

(No Model.)

2 Sheets—Sheet 1.

A. H. MERRIMAN.

POWER PRESS.

No. 286,839.

Patented Oct. 16, 1883.

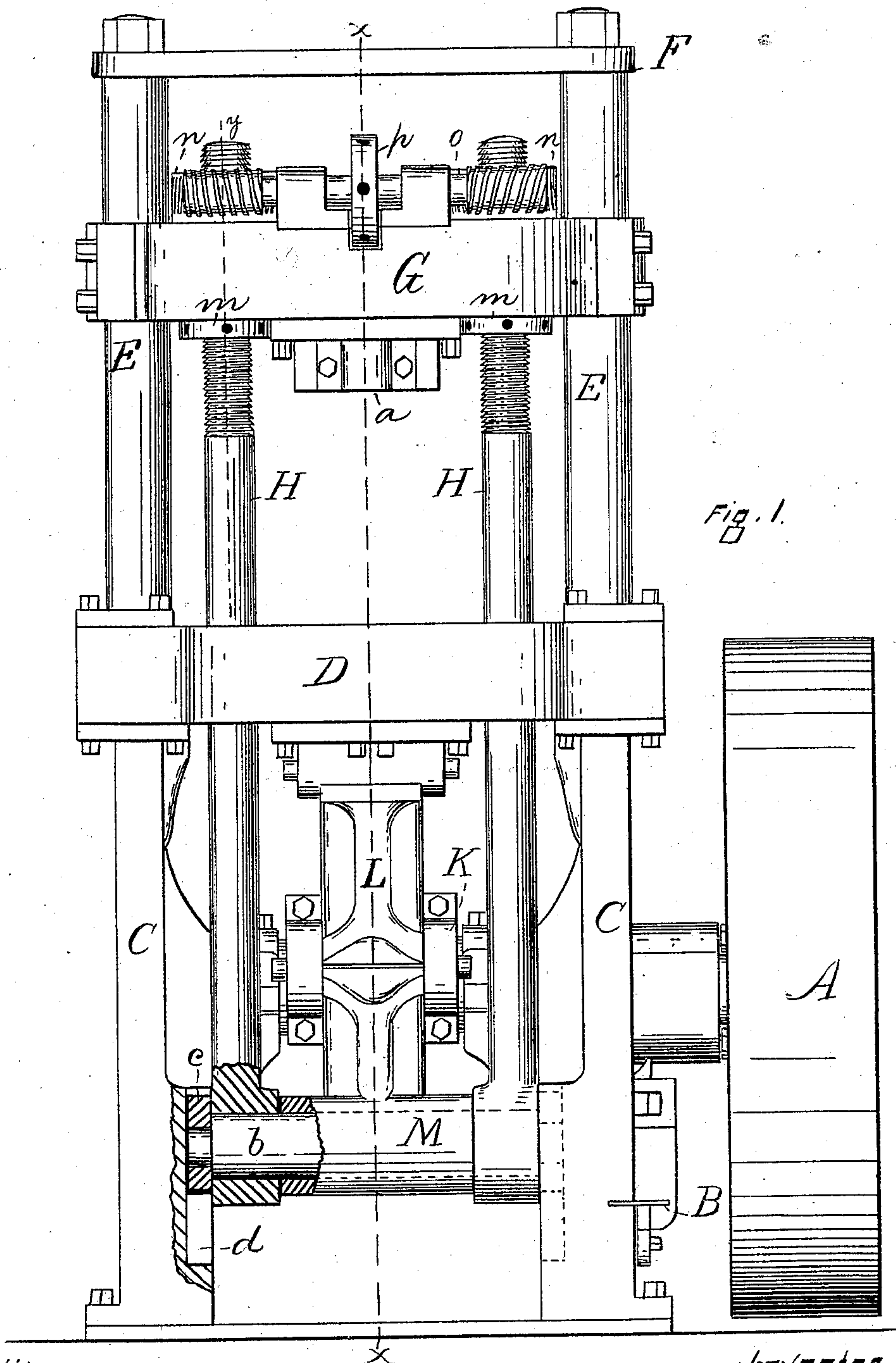


Fig. 1.

Witnesses.
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Martin A. Bond.

