

J. J. UNBEHEND.

PRESSES.

No. 184,931.

Patented Nov. 28, 1876.

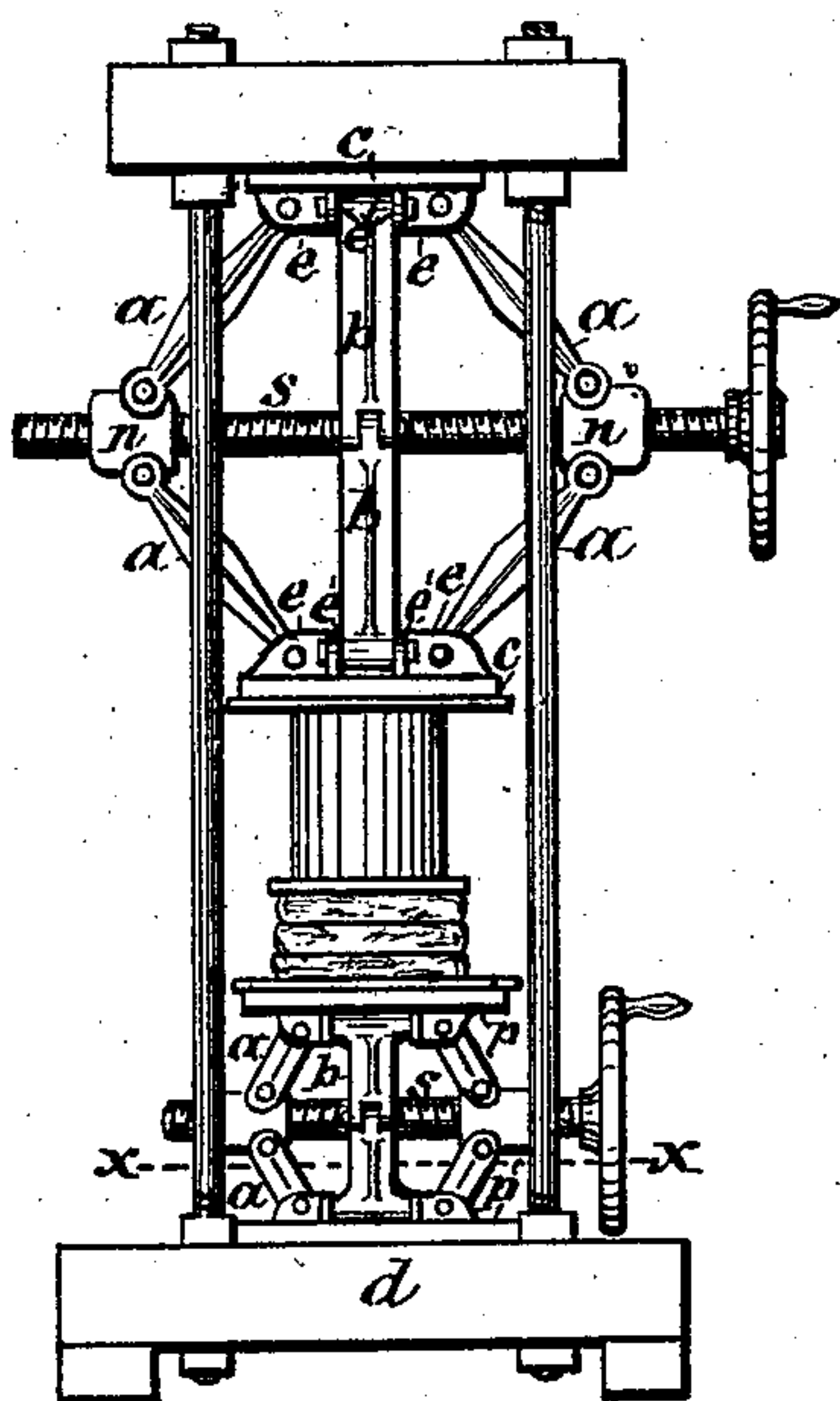


Fig. 1

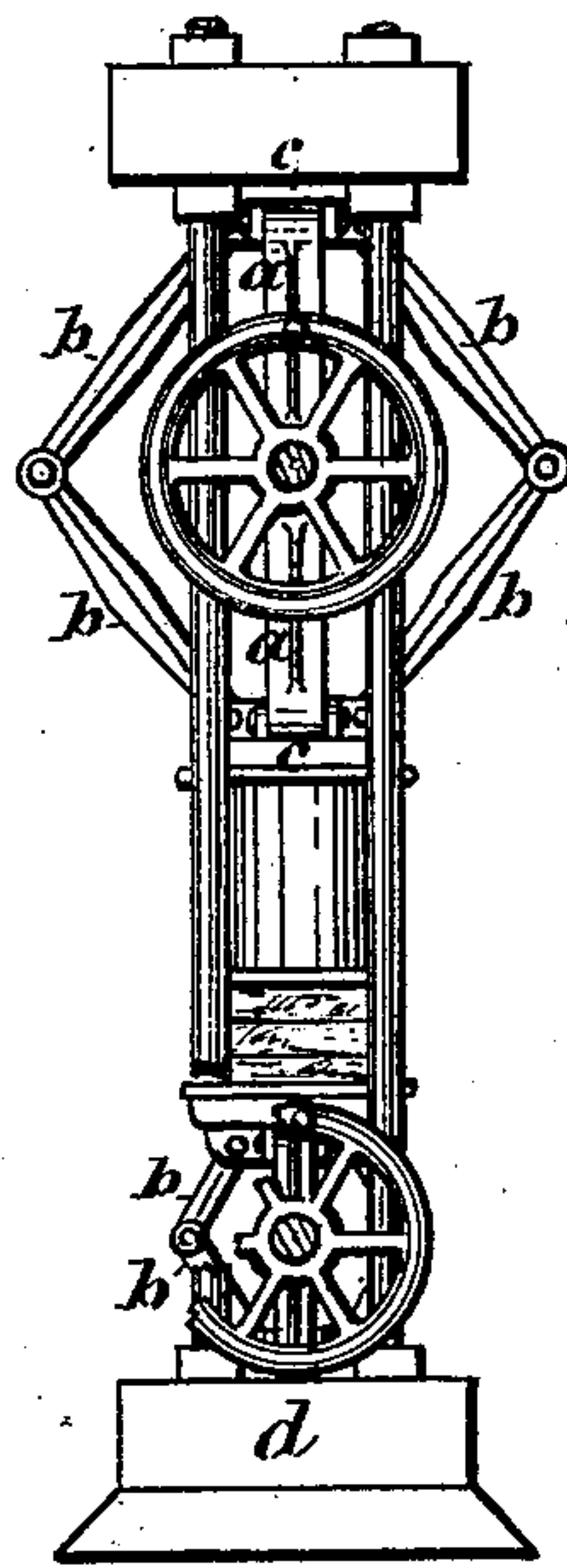


