

UNITED STATES PATENT OFFICE.

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MIXTURE FOR COATING ELECTROTYPE-MOLD FORMS.

997,589.

Specification of Letters Patent.

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No Drawing.

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To all whom it may concern:

Be it known that I, ARTHUR J. WILLIAMS, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Mixtures for Coating Electrotype-Mold Forms; and I do hereby declare the following to be a full, clear, and exact description of the same.

10 In the formation of molds in the process of electrotyping it has been found essential to prepare the surface of the form from which the impression is taken in the wax, and in some instances also the surface of the wax is preliminarily prepared in order that the form and mold may separate properly and "sliding" of one with respect to the other prevented. In the process as ordinarily practiced, the form, regardless of whether it be type, a cut, an etching, or other subject to be reproduced, is coated with plumbago which is applied in a dry condition and usually by means of a brush or pad and the hands of the molder. Practice shows that not only is there a very large percentage of waste in the ordinary process, but the plumbago which is distributed in the air and over surrounding objects is injurious to the health of the molders and is exceedingly difficult to remove from objects on which it is deposited. One of the prime advantages following from the use of the dry plumbago lies in the fact, that after having the surface treated there- with, the form is immediately ready for use and the molder at once takes the impression in the wax matrix.

40 In accordance with my invention, the objections to the use of a dry material are entirely overcome and the advantages incident to the form being immediately available are obtained by making use of a highly volatile liquid vehicle for the plumbago and applying the plumbago while wet to the surface of the form.

In practice I preferably employ alcohol as the vehicle and mix the same with prepared electrotyper's plumbago in proportions of 2½ pounds of plumbago or graphite

to 1 gallon of alcohol. This mixture is applied to the face of the form or subject to be molded with a soft brush or swab, and if desired the surface may be subsequently rubbed with the palm of the hand or not as desired. The coating applied is exceedingly thin and the alcohol almost immediately evaporates, leaving the surface coated with a thin film of graphite, and owing to the fact that the liquid settles into the interstices of the form, those portions of the form, such as the shoulder and body of type, for instance, will be covered with a greater proportion of graphite. By the use of a liquid mixture, the waste of the graphite is practically eliminated and in the molding of half tones which have been over-etched or under-cut, the graphite being suspended in the liquid, will pass in under the edges or into the under-cut portions, thereby preventing the "breaking of the high lights."

70 In some instances it may be desirable to employ a small percentage of lamp black in order to overcome any tendency of the mold to "slide", although with a proper grade of graphite the lamp black is entirely unnecessary.

By the employment of alcohol as the liquid vehicle, the introduction of any soapy or greasy element is entirely avoided and when evaporated the surface left by the alcohol is not objectionable in the formation of molds from any point of view. In fact, the resultant work is better and more sharply defined with certain forms than where the best previous practice, employing dry graphite, is employed. The use of a liquid mixture of graphite, it has been found, lessens the cost of production of electrotype plates by the elimination of waste and reduces the liability of injury to the health of the molders to a minimum.

What I claim is:

1. The process of making wax electrotype molds, which consists in preliminarily coating the impression surface with a mixture comprising graphite and a highly volatile liquid, and allowing the coating to dry.
2. The process of making wax electro-

type molds, which consists in preliminarily coating the impression surface with a mixture comprising graphite and alcohol, allowing the coating to dry and taking the impression to form the mold for the reception of the deposited metal.

3. The herein described mixture for coat-

ing electrotpe mold forms, comprising comminuted graphite, lamp black and alcohol.

ARTHUR J. WILLIAMS.

Witnesses:

JOHN T. NOONAN,
THOMAS DURANT.

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