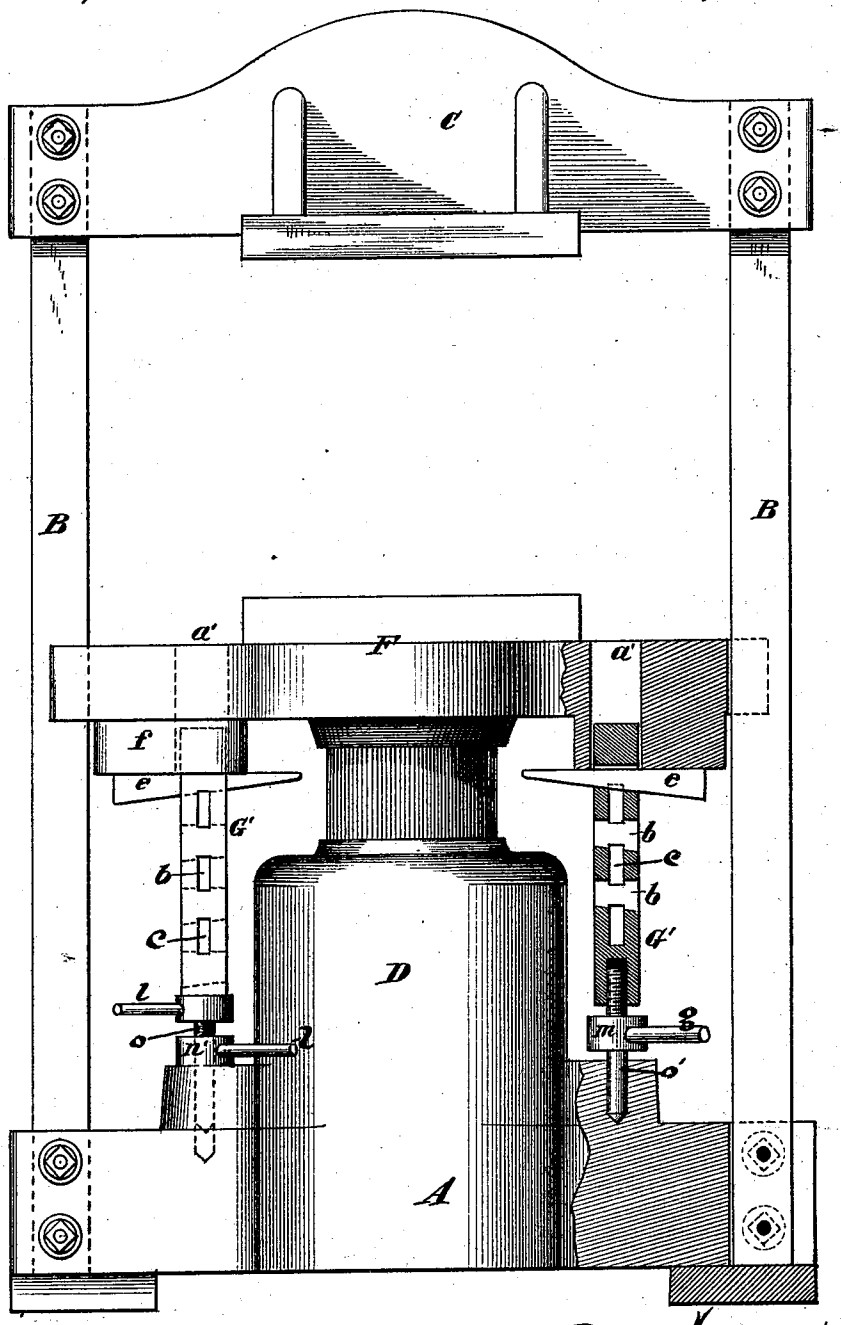
(No Model.)

J. H. McGOWAN.

Hydrostatic Press.

No. 230,429. Patented July 27, 1880.



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JOHN H. McGOWAN, OF CINCINNATI, OHIO.

HYDROSTATIC PRESS.

SPECIFICATION forming part of Letters Patent No. 230,429, dated July 27, 1880.

Application filed May 24, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. McGOWAN, a citizen of the United States, residing at Cincinnati, Ohio, have invented new and useful Improvements in Hydrostatic Presses, of which the following is a specification, the same being, for subject-matter, divided from an application filed January 23, 1880, and allowed March 26, 1880.