Fig. 2

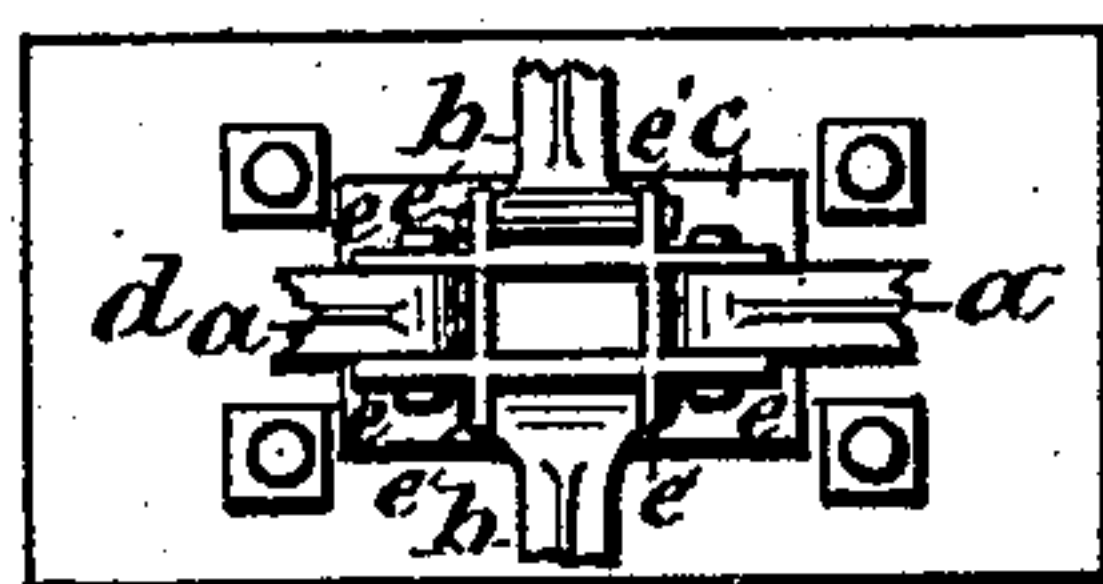


Fig. 3

Witnesses:

E. Bendixen.

J. C. Laass.

Inventor:

Jacob J. Unbehend

per E. Laass Atty.

