

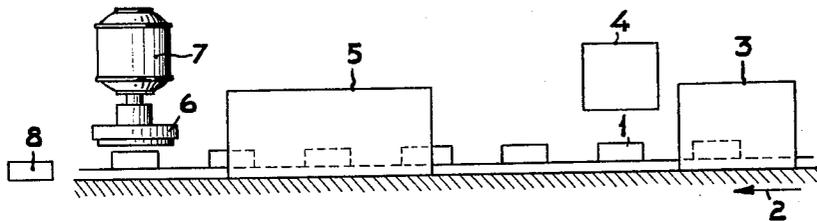
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P. HOKKELING

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CASTING MOLD AND METHOD OF MAKING THE SAME

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INVENTOR

PIETER HOKKELING

BY

Frank R. Jafari

AGENT

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CASTING MOLD AND METHOD OF MAKING THE SAME

Pieter Hokkeling, Eindhoven, Netherlands, assignor to
North American Philips Company Inc., New York,
N.Y., a corporation of Delaware

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2 Claims. (Cl. 22—193)

This invention relates to methods and devices for manufacturing casting moulds from sand and synthetic material with the use of model plates or core boxes, in which the model plates or the like filled with such material are heated so that the sand and the binder are baked to form casting moulds which can be removed from the model plates or the like. When such casting moulds are comparatively thin, they are sometimes referred to as cup moulds. They are provided with cavities corresponding to the shape of one or more products to be manufactured in the mould by casting.

In an efficacious casting process in which it must be possible for a large number of products to be cast at the same time, the moulds are stacked and the cavities in such a stack filled.

In such a process, it is much desirable for the casting moulds to have two opposing surfaces which are parallel and flat. Otherwise gaps are formed through which casting material may flow away, resulting in loss of material, danger for the operating staff and the formation of burrs on the products.

In many cases, the rough upper side of the casting mould removed from the model plates is therefore subjected to a flattening treatment.

The normal procedure is also that the material in the model plates or the like is heated in a space in which a comparatively high temperature, for example from 400° to 500° C., prevails. This is referred to as baking of the casting moulds.

However, it has been found that, due to the difference between the temperatures of the model plate and the oven, the castings removed from the model plates are liable to warp to a comparatively great extent, resulting in gaps being formed during stacking with all the disadvantages involved.

If one proceeds in the described normal way, the products do not satisfy the requirements imposed with regard to accuracy of measurements. The casting moulds removed from the model plates suffer greatly from after-treatments. Notably their sharp edges frequently crumble off, which may lead to poor castings.

The present invention provides means of obviating these disadvantages.

According to the invention, the casting moulds are flattened while still being in the model plates or the like

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and hence are not removed from these plates and only then flattened.

In this process, the filled model plates or the like are preferably exposed to a temperature of the oven not higher than 250° C., preferably about 200° C.

However, it is in this case preferable for the model plates to be pre-heated prior to filling up to a temperature of, for example, 230° C.

As a result of the last-mentioned steps, the risk of the moulds warping in the model plate is small.

The casting moulds flattened in accordance with the invention are advantageously united into stacks immediately after being removed from the model plates or core box, which stacks may be stored, if desired, if not filled immediately.

The risk of damage and loss is thus minimised.

In order that the invention may be readily carried into effect, one embodiment will now be described in detail, by way of example, with reference to the accompanying diagrammatic drawing.

The model plates 1 are supplied at 2 and preheated in a space 3. Subsequently, the plates 1 are led along a filling station 4 and through a baking oven 5 to be processed almost immediately by a scouring or grinding stone 6 which is driven by an electric motor 7, whereafter the flattened casting moulds are removed from the model plate at 8.

What is claimed is:

1. A method of manufacturing casting molds having parallel planar surfaces adapted for stacking from sand and synthetic material which comprises filling a model plate with the sand and a heat hardenable synthetic material, heating the model plate containing said material to form the casting mold, and flattening the casting mold after heating and while still in the model plate by scouring.

2. A method of manufacturing casting molds having parallel planar surfaces adapted for stacking from sand and synthetic material which comprises filling a model plate with the sand and a heat hardenable synthetic material, heating the model plate containing said material to form the casting mold, and flattening the casting mold after heating and while still in the model plate by grinding.

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