Inventor.
Alanson H. Merriman,
By James Shepard atty

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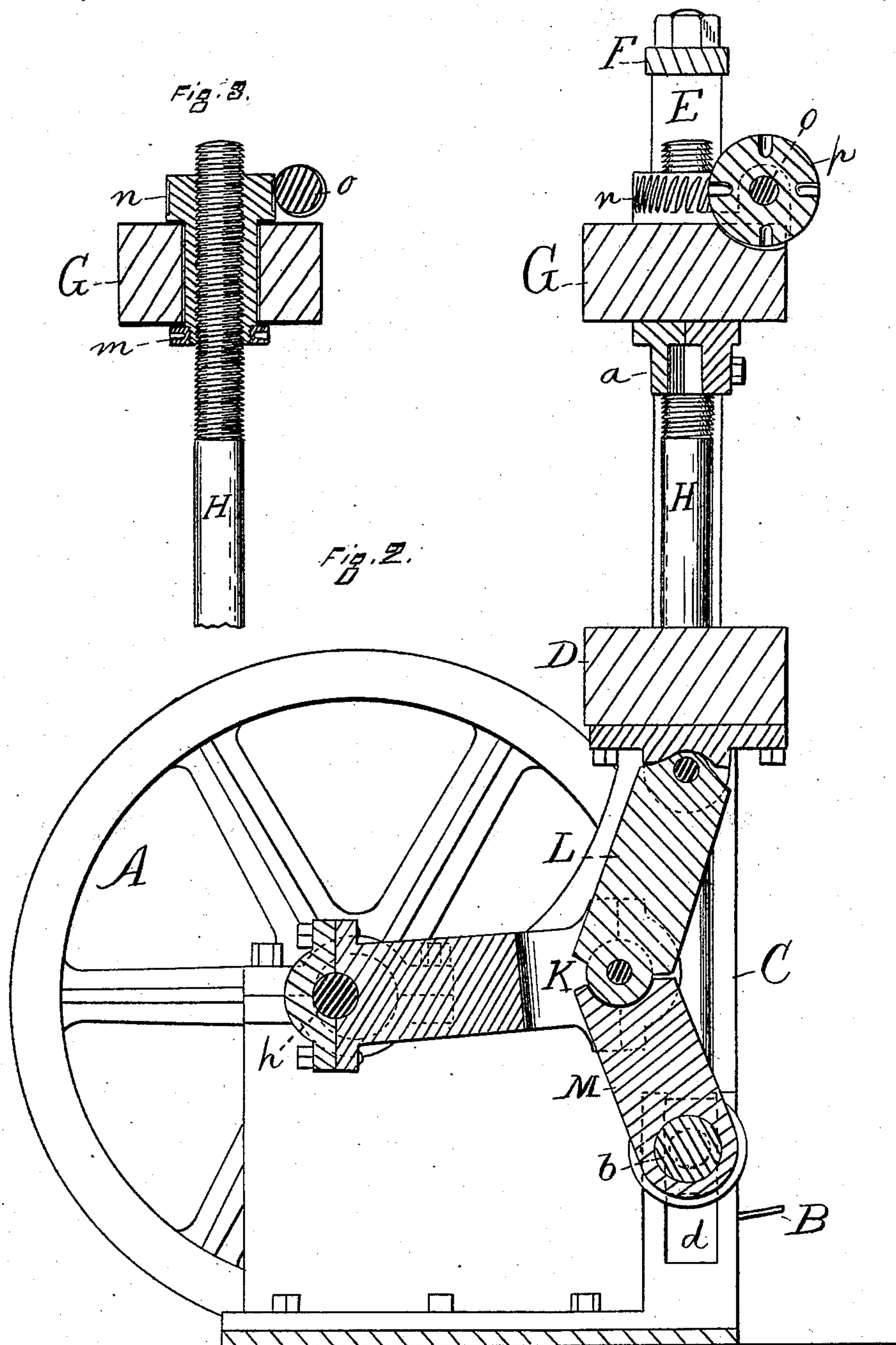
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Martin A. Pond.

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Alanson H. Merriman.
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UNITED STATES PATENT OFFICE.

ALANSON H. MERRIMAN, OF MERIDEN, CONNECTICUT.

POWER-PRESS.

SPECIFICATION forming part of Letters Patent No. 286,839, dated October 16, 1883.

Application filed May 31, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALANSON H. MERRIMAN, a citizen of the United States, residing at Meriden, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Power-Presses, of which the following is a specification.

My invention relates to improvements in power-presses for heavy work; and the objects of my improvements are to locate the driving-shaft at the lower part of the press, to connect the slide therewith so that it will be pulled downward, and to so arrange the parts that they may be efficient, durable, convenient to use, and of simple construction. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of my press, partly in vertical section. Fig. 2 is a vertical section thereof on line *x x* of Fig. 1; and Fig. 3 is a partial vertical section, partly in elevation, on line *y* of Fig. 1.

