No. 752,762. PATENTED FEB. 23, 1904.

C. E. DELLENBARGER & W. D. CARTER.

EMBOSSING PRESS.

APPLICATION FILED APR. 11, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

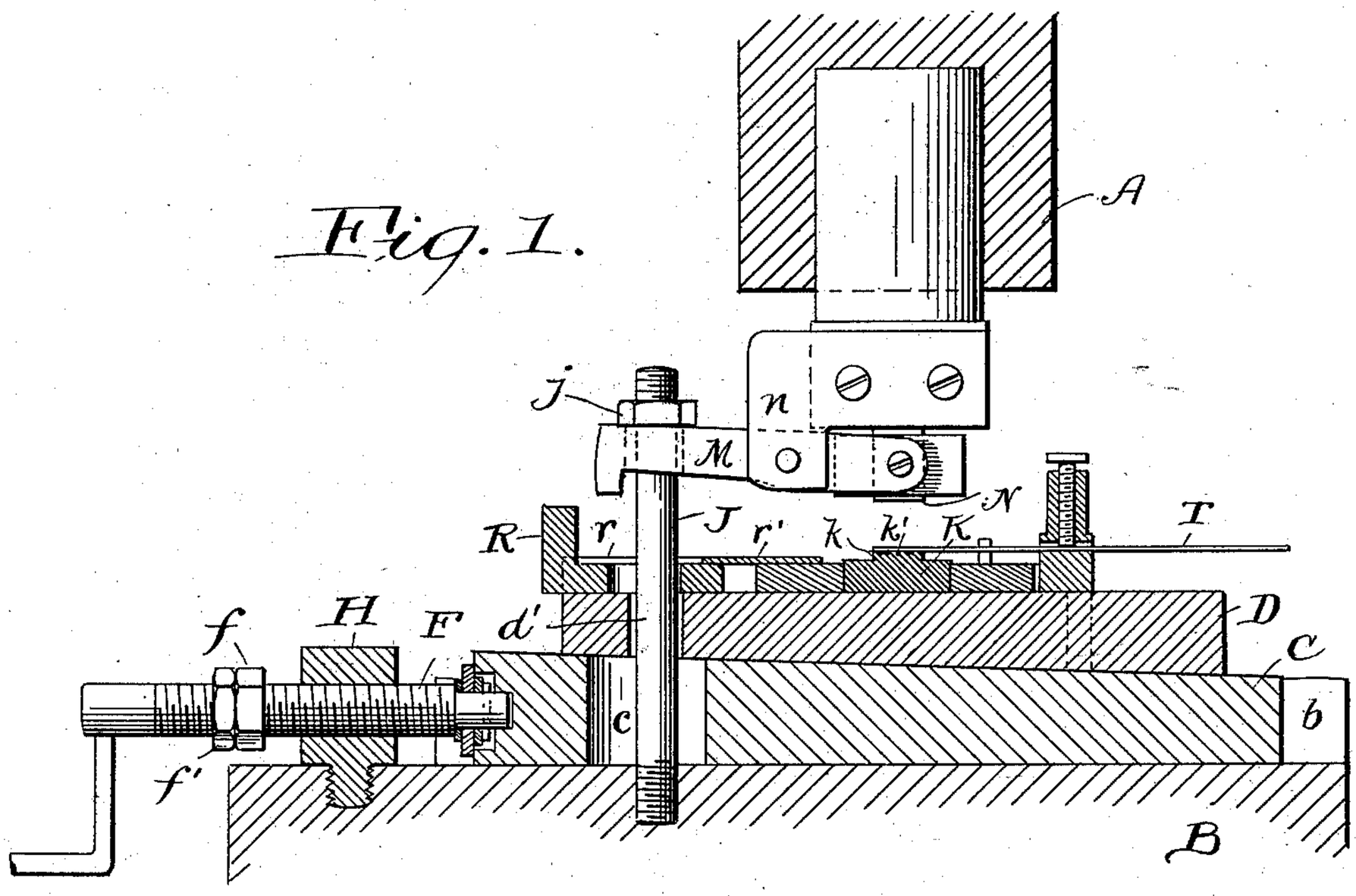
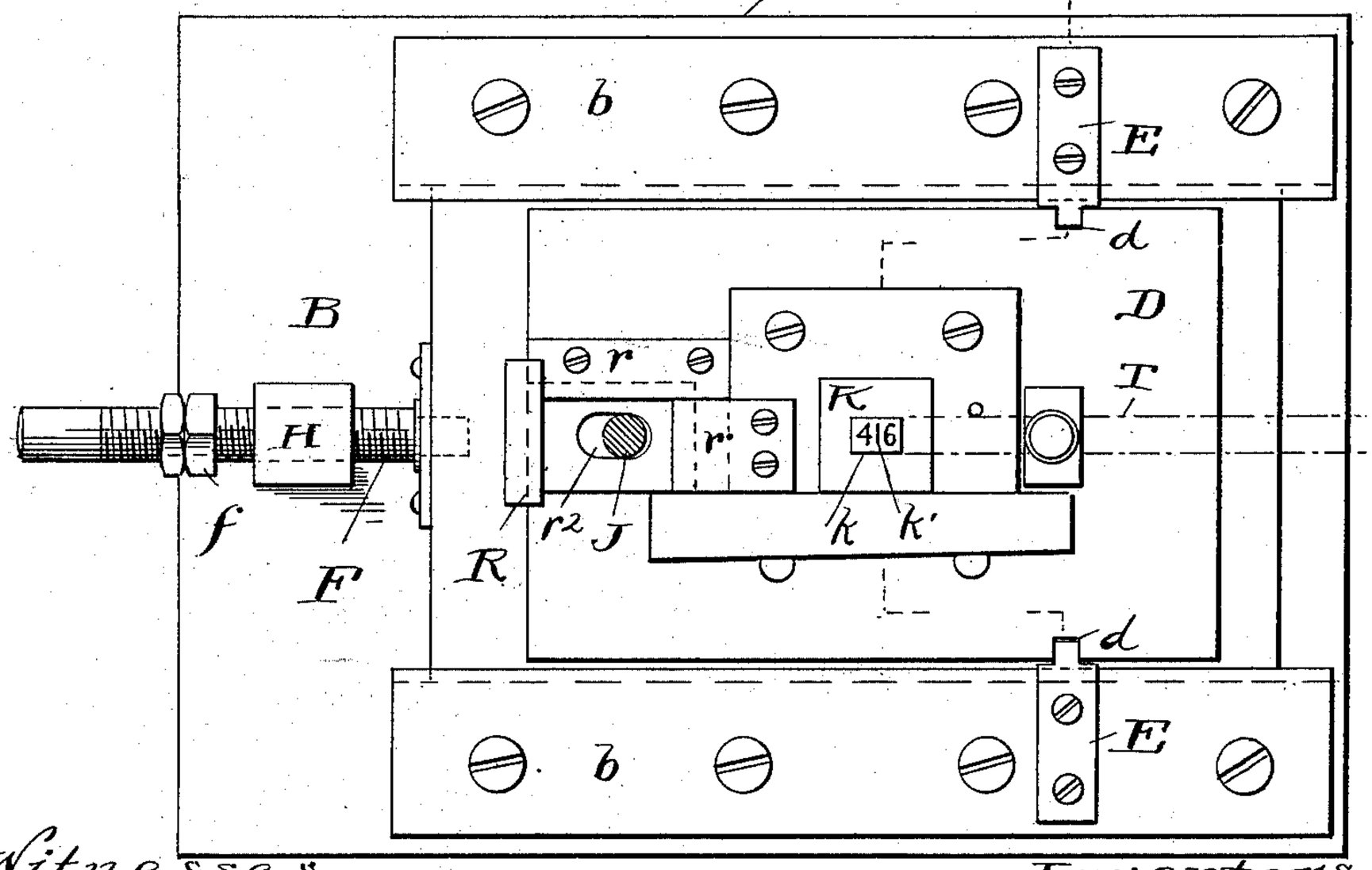


Fig. 2.



