(No Model.)

A. H. MERRIMAN.

ADJUSTABLE FRAME FOR POWER PRESSES.

No. 354,164. Patented Dec. 14, 1886.

Fig. 1.

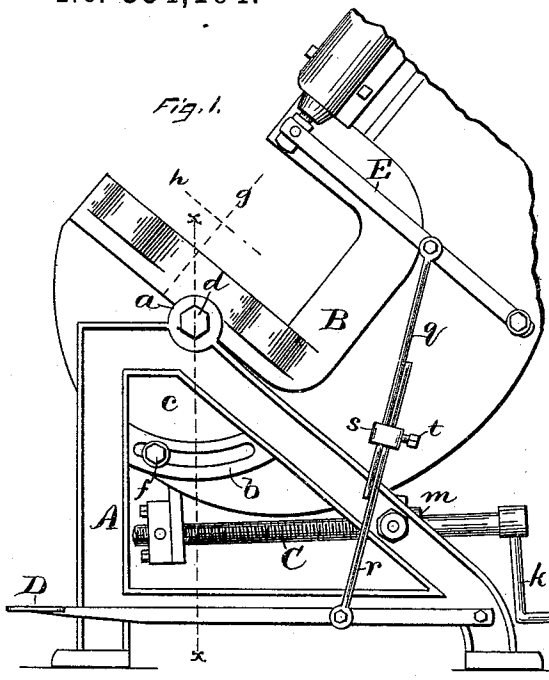


Fig. 2.

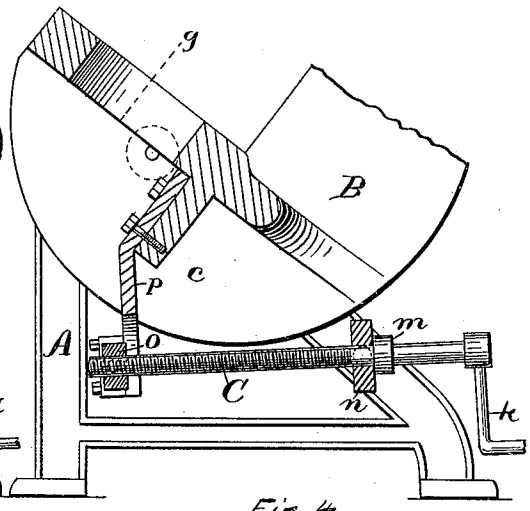


Fig. 3.

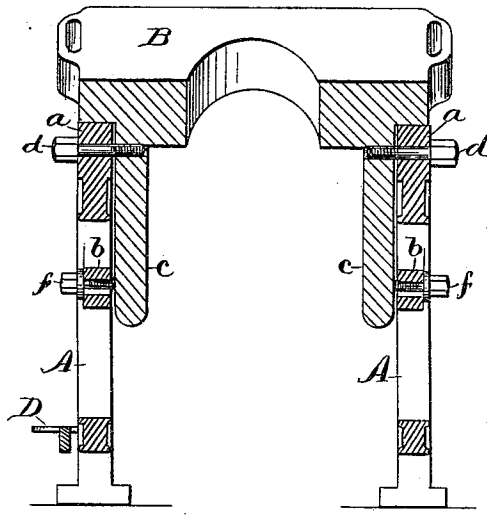
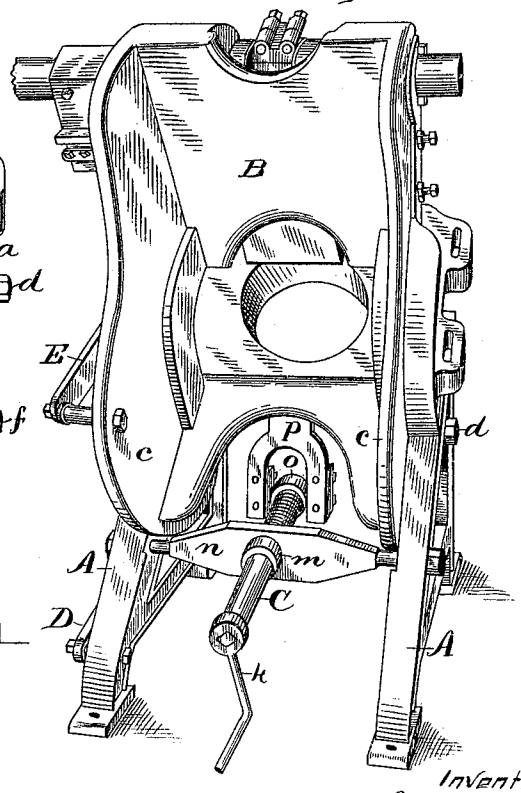


Fig. 4.



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UNITED STATES PATENT OFFICE.

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ADJUSTABLE FRAME FOR POWER-PRESSES.

SPECIFICATION forming part of Letters Patent No. 354,164, dated December 14, 1886.

Application filed September 23, 1886. Serial No. 214,301. (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 of the class in which the main part of the frame is adapted to be tipped backward, and the objects of my improvement are to simplify the construction of the parts, and to so hang the frame of the press that the center of the die will be substantially the same distance from the floor whether the press be tipped backward or set in an upright position.

