

# UNITED STATES PATENT OFFICE.

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## MOLDING COMPOSITION.

SPECIFICATION forming part of Letters Patent No. 668,095, dated February 12, 1901.

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*To all whom it may concern:*

Be it known that I, HUGO ELMQVIST, a subject of the King of Sweden and Norway, residing at Villa Rondinelli, San Domenico de Fiesole, Florence, Italy, have invented a new and useful Molding Composition, of which the following is a specification.

The present invention consists of a new and useful process for the manufacture of a composition or mass for molding purposes and which eliminates those disadvantages heretofore found in such compositions as plasteline, &c., and which new composition does not adhere to the fingers of the operator, is free from offensive odors, and when left standing exposed to the air does not harden on its outer surface.

After much experiment paraffin has been selected as the foundation for the composition, inasmuch as while it makes the mass smooth and pliant it does not dry or change. To this wax is added in order to give more solidity, but care must be taken, as too great an addition of wax would make the composition susceptible to the air and raise considerably the melting-point of said mass, which is important with regard to a special use of the mass, as hereinafter described. Resin is employed for giving the composition adhesiveness, while an addition of tallow serves to equalize the viscosity, and, most important, vaseline is finally added in order to give the desired degree of hardness to the composition. By an addition of an oil-color the mass loses transparency. In the manufacture these ingredients are mixed, preferably, in the following proportions: paraffin, forty-five per cent.; resin, eight per cent.; wax, thirty per cent.; tallow, fourteen per cent.; vaseline, three per cent.; oil-color, three to five per cent. In the manufacture of this composition the following process is followed: Resin and oil-color are first fused or mixed, after which the wax is added, followed by the paraffin, tallow, and, lastly, the vaseline, while the mass is constantly stirred. It is necessary while fusing or mixing these ingredients that care be taken not to overheat the mass, and therefore during the process should air-bubbles appear the heat must be immediately reduced. After mixing, the mass is poured into flat basins for cooling. The thin disks thus produced must then remain for at least a month before the ingredients are thoroughly agitated and are best kept in a room having an

approximate temperature of 25° Celsius. It is still better if they are stored for some time before using.

The given proportions of the ingredients in the compositions can be altered; but it has been proved that the best results are obtained with those named.

An amount of this composition equaling in weight that of the best-known non-hardening molding mass (the plasteline) exceeds in quantity that of the other by over thirty-three and one-third per cent. This composition melting, without residuum, can be employed with great advantage, to be substituted for the wax in the process of metal castings. By retouching the patterns pressed out of this mass the last fine touches can be worked out with the model-tool or the fingers without necessitating the use of warm irons, as would be necessary by the wax process, and this work assumes an unaccustomed melting character for the artist in place of the manner of molding. Should, for instance, red earthy color be mixed with the other ingredients instead of an oil-color, and so that its weight corresponds to the total weight of the said other ingredients, then the mass (but only for molding purposes) can be manufactured cheaper. Finally it may be mentioned that hog fat and stearin can be substituted, respectively, for the tallow and paraffin, but nevertheless at a disadvantage to the composition.

Having now described my invention, what I claim as new, and desire to protect by Letters Patent, is—

1. A new and useful process for manufacturing compositions for molding purposes consisting of mixing resin and an oil-color under the influence of heat, and while stirring the same, to successively add wax, paraffin, tallow, and vaseline approximately in the given proportions, and then to cool the product for a given time in a room having a temperature of approximately 25° Celsius, substantially as described.

2. A new and useful composition for molding purposes composed of paraffin, wax, tallow, resin, vaseline and some desired earthy color, substantially as and in the proportions given.

HUGO ELMQVIST.

Witnesses:

SPIRITO REMENDO,  
ERNA HICHMANN-ELMQVIST.