UNITED STATES PATENT OFFICE.

MELVIN B. CHURCH, OF GRAND RAPIDS, MICHIGAN.

COVERING FOR WALLS.

SPECIFICATION forming part of Letters Patent No. 259,493, dated June 13, 1882.

Application filed January 13, 1882. (No specimens.)

To all whom it may concern:

Be it known that I, MELVIN B. CHURCH, of Grand Rapids, in the county of Kent and State of Michigan, have invented a new and useful Improvement in Coverings for Walls; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to the covering of walls and other surfaces with a plastic or semi-plastic material; and it consists of an improved process whereby the said walls and surfaces are made with a high finish, capable of repair in case of injury or stain in any part, and of cleaning over the whole surface, all as hereinafter fully described and distinctly claimed.

Heretofore walls have been covered with a preparation of finely-pulverized calcined gypsum mixed with a certain proportion of glue and reduced to a liquid, said liquid being applied by means of a brush, whereby a surface is formed in smoothness corresponding to the fineness of the material and the softness of the brush by which it is applied. In this process the main function of the glue is to prevent the plaster from setting while the workman is applying the liquid to the wall or other surface; but it also tends to give strength and firmness to the coating. In this process, where the coat is applied, by means of a brush, in a liquid state, the surface covering is very thin, and when soiled or injured in any place cannot be so perfectly repaired as not to be noticed. Further, when soiled it must be resurfaced by the same process by which it was originally covered; and, further, the comparatively smooth finish can be obtained only on a smooth surface.

I have found that a more durable coating may be applied and better finish of surface obtained by using the same material (but preferably with a larger proportion of glue,) or any equivalent thereof in a thicker condition, (such as a plastic or semi-plastic,) applying said thicker material to the wall, ceiling, or other surface in larger body to form a substantial comparatively thick coat, and, after the material has set, by putting a smooth-finish surface upon the wall so covered by rubbing with sand paper, or sand-paper and subsequently a smoother material, such as felt or the like. In this process my invention substantially consists.

I may use the material commonly known as "alabastine," which consists of finely pulverized and calcined gypsum mixed with a small proportion of glue, except that I preferably add a small proportion of glue to the alabastine as now made. To this in its dry state I add a sufficient quantity of hot water to reduce the powder to a plastic or semi-plastic condition. It may be in such condition that it can be applied by means of a trowel, brush, or other like instrument for spreading a very soft plastic substance. On rough brown-sand surface I use the thicker material, applied with a trowel; but on a smoother surface I use the thinner material and apply it with a brush; but in all cases I form a substantial thick coat upon the wall or other surface. After this has been allowed to set its surface presents the marks, striations, and roughness of the tool or tools used in the application, and does not afford a smooth uniform finish, desirable on the better class of walls and ceilings. This finish I give to the surface by means of sand-paper, with which the surface is thoroughly rubbed until it is made perfectly smooth and even. This process of leveling the rough uneven surface preparatory to the final finish may be aided by brushing the surface with a brush and water. All adhering powdery matter may be rubbed off by means of a piece of felt, or chamois, or like material, if the brush and water above referred to be not used. The surface thus obtained is a beautiful marble surface, which will not turn yellow or discolor by any exposure. When stained by any foreign substances in such quantity as to penetrate the entire coating, that part so stained may be removed and new material added, and then rubbed down by sand-paper, as before. This will show no line of juncture of the new with the old.

When the whole wall or coating becomes dingy by smoke or from like cause it may be resurfaced by simply sandpapering the whole surface and rubbing, or washing with water, as in giving it the original finish.

The plastic or semi-liquid material may be made of any desired tint in the well-known manner.

It is also practicable by this method to form

panels or moldings in colors by laying on the material in lines of different color of the same composition, the darker and lighter lines representing panels and moldings in the usual manner. These lines may be formed by laying on the colored material first by striping in proper order and evenness, thus forming the panels or molding, and when this is set the coating may be applied generally to the wall over the whole surface. When the whole is set the sandpapering process will bring out the colors sharp and clear by removing the outer surface down to the colored lines first applied. The colored lines might be applied also by cutting away lines in the surface previously coated with the uniform color; but the mode just described is preferable.

In addition to the finish given by the sandpaper and rubbing, I may impart an additional gloss by means of a preparation of beeswax dissolved in benzine or like clear colorless solvent and applied with a brush. This adheres to the cement and gives it a glossy surface. It should be finished by rubbing with felt, chamois, or like substance, and higher gloss may be given by repeated coats of the preparation and repeated rubbings. This may also be patched, like the other. It will not turn yellow, like other coatings, and gives an elegant finish.

This process is intended for the better class of houses; but is applicable to other situations, and may be used upon wood, as well as upon the rough-sand or smooth finish of walls.

This preparation of benzine and wax is made by placing two ounces of beeswax (preferably white) in one pint of benzine. This is allowed to stand one hour or more, sufficient to allow the benzine to dissolve the wax. The benzine should be at a certain temperature (about summer heat) in order to dissolve the wax; or, after adding the wax to the benzine, (if the benzine be cold,) the mixture should be placed in a warm room to allow the dissolution of the wax.

This preparation may be used as a polish for wood and the like. It may also be used for waxing floors for dancing purposes. For this purpose it may be applied with a brush, without rubbing or washing, and produces what is called a "dead varnish," or a coating quite impervious to water, giving something like an egg-shell gloss.

I am aware that it is old to rub an ordinary plaster wall previous to painting it; but in such cases the rubbing or sandpapering does not give the finished surface which is attained by my process and material.

The composition is not new; but the special mode of applying it in a thick coat and rubbing and treating as described constitutes the essence of my invention.

I claim as my invention—

1. A coating for walls, consisting of a mixture of finely-pulverized calcined gypsum mixed with glue in substantially the proportions specified, the whole laid thickly upon the wall, and having a rubbed and polished surface, substantially as described.

2. A coating for walls, consisting of a mixture of finely-pulverized calcined gypsum mixed with glue in substantially the proportions specified, laid thickly on the wall and polished, in combination with a surfacing of beeswax, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

M. B. CHURCH.

Witnesses:
E. A. DICK,
DAVID H. MEAD.