In the accompanying drawings, Figure 1 is a side elevation of a press, represented with its upper end broken off, which press embodies my improvement. Fig. 2 is a vertical section of the same, partly in elevation, the plane of section extending from front to rear through the middle of the press. Fig. 3 is a vertical section of the same, partly in elevation, on line *x x* of Fig. 1; and Fig. 4 is a perspective view of said press, looking downward from the rear.

A A designate the supporting-frame, upon which the main frame B is mounted. The upper edge of the supporting-frame A A is horizontal for a short distance, and then inclines downwardly to the rear. At the corner or junction of the horizontal and inclined portions of said upper edge there is a circular boss, *a*, which is bored centrally. Upon each side of the supporting-frame, some distance below said boss, there is a cross-bar, having a curved slot, *b*, concentric with the boss *a*. The frame B, at the under side of its bed, upon each side, is provided with a semicircular recess, which recesses are designed to receive the bosses *a a* of the supporting-frame. Just inside of these recesses the press-frame is provided with flanges *c c*, into which the pivotal bolts *d d* are screwed, said bolts being first passed through the centrally-bored lugs *a a*, as most clearly shown in Fig. 3. I term the bolts *d d* "pivotal" bolts, because they are in the center, upon which the frame swings, but the weight of the press-frame is sustained by the bosses *a a*. Fastening-bolts *f f* are passed through the curved slots *b* in the cross-bars and into the flanges *c c* for the purpose of securing the frame B in place after adjustment. The recesses in the bed of the press, which receive the bosses *a a*, are so located with reference to the center of the hole through the bed and the axial line of the press-slide, as indicated by the broken line *g*, as to be a little back of said line.

In practice, the ordinary dies will be placed upon the bed of the press, so that their upper surface will come approximately to the broken line *h*, Fig. 1, and therefore the center of the upper face of the die will be at the junction of said broken lines *g* and *h*. When the press is tipped backward, as illustrated in the drawings, the center of the die will be a given distance back of the vertical line passing through the center of the bosses *a a*, and when the press-frame is thrown forward into an upright position to bring the top of its bed horizontal the center of the die will be about the same distance forward of said line, and consequently will be substantially the same distance from the floor, whether the press-frame is upright or inclined, thereby making it more convenient for the operator than would be the case if the height of the die were varied when the press was changed.

In order to swing the frame from its inclined position to an upright one and let it back again, I make use of the screw C, having an operating-crank, *k*, at its rear end. This screw is provided with a shoulder or collar, *m*, and is passed through the bar *n*, with the collar bearing against said bar, which bar is hung upon the supporting-frame A A of the press, so as to be free to turn loosely in its bearings. The other end of the screw C passes into the nut *o*, which is pivoted to swing freely within the arm *p* at the under side of the press-frame. Thus it will be seen that when the fastening-screws *f f* are loosened, turning the crank in the direction which will drive the screw C through the nut *o*, will throw the press-frame B into an upright position, the bar *n* and nut *o* swinging on their axes to keep them parallel with each other and prevent binding the screw during the operation. Turning the screw in the opposite direction will permit the press-frame to fall backward again into the position shown.

D designates the treadle for operating the clutch mechanism of the press. Said clutch

mechanism may be of any ordinary construction, and is connected to the front end of the lever E, the rear end of which lever is hinged or pivoted to the frame of the press. This lever is connected with the treadle D by means of connecting-rods *q r*, the ends of which lap by each other, where they are fastened together by means of the collar *s* and set-screw *t*. When the set-screw is loosened, both the rods *q* and *r* can slip freely through the collar *s*. When the press is changed from an upright to an inclined position, or vice versa, the set-screw *t* can be loosened and the rods allowed to slip through the collar *s* to bring the treadle D at the proper height after such adjustment, and the set-screw may be tightened again to clamp the lapped end of the rods in their adjusted position.

I am aware that it is not new to arrange a press-frame so that its position may be changed upon the supporting-frame, and to provide the same with mechanical means for moving the frame.

I claim as my invention—

1. The combination of the supporting-frame A A, having the circular bosses *a a* at their upper edge, and the press-frame B, having recesses upon each side under the edge of its bed, into which said bosses are received in pivoting the frame thereon, substantially as described, and for the purpose specified.

2. The combination of the supporting-frame A A, having the circular bosses *a a* at their upper edge, and the cross-bars with the curved slot *b* concentric with said bosses, the press-frame B, having recesses upon each side under the edge of its bed, into which said bosses are received in pivoting the frame thereon, and having, also, the flanges *c c*, the pivotal bolts *d d*, passing through the lugs *a a* and into the frame of the press, and the fastening-bolts *f f*, extending through the curved slot into the flanges *c c* of the frame B, substantially as described, and for the purpose specified.

3. The combination of the supporting-frames A A of a press, a press-frame pivoted on said supporting-frame and having the downwardly-projecting arm *p*, the nut *o*, pivoted within said arm, the pivoted cross-bar *n*, and the screw C, extending through said cross-bar into the nut, substantially as described, and for the purpose specified.

4. The combination of the supporting-frames A A of a press, a press-frame pivoted thereon, the lever E, pivoted to the press-frame for operating the clutch mechanism, the treadle D, the rods *q r*, for connecting said lever and treadle, the collar *s*, embracing the lapped ends of said rods, and the set-screw *t*, for binding the said ends together within the collar *s*, substantially as described, and for the purpose specified.

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