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T. J. FLACK

1,806,451

PROCESS FOR MOLDING ARTICLES

Filed March 6, 1929

Fig. 1.

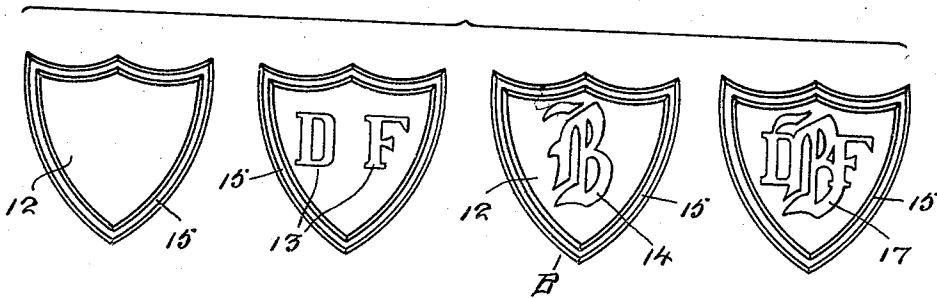


Fig. 2.

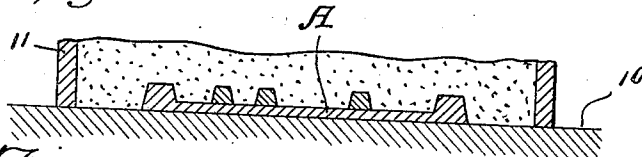


Fig. 3.

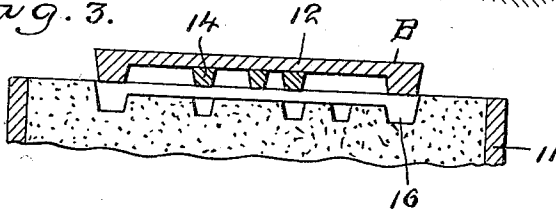


Fig. 4.

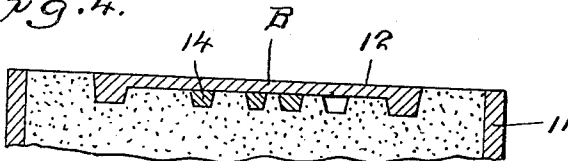


Fig. 5.

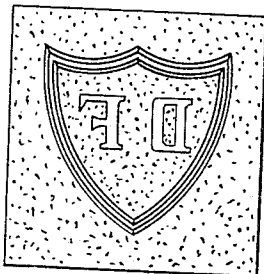
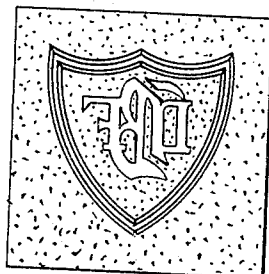


Fig. 6.



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PROCESS FOR MOLDING ARTICLES

Application filed March 6, 1929. Serial No. 344,900.

This invention relates to the process of and apparatus for casting metal articles, and is an improvement upon the invention disclosed in my Patent 1,701,559, issued February 12, 1929, and the invention disclosed in an application filed by me January 16, 1929, Serial No. 332,776.

Like the inventions above referred to, the present invention has for an object the provision of means for casting unitary articles from separate pattern units, so that a number of different articles may be cast without the expense of an individual pattern for each article.

The present invention is especially directed to molding monograms and other ornamental designs upon a base, and for utilizing the base to properly position the separate units, so that no auxiliary means, as in the above mentioned applications will be necessary.

With the above and other objects in view, the invention further includes the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claim.

In the drawings:—

Figure 1 is an elevation illustrating the separate pattern units and the finished product.

Figure 2 is a sectional view illustrating one step used in carrying out the process.

Figure 3 is a like view of another step.

Figure 4 is a sectional view illustrating a further step.

Figure 5 is a plan view of the bank or mold after the pattern unit as shown in Figure 2 has been removed.

Figure 6 is a similar view of the completed mold.

Referring to the drawing in detail wherein like characters of reference denote corresponding parts, the reference character 10 indicates a portion of a mold board which forms the bottom of a flask, a portion of which is indicated at 11.

The pattern utilized in making the mold is formed of a number of separate pattern units which may be combined to form many

different patterns. One of these pattern units is indicated at 12 while others are indicated at 13 and still another at 14. The pattern unit 12 is in the form of a base upon which the units 13 and 14 may be mounted and this base may take on various shapes and designs as desired. The base shown is in the form of a shield having an ornamental rib 15 which extends around its edges. The units 13 and 14 are in the form of letters of different character.

The invention is especially designed for molding overlapping elements which may be in the nature of the letters 13 and 14 illustrated or may be of various other designs.

In carrying out the process, certain of the letters or characters, for example the letters D F, are disposed upon the face of the base 12 and superficially connected thereto in any suitable manner so that the base and the letters D F form a pattern unit. This unit is then placed on a follow board in the usual manner and the drag after being placed in position on this board is filled with molding sand which is moistened and rammed up in any well known manner. The drag is then rolled over, and after the parting is made, the cope is put on and also rammed up in any well known manner, the cope being there-
after lifted from the drag. The flask is then rolled over to the position shown in Figure 3 and the pattern unit made up of the units 12 and 13 and indicated at A is removed. This leaves a mold such as is indicated at 16 in Figure 3.

A second pattern B is now made up from a base 12 which is identical with the first base referred to and mounted upon this base is a unit 14.

The pattern unit B thus formed is placed within the mold 16 with the rib 15 of the unit B positioned within the groove formed in the mold by the rib 15 of the unit A. The two units A and B will thus accurately register and when pattern unit B is impressed into the sand of the mold as shown in Figure 4, the overlapping design or monogram 17 as shown in Figure 4 will result. The mold thus obtained and illustrated in Figure 6 of the

drawings may then be poured in the usual manner.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is herein reserved to make such changes as properly fall within the scope of the appended claim.

Having described the invention what is claimed is:—

- 10 The process of producing molded articles consisting of a base having an outstanding border and overlapping outstanding characters within the border, which process comprises arranging upon the upper face of a
- 15 mold member of the form of the base and its outstanding border, core elements of the form of certain of the characters to be molded upon the base and superficially connecting said elements with the base, arranging the assemblage within a mold flask to
- 20 form, in the sand in the flask, and effecting an impression of the mold member of the form of the base, and the core elements, removing the assemblage, separating the said
- 25 character representing core elements from the face of the said mold member, moistening the sand in the flask, similarly arranging upon the face of the said mold member another core element of the form of another
- 30 character to be molded upon the face of the base, utilizing the border of the base mold member in symmetrically positioning the last mentioned core element, and effecting a reimpression of the said mold member and
- 35 the last mentioned core element.

In testimony whereof I affix my signature.

THEODORE J. FLACK.

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