UNITED STATES PATENT OFFICE

JACOB J. UNBEHEND, OF SYRACUSE, NEW YORK, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO JOHN J. UNBEHEND, OF SAME PLACE.

IMPROVEMENT IN PRESSES.

Specification forming part of Letters Patent No. 184,931, dated November 28, 1876; application filed May 9, 1876.

To all whom it may concern:

Be it known that I, JACOB J. UNBEHEND, of Syracuse, in the county of Onondaga and State of New York, have invented new and useful Improvements in Presses, of which the following, taken in connection with the accompanying drawing, is a full, clear, and exact description:

This invention relates to improved devices for guiding and laterally bracing the piston or follower of a press in its vertical movement.

The invention consists, first, in the combination, with the piston and the main toggle-levers operated by nuts on a horizontal right-and-left screw, of toggle arms or braces pivoted at the ends to the plates to which the main toggle-levers are pivoted, and arranged to work transversely or at right angles to the main toggle-levers and brace the piston laterally in its vertical movement; second, in a novel construction of the plates to which the main and lateral toggle levers or arms are pivoted, whereby the plates are stiffened, the sockets holding the toggle-levers are braced, and the lateral toggle-braces are brought a proper distance apart to give them increased purchase, and which also admits of a ready detachment of the toggle levers or arms for repairs.

In the accompanying drawing, Figure 1 is a side view of a press with my improvements applied; Fig. 2, an end view of same with a portion removed to show the lateral braces under the platform; and Fig. 3 a horizontal section on line *x x* in Fig. 1.

Similar letters of reference indicate corresponding parts.

a a are the main toggle-levers operated in the usual way by the nuts *n* on the horizontal right-and-left screws. *b b* are the lateral braces for steadying and guiding the piston in its vertical movement. They consist of toggle-jointed levers or arms pivoted at the ends to the plates *c c*, to which the main toggle-levers *a a* are also pivoted, and arranged transversely or at right angles to the latter, and co-operating with same, to brace the piston laterally in its vertical movement. For the purpose of stiffening the plates *c c* and bracing the

sockets to which the toggle-levers are pivoted, and also in order to bring the lateral braces a proper distance apart to give them increased purchase on the piston, I form the four sockets for the four toggle-levers by two pairs of parallel ribs or flanges, *e e' e'*, crossing each other at right angles, and of sufficient length to form ears on the outside of a square or rectangle, to which ears the toggle-levers are hinged or pivoted by a pin passing through the ears and an eye in the end of the levers, which pin is readily withdrawn and the lever detached when required for repairs.

This system of main and lateral toggle-levers with a horizontal screw when applied under the platform, as represented in the drawing, furnishes excellent means for raising and lowering the platform, and dispenses with the use of loose blocking usually applied under the follower or piston to compensate for the shrinkage in the pressings.

The operation of this arrangement is as follows, to wit: When the pomace or substance to be pressed is first placed upon the platform of the press the horizontal screw is revolved to lower the platform until it is brought to rest on standards or other rigid support, and the toggle-levers are relieved of the strain from the press. After the first pressing is accomplished, and the piston raised and the pomace prepared to receive the second pressing, instead of applying loose blocking as heretofore employed between the piston and the pomace, the horizontal screw under the platform is rotated to raise the platform the desired height, thus obviating the inconvenience of said blockings, and expediting the operation of pressing.

I prefer to use the system of the horizontal screw and toggle-levers in this position in the press, and for this purpose because it is easily applied to a press and conveniently operated.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination and arrangement, with the piston and the main toggle-levers *a a* pivoted at the ends to plates *c c*, of the lateral toggle-arms *b b*, pivoted likewise at the ends to the plates *c c* aforesaid, and arranged trans-

versely or at right angles to the main toggle-levers *a a*, substantially in the manner described and shown, for the purpose set forth.

2. In combination with the main toggle-levers *a a* and lateral toggle-arms *b b*, the plates *c c* when constructed to form four sockets, substantially in the manner described, for the purposes specified.

In testimony whereof I have hereunto signed my name in the presence of witnesses at Syracuse, State of New York, this 4th day of May, 1876.

JACOB J. UNBEHEND.

Witnesses:

E. BENDIXEN,
J. C. LAASS.