(No Model.)

H. F. BLACKWELL, Jr., & W. G. CARLISLE.

SIGN AND APPARATUS FOR MAKING THE SAME.

No. 456,545. Patented July 28, 1891.

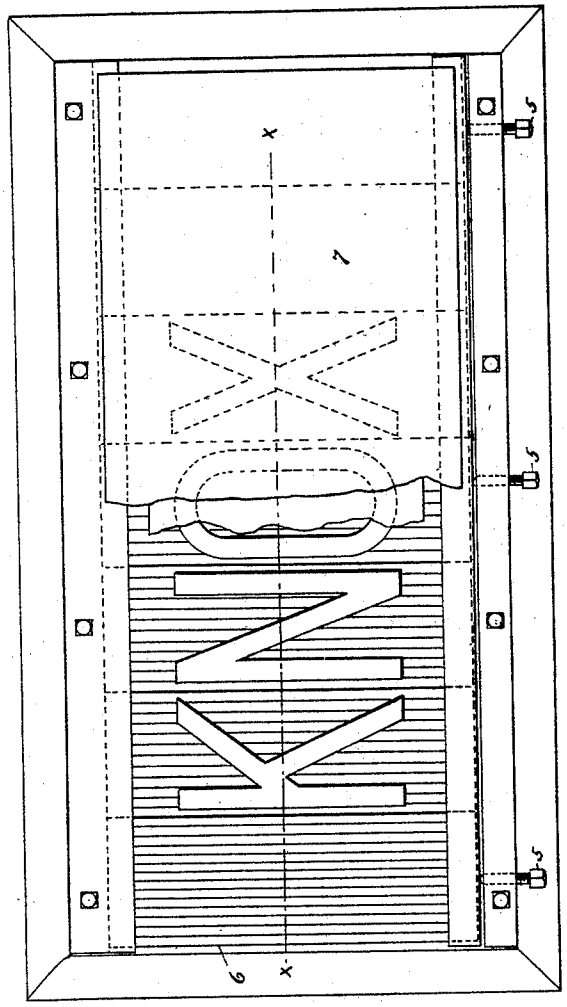

Fig. 1.



Fig. 3.

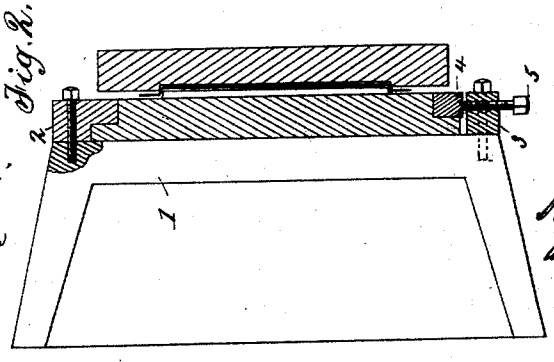

Fig. 2.

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UNITED STATES PATENT OFFICE.

HENRY FIELD BLACKWELL, JR., AND WILLIAM GATES CARLISLE, OF BROOKLYN, NEW YORK.

SIGN AND APPARATUS FOR MAKING THE SAME.

SPECIFICATION forming part of Letters Patent No. 456,545, dated July 28, 1891.

Application filed July 16, 1890. Serial No. 358,952. (No model.)

To all whom it may concern:

Be it known that we, HENRY FIELD BLACKWELL, Jr., and WILLIAM GATES CARLISLE, citizens of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Signs and Apparatus for Making the Same; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to produce a sign principally for street use, but also adapted for other purposes, which will be cheaper and better than those now commonly used, in which the letters are formed in skeleton outline by being cast in metal.

It is the principal object of the invention to have the letters or characters constituting the sign formed in relief upon a single piece of sheet metal in such a manner that the reading-surface of the letters is flat and may be readily painted by passing a printing-roller over the surface.

The invention also contemplates the formation of single letters struck up from a flat piece of metal, which letters may afterward be assembled or grouped to form any desired reading and secured in place upon a supporting frame or fabric.

In carrying out our invention we use a series of die-blocks in which the reading-surface is plane and is raised in relief and assemble these blocks in a frame provided with guiding-strips and means for locking the blocks in position. We then form a matrix for co-operating with the die-blocks by placing a cap over the assembled blocks and running melted lead into the mold thus formed. The matrix after cooling is used as a press-plate to co-operate with the die-blocks in striking up the letters from a sheet of metal which is to form the sign. By preference, the main body of the surface of the die-blocks is corrugated in lines extending in a direction parallel to the sides of the blocks, so that in the completed sign the division-lines between the several blocks constituting the group will not be noticeable.

In the accompanying drawings, which illustrate the invention, Figure 1 is a plan view of the table, showing the die-blocks arranged in position for stamping the group of characters. Fig. 2 is a sectional view showing the action of the die and matrix on a sheet of metal. Fig. 3 is a sectional view on the line $x\,x$, indicated in Fig. 1, of a sign produced in accordance with our invention.

1 is a suitable stand or table, at the sides of which are secured guide-bars 2 3, the former having a flange or shoulder, as shown in Fig. 2, for co-operating with a flange on the under side of the die-blocks. These blocks have a flange at each end, as shown in Fig. 2, and are laid in place on the bed-plate and locked firmly against displacement by a bar 4, resting upon one flange, pressure being applied by set-screws 5, passing through the guide-bar 3. The die-blocks will be furnished in sufficient number to form any desired combination of letters, and some of them will be blank, having simply a corrugated upper face, as shown at 6 in Fig. 1, so as to preserve uniformity in the appearance of the sign. After the blocks have been assembled and locked in position a sheet of metal 7 is laid over them and the matrix forced down upon the dies by screw-pressure or otherwise. By reason of the smooth upper face of the die-blocks the entire reading-surface of the sign lies in the same plane and may be readily painted by passing a roller coated with a paint over the surface. The corrugated portions of the sign are also painted, but in a different color from the reading-surface, so as to make the entire body of the sign weather-proof.

The sheet-metal sign when completed can be secured to a suitable frame in any desired manner.

Instead of forming the whole sign upon one piece of sheet metal, separate letters may be formed by each die-block and the edges trimmed, so that they may be readily secured by cement or in any other manner to a supporting-base.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. A die for embossing a letter or character

on sheet metal or like material, having a letter or other character formed thereon, the face of the die being filled with corrugations in lines parallel to the sides of the die-block.

2. A sheet-metal sign having letters or characters stamped therein, the surface of the sign being filled with corrugations.

3. A sheet-metal letter for use in composing signs stamped from a flat blank, having a reading-surface raised in relief, and a flat edge around the letter for attachment to a plane supporting-surface.

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

HENRY FIELD BLACKWELL, JR.
WM. GATES CARLISLE.

Witnesses:
C. H. LUENGENE,
GEO. E. SEARLE.