided with set-nuts capable of adjustment to the upper face of the base-bar, have been found to answer the requirements of practical use. The difficulty in this construction is that whenever the platen is to be let down—as, for example, in receiving a new charge in the press-box—it is absolutely necessary to run the nut up on its screw-standard, and again run it down to serve for holding purposes.

As such presses are used in large numbers together in tobacco and other factories where it is desirable to place many under the charge of a single attendant, the labor and loss of time thus ensuing of course limits the number of presses which can be thus supervised. By my improvement this difficulty is avoided, and an important incidental advantage is gained, whereby, in respect to successive charges treated by the same press, the holding-nut, once set to position in the first pressing, may remain in such position as a guide throughout the entire operation.

To this end my invention consists in combining with the platen and its depending screw-standards, a base-bar provided with apertures sufficiently large to permit the standard and its holding nut or nuts to pass freely through without engaging contact, and a re-

movable plate with an open side slot enabling it to be inserted beneath the holding-nut around the screw, upon the surface of the base-bar, to constitute a holding-surface for the nut.

My invention is illustrated in the accompanying drawings, in which Figure 1 is a partial side elevation of an ordinary form of hydraulic press (such as used in tobacco factories) embodying my improvement; Fig. 2, a plan view of a plate adapted to be held by a pivotal attachment upon the surface of the base-bar adjacent to the screw-standard; Fig. 3, a plan of a plate devoid of any means of attachment and to be used by simple insertion or removal; and Fig. 4, a partial vertical section through the orifice of the base-bar, showing the screw-standard in a lowered position, with the nut within the aperture.

Referring now to the drawings, A designates the cylinder; B, the cylinder-extensions constituting the base-bar; C, the plunger; P, the platen, and D D the side bars or platen-guides.

S S are the screw-standards, secured in and depending from the platen; *o o*, the orifices in the base-bar beneath the standards S, and *n n* the holding-nuts adjustable upon the standards.

Constructed according to my improvement, the orifices *o* are sufficiently large to permit the nuts *n* to pass freely through as the platen ascends and descends, carrying the standards S.

In the operation of the press, when the platen has reached the required height, the plates E E, which are constructed with slots *e e*, of a width equal to the diameter of the screw-standards S, opening inward from one side, are slipped into position on the surface of the base-bar B, and the nuts *n* turned down upon them, thus holding the platen in its elevated position without maintaining the pressure in the cylinder. In releasing, the plates E may be knocked out or drawn aside, when the platen is allowed to descend, without changing the position of the nuts. In the next pressing, the nuts being already in position, so remain, and when the elevation of the platen carries them to the required height, the plates E are slipped into place as before. Thus the nuts serve as a guide through successive pressings after the first, to secure a uniformity of

results throughout a given period or series of pressings.

It will be obvious that the time and labor of removing or replacing the plates E is far less than would be required in moving the nuts *n* up and down at each pressing, also that all unnecessary wear upon the thread surfaces is avoided.

I have heretofore patented a construction in which the sustaining-bars, project upward from the base-bar through perforations in the platen, and are provided with slotted supports pivoted to the underside of the platen; therefore I do not claim the slotted supports, broadly, herein, but only in combination with the other parts constructed and operating as herein described.

I claim as my invention and desire to secure by Letters Patent of the United States—

In a hydraulic press, in combination with a vertically moving platen provided with depending standards having holding-nuts threaded thereon, a base-bar perforated with apertures of sufficient size to permit the free passage of the standards and their nuts without engagement, and removable holding-plates adapted to be inserted beneath said nuts to hold the same against the base-bar and uphold the platen, substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN H. MCGOWAN.

Witnesses:

L. M. HOSEA,
C. D. KERR.