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COLD WATER PLASTIC PAINT FOR TEXTURED WALL DECORATION

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This invention relates to a composition of matter, manufactured and sold in dry powder form and adapted to be mixed with cold water to provide a plastic paint for textured wall decoration.

The object of the invention is to provide an accurately and uniformly compounded composition of matter, which may be packed and stored in dry powder form without loss or deterioration and which requires only the addition of cold water to provide a plastic paint which may be readily applied to wall, ceiling or other surfaces with a brush and be manipulated with a brush, sponge, trowel, cloth or other device to give any desired textured effect on such surface.

A further object is to provide a plastic paint of the character indicated, which will require a minimum amount of skill on the part of the decorator and which will have such a constant uniformity of character, despite the usual variations of time and conditions surrounding the use of such materials, as will enable even unskilled operators to readily apply the same and secure any desired variations in the pattern of the surface decorated.

More specific objects are to provide a composition of matter, the setting or crystallization of which will be delayed to permit sufficient time, after the addition of water, to permit application to the wall surface and manipulation thereon to secure the desired smooth or rough textured effects; which, when mixed with water, will have a smooth body with sufficient plasticity and adhesiveness to permit the formation of points, ridges and the like under manipulation of the working device, such points, ridges and the like retaining their form during the setting or hardening period, and which will be stable and will not crack or peel off the wall surface.

The so-called water paints of the calsomine type are well known and have been long used for the ordinary tinting of walls. One such tinting material of this type contains the following ingredients in somewhat the following proportions: whiting, 1000 lbs.; clay, 520 lbs.; glue, 60 lbs., and gypsum, 80 lbs. The present invention may be regarded as an improvement of such tinting material, adapting the latter for application in thicker coats of such consistency as to permit working in the desired manner on the wall or ceiling surface to be decorated.

For convenience of description the above defined composition of matter in approximately the proportions given will be generally referred to as "tinting material", and the term will be so interpreted when used in this specification and the appended claims.

In accordance with this invention there is mixed with this "tinting material" plaster of Paris, which upon hydration provides a cementitious bond for the mass, oil cake, which among other things gives the mass a smoothly flowing body, when water is mixed with it, and holds the water in place for uniform hydration of the plaster of Paris, mica, which assists the mass to stand out in points or ridges under manipulation of the working tool, a retarder, such as fruit sugar, to regulate the time of setting of the mass and a material such as zinc sulphate to act as a preservative for the glue and prevent efflorescence or the like.

The new composition of matter or plastic paint may be prepared as follows, the preferred proportions of the various ingredients being given by way of example.

About 60 lbs. of glue is mixed with approximately 125 lbs. of water and 2 lbs. of a preservative, such as zinc sulphate, alum or the like, preferably zinc sulphate, and allowed to stand for several hours. In preparing the "tinting material" 1000 lbs. of whiting, free from strong alkali reaction, is charged into a kettle or retort heated to substantially 75° F. and 520 lbs. of china clay and 60 lbs. of the prepared glue is gradually added to the whiting and clay in the hot kettle where the mixture is heated for substantially two hours. Substantially 80 lbs. of gypsum is then added and the mixture heated to 215 to 230° F. for a limited period of time, leaving approximately 4% moisture in the mass. To approximately 184 lbs. of this mixture of prepared "tinting material" is then added approximately 100 lbs. of plaster of Paris, 4 lbs. of retarder, preferably fruit sugar, although other known retarders are available, 4 lbs. of oil cake and 36½ lbs. of mica, and the whole is intimately mixed and ground to such a fineness that substantially 90% will pass through a 150 mesh screen. The fineness of the material may vary within substantial limits.

The material is then ready for packaging and shipment in the form of a dry powder, requiring only the addition of cold water to make it ready for application to wall or ceiling surfaces.

While specific proportions of the various ingredients have been given, substantial variation is permissible in the "tinting material" base and the other materials may be varied with the characteristics desired in the finished material. For general purposes the specific proportions given

indicate the preferred composition of the material.

The oil cake holds the water in the mass permitting the complete hydration and crystallization of the plaster of Paris, thus insuring maximum strength from the cementitious bond provided by the plaster of Paris as it crystallizes in place on the wall surface. It also increases the plasticity and adhesiveness of the mass, which upon application should contain sufficient water to permit the mass to drop from the face of the mixing paddle when the face of the paddle is turned to a vertical position. It causes the mixture to flow easily under the brush and with the retarder, to delay the setting of the plaster of Paris, permits sufficient time to enable the operator to work the material into any desired design, with swirls, waves, pebbles, plateaus, valleys, etc. The mica also assists in producing a finished product which will stand up in the desired form and which will not crack or check. Moreover it seems to affect the hardness of the material and when used in substantially the proportion specified gives best results.

To prepare the finished powder material for application to wall or ceiling surfaces, it is necessary only to mix it with cold water and it is then ready for immediate application. Owing to the composition of the material, the water is not materially removed therefrom, as is so frequently the case with this type of material, by the suction of the wall surface and evaporation into the atmosphere. Sufficient water is thus always available for adequate hydration, permitting the material to set without cracks or checks in the surface. The material has no ingredients which will injure the hands or brushes used in application or woodwork finished with varnish or paint, and it may thus be used for redecorating old surfaces as well as new ones.

Moreover the dry material may be mixed with raw or boiled linseed oil or the like to provide a plastic oil paint, but it is preferable to first add to the dry material sufficient water to insure the hydration of the plaster of Paris and the consequent crystallization thereof, and then add the oil.

We claim:

1. A composition for wall finish adapted to be rendered plastic by the addition of cold water, comprising approximately one hundred and eighty-four pounds of whiting, clay, glue and gypsum combined, and the following ingredients in approximately the proportions mentioned, plaster of Paris, one hundred pounds, oil cake, four pounds, fruit sugar, four pounds, and mica, thirty-six and one-half pounds, all finely ground and blended together.

2. A composition for wall finish adapted to be rendered plastic by the addition of cold water, comprising whiting, clay, gypsum, glue to which zinc sulphate has been added, plaster of Paris, oil cake, fruit sugar and mica, all finely ground and blended together.

3. A process of preparing a dry composition to be mixed with cold water for use as a plastic paint, comprising soaking an animal glue with water containing a preservative, mixing whiting and china clay in a heated retort, gradually adding the soaked glue thereto and heating the mixture, adding gypsum thereto and further heating the mixture to 215 to 230° F., then intimately mixing and grinding therewith plaster of Paris, a retarder, oil cake and mica.

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