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E. T. KINDT

2,474,428

PATTERN MARKING LETTER

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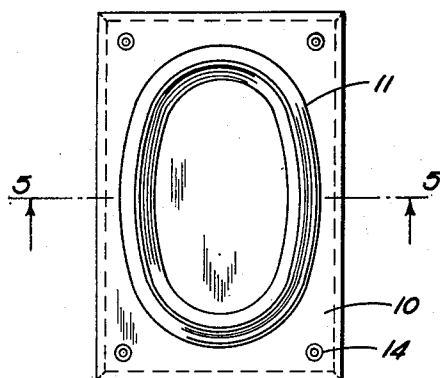


Fig. 1

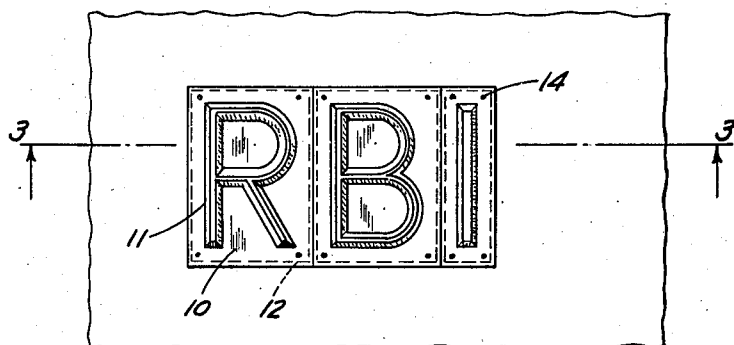


Fig. 2

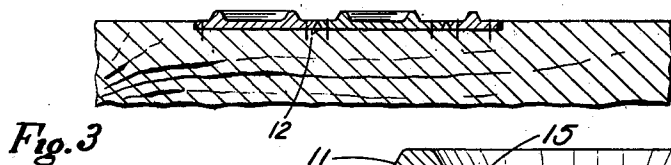


Fig. 3

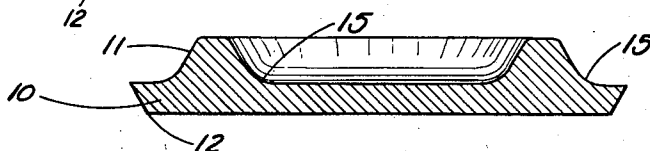


Fig. 5

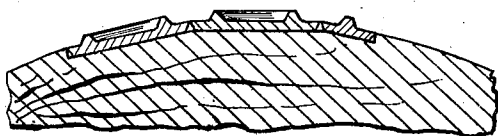


Fig. 4

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PATTERN MARKING LETTER

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4 Claims. (Cl. 22—158)

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This invention relates to improvements in alphabetic markers of the type used in making patterns for metal castings such as machine parts, memorial tablets, building members and similar cast or molded products.

Heretofore it has been the practice to form pattern letters and numerals to the contour or outline of the characters and to mount such letters in superposed relation upon the pattern. Obviously with such a structure, a crevice or sharp angular shoulder was formed at the junction of the side walls of the letters with the pattern. In theory it was presumed that since such letters were there and the draft so generous that satisfactory castings could be obtained. In practice, however, it has been found that sand would frequently cleave to the crevices or shoulders between these letters and the pattern or that sand would wash therein and thus disfigure the appearance of the castings.

In the present invention the letters are formed in bas-relief on small rectangular plates which are inlaid in the face of the pattern, the junction of the side walls of the characters and the face plates being formed with fillets of suitable proportion to prevent the difficulties referred to above.

In addition to the foregoing advantage a further object of the invention resides in the provision of inwardly beveled edges on the lower face of the plates to minimize the gap between contiguous letters and to facilitate assembly of the plates upon surfaces of convex form.

Another object of the invention is to construct the letter plates of each alphabetical set of uniform height and to proportion the width thereof so that the letters or digits thereon will be disposed in proper word formed relation when the plates are mounted in edge to edge relation with each other.

Still further objects of the invention reside in the construction of pattern letters which are economic of manufacture, attractive of appearance and susceptible of assembly with less arduous work or skill than heretofore required.