Witnesses.
E. B. Gilchrist
N. L. Brennan

Inventors.
Charles E. Dellenbarger,
William D. Carter,
By Thurston & Bates, Attys.

No. 752,762. PATENTED FEB. 23, 1904.

C. E. DELLENBARGER & W. D. CARTER.

EMBOSSING PRESS.

APPLICATION FILED APR. 11, 1903.

NO MODEL. 2 SHEETS—SHEET 2.

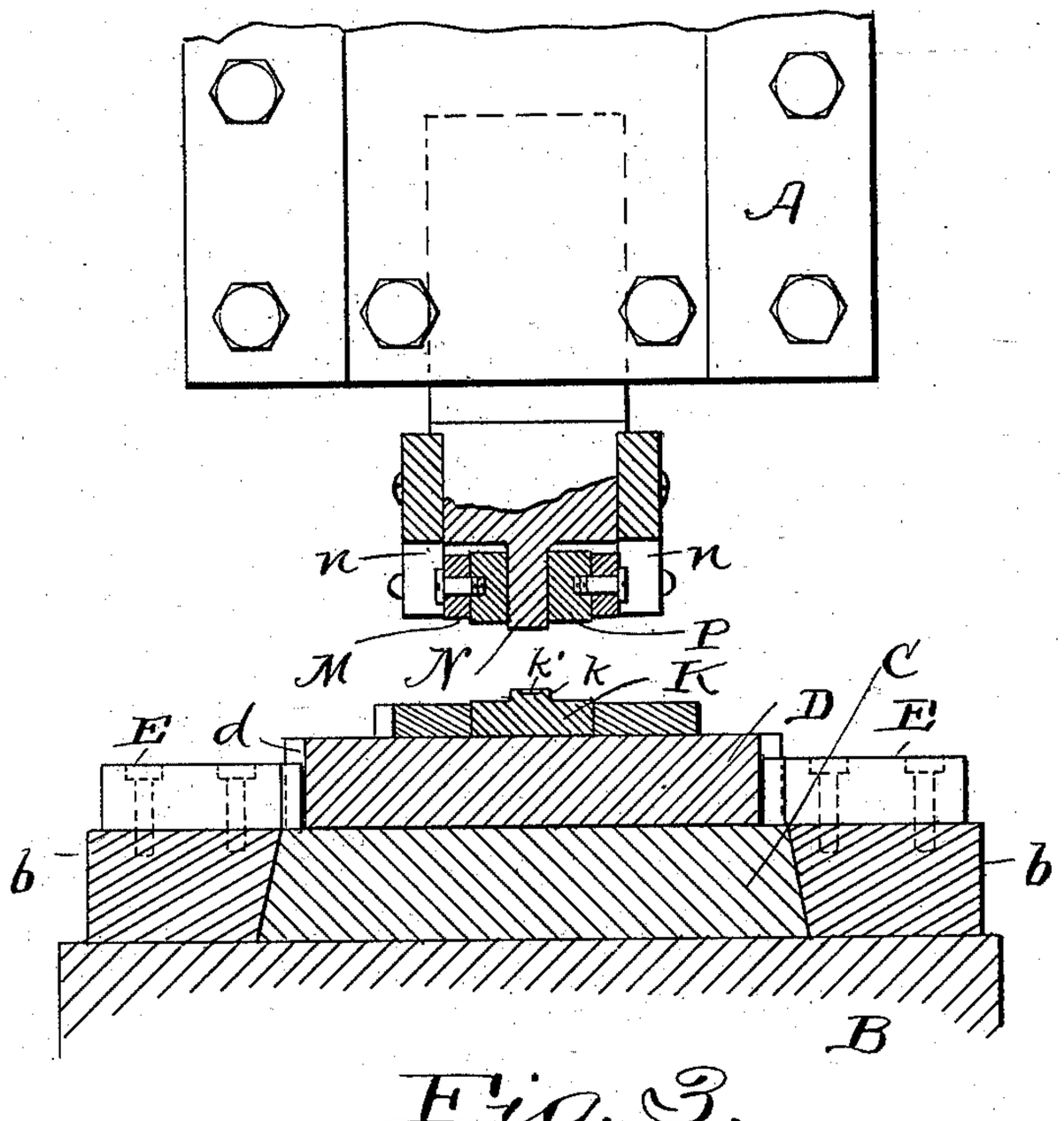


Fig. 3.

