UNITED STATES PATENT OFFICE.

RICHARD WARWICK, OF WILLIAMSBURG, NEW YORK.

IMPROVEMENT IN COMPOSITIONS FOR CEMENT.

Specification forming part of Letters Patent No. **169,212**, dated October 26, 1875; application filed April 22, 1875.

To all whom it may concern:

Be it known that I, RICHARD WARWICK, of Williamsburg, county of Kings, New York State, have invented a Composition for Making a certain Cement for an improved hard-finish for plastering purposes, whereby the last or finishing coat of plastering can be rendered in a very superior manner either white or in various colors, and of sufficient hardness to take a polish, of which the following is a specification:

The nature of my invention consists in making a cement for hard-finishing purposes in the plastering trade, of various grades of quality or strength for rendering finished plastering from ordinary hard-finish up to a more superior quality of work than now done, by nicely graduating the below-mentioned ingredients in different proportions for the different grades of the cement, to suit the requirements of the plastering trade in general, both as to quality for best work and economy for middle class or indifferent work in plastering.

The following are the ingredients used in the process of manufacture of the said cement, of best quality: First. