

## CUTTING STEEL STAMPS

by J. F. Greene

Some few years ago, steel stamps could be profitably made with a vise, a few chisels, a couple of gravers, an emery grinder, a few files and a tempering furnace. Now, however, the uptodate shop requires, in addition to the foregoing a horizontal miller, a vertical miller, a drill press and several other tools.

The following method is practiced in the shops of the Pittsburgh Steel Stamp Co., Pittsburgh, Penn. Usually, stamps are made in large lots at a time. The square bars of steel are first cut off to length, after which one end is whitened with stencil paste. After the stencil paste has become dry, a boy imprints the character on the whitened end with a rubber stamp. This is done quickly and accurately by laying the piece of steel in a

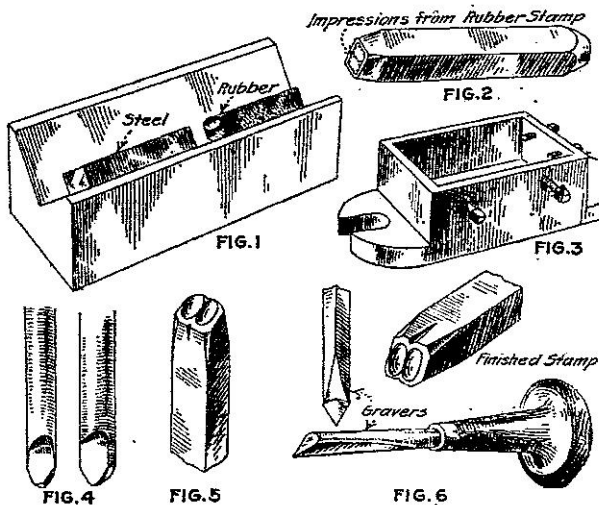
sort of V-block and pressing it up against the rubber stamp, which is on the end of a piece of steel of the same thickness as the stamp. Fig. 1 shows the operation.

Next, comes the grinding, which is done by boys who become very expert in a short time. The outside is ground at the proper bevel, wherever possible, up to the ink line. In Fig. 2 the dotted lines show the imprint of the rubber stamp and the black border the part to be ground off. The heads of the stamps are also ground in this operation.

At this stage the finisher takes the work. His task is to shape the outside of the character with a file just as it will look when finished. This is a small matter, as the grinder has done most of the work.

The stamps are then placed in a

chuck, Fig. 3, and clamped to the bed of the vertical miller. A Becker No. 1 or 2 miller is handy for this work, as it has a foot pedal for lowering and raising the tool. High-speed single-edge cutters,



FIGS. 1 TO 6. TOOLS FOR CUTTING STEEL STAMPS

Fig. 4 are used. Here for the first time a skilled operator is required. Through long practice this operator can manipulate the slides of the machine so accurately that all the surplus metal is routed out right up to the outside edge, as in Fig. 5. A 3/4-in. letter can be milled out easily in 3 min.

From here the finisher takes charge. With properly shaped chisels he cuts out the corners where the milling cutter could not reach. He is then ready to sharpen up the lines and smooth out any irregularities, which he proceeds to do with gravers. All lines are brought up to a knife-edge by this process. The next operation is hardening and tempering. It is by far the most important of any and one that requires a great amount of skill.