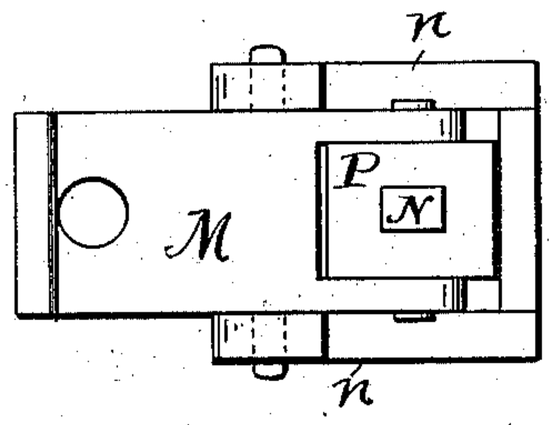


Fig. 4.

Witnesses.
E. B. Filchrist
N. L. Duncan

Inventors.
Charles E. Dellenbarger,
William D. Carter,
By Their Attorneys,
Thurston & Dale.

No. 752,762. Patented February 23, 1904.

UNITED STATES PATENT OFFICE.

CHARLES E. DELLENBARGER, OF CINCINNATI, AND WILLIAM D. CARTER, OF CLEVELAND, OHIO; SAID CARTER ASSIGNOR TO SAID DELLENBARGER.

EMBOSSING-PRESS.

SPECIFICATION forming part of Letters Patent No. 752,762, dated February 23, 1904.

Application filed April 11, 1903. Serial No. 152,125. (No model.)

To all whom it may concern:

Be it known that we, CHARLES E. DELLENBARGER, a resident of Cincinnati, in the county of Hamilton, and WILLIAM D. CARTER, a resident of Cleveland, in the county of Cuyahoga, State of Ohio, citizens of the United States, have invented a certain new and useful Improvement in Embossing-Presses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to certain modifications of and additions to an ordinary power-press, whereby it is adapted by successive blows to either impress intaglio characters into or embossed cameo characters upon malleable metal.

The invention may be here summarized as consisting in the construction and combination of parts hereinafter described, and definitely pointed out in the claims.

In the drawings, Figure 1 is a side elevation, partly in central section, of a press having our improvements applied thereto. Fig. 2 is a plan view of the bed of the press and the parts supported thereon. Fig. 3 is a sectional end view in the plane indicated by line 3 3 of Fig. 2; and Fig. 4 is a bottom plan view of the plunger and the mechanism carried thereby, as shown in Fig. 1.

Referring to the parts by letters, A represents the reciprocating plunger of any ordinary power-press. B represents the bed-plate of said press, upon which bed-plate the parallel guide-bars *b* are secured, so as to form between them a guide-channel for the wedged block C, which rests upon the bed-plate B. Resting upon this wedge-block is the anvil-block D, having in its sides vertical guide-grooves *d*, which receive the ends of the bars E, secured to the bars *b*. These bars E permit the anvil-block D to move up and down, but help to prevent it from moving in any other direction. This block D is still further restrained from any movement, except its up and down movements, by a rod J, which is screwed into the bed-plate and extends up through a slot *c* in the wedge-block C and through a slot *d'* in the anvil-block D. It is therefore clear that if the wedged block is moved inward this anvil-block will be moved upward. The movement of the wedge-block to produce this result is effected in the construction shown by means of a screw F, which is swiveled to the wedge-block C and screws through a block or post H, secured to the bed-plate of the machine. The set-nut *f* upon the said screw may be placed so that it will engage with the post H when the screw F has been turned far enough to produce the desired movement of the wedge-block.

