

D. EDSTRÖM, R. H. GALT & C. M. MACKALL.  
METHOD OF MAKING MOLDS.  
APPLICATION FILED MAY 1, 1916.

1,188,051.

Patented June 20, 1916.

Fig. 1.

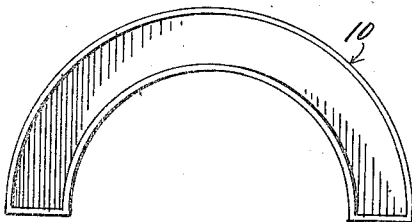


Fig. 2.

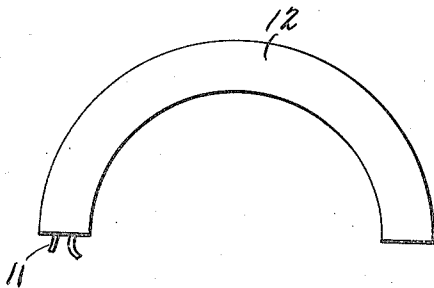
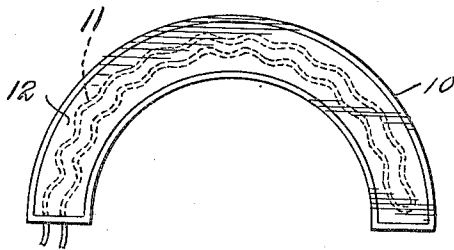


Fig. 3.

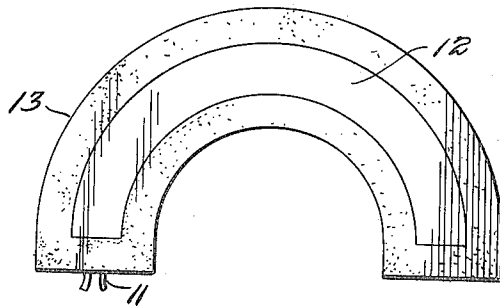


Fig. 4.

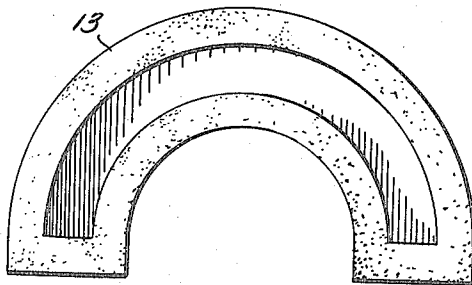


Fig. 5.

Witnesses

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# UNITED STATES PATENT OFFICE.

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## METHOD OF MAKING MOLDS.

1,188,051.

Specification of Letters Patent.

Patented June 20, 1916.

Application filed May 1, 1916. Serial No. 94,718.

*To all whom it may concern:*

Be it known that we, DAVID EDSTRÖM, ROGERS H. GALT, and COLIN M. MACKALL, citizens of the United States, residing at Sewanee, in the county of Franklin, State of Tennessee, have invented certain new and useful Improvements in Methods for Making Molds; 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.

Our invention relates to a novel method for making molds.

It is our object to provide an improved method for making molds for castings which will enable such molds to be made and a casting of any size, weight or degree of complexity to be formed, without moving the mold or heating same by means of a furnace.

In order that our improved method may be clearly understood reference will be had to the accompanying drawings wherein—

Figure 1 is a top view of a form employed in effecting the first step of the improved method; Fig. 2, a top view of the form with the core filling therein and showing the heat conveying elements, this view being completely illustrative of the first step of the improved method; Fig. 3, a view illustrative of the second step of the improved method; Fig. 4, a view illustrative of the third step of the improved method; and Fig. 5, a view illustrative of the fourth and last step of the improved method.

In carrying out our improved method we first produce a form of the desired shape and of suitable material such as wood, plaster, cement or metal. This form is indicated at 10. We then place conveniently within the form 10 a heat conveying element 11 such as single or double tubes, flexible or rigid for the conveyance of steam or other heat medium or we may employ any other suitable heating device within the form or some other method of heating the interior

of the form. We then fill the form 10 with a material having a low melting point such as one of the fusible alloys, sulfur or paraffin, such material being indicated at 12. The form 10 is then removed from the resultant core and the latter is then surrounded by a suitable mold forming material 13, such as sand. The heat conducting element 11 is then rendered active to melt out the core 12 which leaves the finished mold as illustrated in Fig. 5, it being understood that the heat conveying element 11 is removed after the core 12 is melted out. When these steps are completed the mold is ready to receive the desired casting.

What is claimed is:—

1. The herein described method of making molds for castings consisting of forming a core of material having a low melting point and with a heating element embedded therein, surrounding the core with a suitable mold forming material, then rendering the heating element active to melt the core, and then removing the heating element from the mold forming material.

2. The herein described method of making molds for castings consisting in filling a suitable form having a heat conveying element therein with a material having a low melting point to form a core having an embedded heat conveying element, then removing the form from the core, surrounding the core with a suitable mold forming material, then rendering the heat conveying element active to melt the core, and then removing the heating element from the mold forming material.

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

DAVID EDSTRÖM.  
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COLIN M. MACKALL.

Witnesses:

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