My invention relates to improved means for engaging and sustaining the platen of a hydrostatic or other press at a given elevation and for disengaging the same expeditiously; and it consists in the provision of a slotted retaining bar and keys for engagement and support of the platen and of means for perfecting the adjustment and facilitating the disengagement of the same, as hereinafter more particularly described.

My invention is embodied in mechanism illustrated in the accompanying drawing, which shows a hydrostatic press with my improvements therein.

The base A, side braces or tie-bars, B, and upper press-bar, C, constitute the frame of my improved press. The platen F, moving between the tie-bars B, which may also act as guides, is actuated by a plunger operating in a cylinder, D.

G′ indicates my improved sustaining-bars, of which there may be any number, projecting upward from the base A in a line parallel to the axis of the plunger; but two are ordinarily sufficient. The bar G′ is square in section, except its lower portion, *o*, which is cylindrical and adapted to be stepped into a socket in the base A, or perforated to pass over and rest upon a standard, *o′*, as shown in the right-hand bar, and hereinafter described as a modification. The square portion of the bar is perforated by wedge-shaped slots or openings *b c*, which cross and open into each other at right angles alternately from adjacent sides of the bar, as shown in the drawing and indicated by dotted lines. Wedges or keys *e* are provided, which enter through the openings of the bars beneath the platen and serve to retain the same at a given elevation. The cylindrical base *o* of the bar, resting in a socket, enables it to be rotated, and as the slots before mentioned overlap and open into each other alternately, a key-slot properly located with reference to the platen may thus be brought into position convenient for the insertion of the wedge or key. Means for the rotation of the bar G′ are shown in the handle *l*.

The above-described portion of my invention is operative in and of itself; but for the purpose of obtaining a more accurate adjustment of the sustaining devices to the platen a nut, *n′*, is provided upon the cylindrical portion *o* of the sustaining-bar, part of which is threaded to receive it. When the key *e* is in place the nut *n′* is rotated sufficiently to bear against the base A, and thus slightly elevate the bar G′ and its key against the platen, to tighten the bearing and perfect the adjustment. The rotation of the nut *n′* in the opposite direction depresses the bar and loosens the bearing of the key against the platen, and thus facilitates its removal.

The platen is perforated at *a′* to permit the relative vertical movement of the bar as the platen descends, or a perforated re-enforcing block, *f*, may be attached to the lower side of the platen for the same purpose.

A modification in construction is shown in the bar on the right hand of the figure. In place of the lower cylindrical termination, *o*, of the bar, the lower end of the square bar is bored for a short distance, provided with interior screw-threads, and fitted upon a short standard, *o′*, which rests in the base-socket. The upper part of the standard is threaded to engage the bar G′, and by its rotation in its socket raises or depresses it. Means for the rotation of the standard *o′* are shown in the collar *m* and handle *g*. In use its function is the same as the nut *n′*, before described—to wit, to elevate and depress the bar G′ and perfect the engagement or facilitate the disengagement of the platen-supports.

The advantages of my invention are sufficiently obvious, as the economy of time and labor in dealing with a number of presses would be very considerable, while providing for a most accurate adjustment in each.

I do not here claim, broadly, the combination, with a vertically-moving platen, of two or more independent removable sustaining-bars projecting upward from the base-bar and provided with means for engaging the platen and

sustaining it at any desired point in its elevation, as such combination of devices is embodied in a separate application for patent filed by me January 23, 1880.

Having described my invention, I claim and desire to secure by Letters Patent—

1. In combination with the movable platen of a hydrostatic or other press, movable sustaining-bars provided with overlapping slots opening through the same alternately at right angles, adapted for the insertion of wedge-keys for sustaining the platen, as set forth.

2. In combination with the movable platen of a hydrostatic press and sustaining-bars provided with adjustable means for sustaining the platen, the independently-rotating spindle-support *o'*, engaging the sustaining-bar upon screw-threads, substantially as and for the purpose specified.

3. The combination, with the base-bar and the vertically-moving platen of a hydrostatic press, of the rotating and vertically-adjustable sustaining-bar G', constructed with transverse slots cut alternately in different directions and extending into each other and provided with a wedge or key, all substantially as and for the purpose described.

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

JOHN H. McGOWAN.

Witnesses:
L. M. HOSEA,
E. KELIHAN.