The described mechanism is believed to be of greatest utility in embossing on strips of brass cameo characters which will be perfect reproductions of the depressions in the dies in which they are formed. In using the mechanism for this purpose a die-block K is secured by any suitable means upon the anvil-block. On the die there is preferably a projection *k*, in the top face of which the intaglio characters *k'* are formed. A punch N, having its lower end of the same shape and size in cross-section as the projection *k*, is secured to the plunger A, said punch and die projection being in alinement. A lever M is pivoted to two plates *n*, secured to the punch. One end of the lever is forked, and the two sides thereof embrace and are pivoted to a trimming-frame P, which is slidably fitted upon the lower end of the punch. A strip T, of brass or other metal to be embossed, is fed across the face of the die K. The punch as it descends strikes this strip with such force that the metal is partially driven into the depressions *k'*. When the punch is moving up and down for another blow, the operator turns the screw F, thereby moving the wedge-block and causing the raising of the anvil-block and the die K thereon.

The punch as it now comes down applies additional pressure upon said strip and causes a further flow of the metal thereof into said depressions *k'*. These operations are repeated until the nut *f* on the screw F strikes the post H, and then if the nut *f* has been properly adjusted and about four blows (for brass) have been struck it will be found that the metal of the strip has completely filled said depressions *k'* and that the embossed part of the strip

has been reduced so that it is of exactly the same thickness as every other finished embossed piece. This being accomplished, the operator pushes a sliding tappet-plate R along until it is under the tail of the lever M. This tappet-plate is mounted on the anvil-block and is guided partly by the gibs $r\ r'$ and partly by the rod J, which passes through a slot r^2 in said tappet-plate. Then as the punch descends the lever strikes this tappet-plate, and as a result the trimming-frame P slides down the punch and over the die projection k, thereby cutting off the embossed end of the strip T and trimming it to proper size and shape. As the punch goes up the cut-off end of the strip T is lifted out of the die by this frame. When the punch nears the top of its stroke, the tail of the lever M strikes a nut j on the rod J, whereby the lever is rocked in the contrary direction, with the result of sliding the trimming-frame up the punch to the normal position, as shown in Fig. 1, and the embossed plate is thereby pushed out of said frame.

The described mechanism may also be used very effectively for forming intaglio characters in a metal block. One need only to substitute for the punch N another punch having cameo characters on its lower end and to secure upon the anvil-block the metal block into which the characters are to be impressed.

Having described our invention, we claim—

1. In a press, the combination of a reciprocating punch, a trimming-frame fitted to and slidable upon the lower end of said punch, a die having a projection corresponding in shape and size to the lower end of the punch, and means for raising and lowering said trimming-frame to cut off the work resting upon the die, substantially as specified.

2. In a press, the combination of a reciprocating punch, a trimming-frame slidable upon the lower end of said punch, a lever pivotally connected with said punch and with said trimming-frame, a die having a projection corresponding in shape and size to the lower end of the punch, and a movable tappet-plate adapted to be moved beneath the tail of said lever, substantially as specified.

3. In a press, the combination of a reciprocating punch, a trimming-frame slidable upon the lower end of said punch, a lever pivotally connected with said punch and with said trimming-frame, a die having a projection corresponding in shape and size to the lower end of the punch, a movable tappet-plate adapted to be moved beneath the tail of said lever, and a tappet-piece above the tail of said lever and adapted to engage therewith, substantially as specified.

4. In a press, the combination of a reciprocating punch, a trimming-frame slidable upon the lower end of said punch, a lever pivotally connected with said punch and with said trimming-frame, a die having a projection corresponding in shape and size to the lower end of the punch, a movable tappet-plate adapted to be moved beneath the tail of said lever, a vertical rod, a tappet-nut thereon for engaging it with the tail of said lever, substantially as specified.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

CHARLES E. DELLENBARGER.
WILLIAM D. CARTER.

Witnesses:
ALBERT H. BATES,
E. L. THURSTON.