A designates the driving-wheel, loosely mounted upon the end of the driving-shaft, in connection with any ordinary clutch mechanism, and treadle B, for operating the same.

CC designate two uprights, to the upper end of which I secure the working-bed D of the press. To the upper side of this bed, and extending upward therefrom, I secure two posts, E E, preferably of a round form, so that they may be turned in a lathe. These posts are connected at their upper ends by a tie or cross-piece, F, and they constitute the ways upon which the slide G reciprocates. Said slide has secured to it two vertical bars, H H, which extend downward through the bed D, one upon each side of the punch or stamp holder *a*, as shown. The lower ends of these bars H H are secured to a short cross-shaft, *b*, the ends of which rest in small sliding blocks *c*, one of which is shown in vertical section in Fig. 1, and the position of which is indicated in broken lines upon the other side of the machine in both Figs. 1 and 2. These blocks *c* slide in a groove, *d*, formed in the inner face of the uprights C C, for guiding the lower ends of the bars H H.

The crank or eccentric *h*, Fig. 2, of the driving-shaft has one end of the pitman K connected to it, while the other end of said pitman is connected to the toggle L M. The upper mem-

ber, L, of this toggle is hung upon the under side of the bed D, while the lower member, M, is mounted upon the cross-shaft *b*. When the pitman K moves forward under the action of the eccentric *h*, the toggle acts to force the shaft *b* downward, and causes the bars H H to pull the slide G down with it, and the return movement of the pitman lifts the shaft *b* and slide G back again.

For adjusting the slide G, I thread the upper ends of the bars H H and place nuts *n* thereon. These nuts extend through the slide G, and have a collar, *m*, screwed upon their lower ends, to secure them within the slide and at the same time to leave them free to rotate therein. If desired, the upper ends of these nuts may be made of angular form or provided with holes for the application of a wrench or rod for turning them; but for the purpose of moving the nuts *n* upon both bars simultaneously, so as to always keep the slide square with the posts E and parallel to the bed D, I form teeth upon the periphery of the nuts *n* of a suitable form for working in connection with a worm. In front of these nuts I place the shaft *o*, having the head *p* for the application of a rod or wrench, and a right and a left hand worm or thread at its respective ends, which engage the teeth of the nuts *n*. In order to adjust the slide it is only necessary to turn the shaft *o*, and both nuts will turn simultaneously and carry the slide up or down, as may be desired, according to which way the shaft is turned.

If desired, instead of providing the shaft *o* with the head *p*, by means of which to rotate it, the shaft may be lengthened and a crank or wheel applied to the end of said shaft for that purpose. Other means for adjusting the slide may be employed without changing the character of the other features of my improvements.

I am aware that a prior patent shows and describes a hay-press having two moving platens with mechanism located below the lower platen, consisting of a screw and worm-gearing for operating both platens, and also having connecting-rods which extend from the worm-gears to the upper platen for pulling it downward. Such a press is hereby disclaimed.

I claim as my invention—

1. The combination of the frame of a press having the stationary working-bed D, the slide

located above said working-bed, the driving-shaft having the eccentric *h*, and located below said working-bed, and suitable mechanism connecting said eccentric and slide and imparting
5 a reciprocating movement to the slide above the bed for every revolution of the driving-shaft, which is below the bed, substantially as described, and for the purpose specified.

2. The combination of the slide *G*, supported
10 on a suitable frame, the bars *H H*, extending from the slide downward below the working-bed, the cross-shaft *b*, fitted to slide in suitable guides in the framing at the lower end of said bars, and mechanism for operating said shaft
15 and bars, substantially as described, and for the purpose specified.

3. The combination of the frame of the press, having the bed *D*, the slide *G*, bars *H H*,

guided by the framing both above and below the bed *D*, the toggle *L M*, the shaft *b*, pitman 20 *K*, and driving-shaft bearing the eccentric *h*, substantially as described, and for the purpose specified.

4. In a press, the combination of the slide *G*, the bars *H H*, threaded at their upper ends 25 and passing through the slide mechanism for reciprocating said bars and slide, the nuts *n*, having toothed peripheries, and the worm-shaft for adjusting both nuts simultaneously, substantially as described, and for the purpose 30 specified.

ALANSON H. MERRIMAN.

Witnesses:

JAMES SHEPARD,
MARTIN A. POND.