Other objects and advantages more or less ancillary to the foregoing and the manner in which all the various objects are realized will appear in the following description, which considered in connection with the accompanying drawings, sets forth the preferred embodiment of the invention.

In the drawings:

Fig. 1 is a plan view of a pattern letter embodying the present invention;

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Fig. 2 is a plan view of a plurality of letters shown in assembled relation upon a pattern;

Fig. 3 is a transverse section through the letters and pattern illustrated in Fig. 2, the section being taken on a plane indicated by the line 3—3 in said figure;

Fig. 4 is a similar sectional view illustrating the improved letters applied to a pattern surface of convex form; and

Fig. 5 is a transverse section, shown upon an enlarged scale, of the letter illustrated in Fig. 1, the section being taken on a plane indicated by the line 5—5 in said figure.

Referring first to Fig. 2, the improved letters comprise rectangular plates 10 formed of metal or a molded plastic material having the characters 11 formed in bas-relief on the upper face thereof. The plates are of uniform length for each alphabetic case of letters and digits but are proportioned with respect to their width to provide the proper spaced relation of the letters, within a word when arranged in edge to edge relation with each other. The edges 12 of the bottom faces of the plates are beveled to provide a line contact between contiguous plates and thus minimize the opening or gap intermediate the letters. If the abutting faces of the plates were formed with square edges it is obvious that the possibility for error would be threefold, i. e. the parallelism of the abutting faces, the squareness of the plate per se and the lineal trueness of the respective edges. With the beveled edge construction only the latter element of error need be considered. In practice it has been found that a beveled bearing edge may be commercially formed with adequate precision to eliminate the evidence of the outline of the plate or tracery thereof in castings made therefrom. A further advantage of the beveled plate construction resides in the adaptability thereof upon a pattern surface of convex form. As will be seen in Fig. 4, when the improved letters are mounted upon a cylindrical pattern the contiguous edges thereof meet in line to line engagement, thus precluding delineation of the cast surface produced therefrom.

The letter plates are mounted upon the pattern by carving a square cornered recess equal in depth to the thickness of the plates 10 in the work and of suitable width and length to accommodate the assembly of the requisite number thereof. The plates may be secured in place by means of an adhesive or by brads mounted in counterbored openings 14 suitably arranged in the body of the plates.

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As will be seen in Fig. 5, fillets 15 of liberal proportion are provided about the entire outline of the letters so that cleavage of sand or other material will be avoided during the molding operation. Hence when the pattern is drawn, a mold or matrix will be produced which is sharp of definition, free from surface cracks and similar imperfections which normally promote sand wash and disfigure the appearance of the casting.

The term "relief" as used in the claims is generic to raised and hollow relief.

The terms "pattern letter" and "letter" as employed in the specification and claims are not restricted specifically to letters of the alphabet, but are to be understood to include such characters as may commonly be found in a type font (for example, letters, numerals, symbols, and punctuation marks) and other analogous characters.

Although the foregoing description is necessarily of a detailed character, in order that the invention may be completely set forth, it is to be understood that the specific terminology is not intended to be restrictive or confining, and that various rearrangements of parts and modifications of detail may be resorted to without departing from the scope or spirit of the invention as herein claimed.

I claim:

1. A pattern letter comprising a plate of rectangular outline with a letter formed in relief on the upper face thereof, the lateral faces of the plate forming acute dihedral angles with the said upper face.

2. A pattern letter comprising a plate of rectangular outline with a letter formed in relief on the upper face thereof, at least one of the side faces of the plate forming an acute dihedral angle with the said upper face.

3. A pattern letter comprising a plate with a

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letter formed on the face thereof, the plate having lateral edges substantially as long as the corresponding dimension of the letter and being undercut at its lateral edges so that when a plurality of the said pattern letters are juxtaposed in a row to form a composite symbol, the adjacent plates are in substantially line contact at a lateral edge of said face.

4. An assembly of pattern letters comprising a plurality of rectangular plates of uniform height with letters formed on the upper face of said plates, the face of the plates being undercut at the lateral edges thereof so that the upper face extends beyond the lower face, the pattern letters being disposed in juxtaposition to form a composite symbol.

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