T. RUE.

Dies for the Manufacture of Sheet-Metal Number-Plates.

No. 221,103. Patented Oct. 28, 1879.

Fig. 1

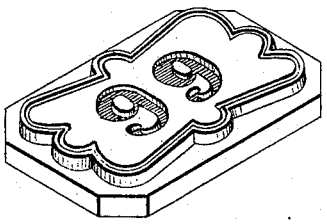


Fig. 2

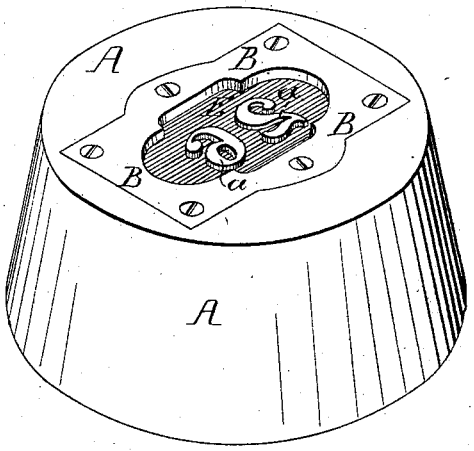


Fig. 3

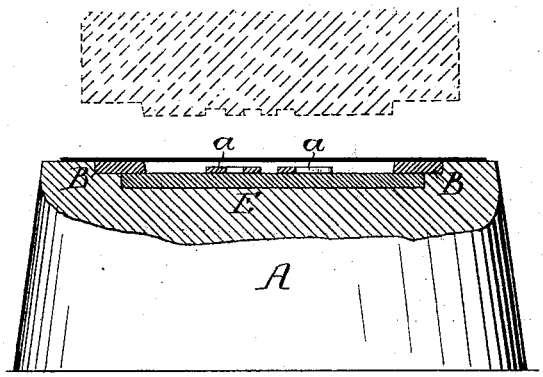


Fig. 4

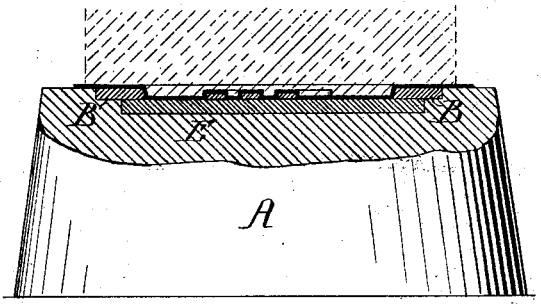
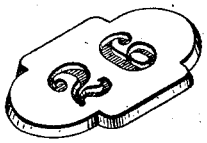


Fig. 5

Fig. 6



WITNESSES

Harry Smith

J. M. Turner

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IMPROVEMENT IN DIES FOR THE MANUFACTURE OF SHEET-METAL NUMBER-PLATES.

Specification forming part of Letters Patent No. **221,103**, dated October 28, 1879; application filed April 21, 1879.

To all whom it may concern:

Be it known that I, THEODORE RUE, of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Dies for the Manufacture of Sheet-Metal Number-Plates with Sunken Numbers, of which the following is a specification.

My invention relates to a die to be used in a drop-press in the operation of striking up thin sheet-metal plates to form number-plates with sunken numbers, the object of my invention being to construct a die which, while capable of being effectively used in this manner, will be much cheaper than the engraved dies ordinarily used for the purpose. This object I attain in the following manner, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of an ordinary die-block for the manufacture of a number-plate with sunken numbers; Fig. 2, a perspective view of a die-block constructed according to my invention; Figs. 3 and 4, sectional views of the upper and lower die of a press, illustrating the operation of the same on the sheet-metal plate, the upper die being shown by dotted lines; Fig. 5, a sectional view, and Fig. 6 a perspective view, of a finished number-plate constructed in accordance with my invention.

The great objection to the employment of engraved die-blocks, such as shown in Fig. 1 of the drawings, is their expense, especially when used for the manufacture of a series of plates having different numbers. An idea of this expense will be gained when it is understood that each block costs from two to three dollars, that there must be a separate block for each number of a set, and that there must be a separate set for each style of figure used.

I overcome this objection by constructing the die-block in the manner shown in Figs. 2, 3, and 4 of the drawings, in which A represents the base of the block, the upper face of which is recessed for the reception of a plate, B, which fits snugly in said recess, and is secured therein by screws or otherwise, so that it can be readily detached when desired.

The plate B has a central opening, the configuration of which corresponds with that desired for the number-plate, the inner edges of the opening in the plate B overlapping the edges of a recess in the block A, to which is adapted a plate, E; and to the face of the latter, in proper positions in respect to the opening of the plate B, are secured the desired numbers *a*, the latter being ordinary articles of commerce and comparatively inexpensive.

The numbers *a* should be secured to the plate E so that they can be readily detached therefrom, the mode preferred being to solder the numbers to the plate, so that upon the application of sufficient heat the solder will melt and permit the numbers to be detached, the heat, however, not being sufficient to injure the number or the plate.

The die-block is fitted to its place in the press, and when the desired number of sheet-metal plates have been struck up by the dropping of the upper die, which is constructed in the usual manner, the plate B may be removed, and a plate having an opening of different configuration substituted therefor, and this may be repeated as often as desired; or the plate E, carrying the numbers, may be removed from the block A, and another plate, carrying numbers of a different character, substituted therefor, the numbers on the first plate, E, being changed, if desired, while the other plate is in use. By this means the expense attending the use of separate engraved plates is, to a great measure, overcome, and I am thus enabled to produce sets of metal number-plates with sunken numbers at much less expense than when such engraved plates are used.

As it leaves the press the sheet metal is in the form of a dished plate, on which the figures are struck in, as shown in Fig. 5.

In order to impart the proper strength and rigidity to the plate, it is usual to provide the same with a filling or backing of lead, solder, or other soft metal, which, when first applied, is in a fluid state, but which rapidly hardens. I take advantage of this backing to secure to the plate pins *b b*, by which it may be readily attached to a door or other object. The heads of these pins are inserted into the metal back-

ing while the latter is in a fluid or semi-fluid state, and held in position until the metal hardens, when the pins will be firmly retained.

I am aware that detachable letters have been combined with a die-block for the manufacture by compression of sheet-metal name-plates with raised letters, and this, therefore, I do not desire to claim; but

I claim as my invention—

The combination of the block A and the plate E, adapted to the recessed face of the block, and carrying the numbers *a*, with the plate B, arranged to overlap the edges of the plate E and cover the joint between the same and the block A, all substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THEODORE RUE.

Witnesses:

WILLIAM J. COOPER,

HARRY SMITH.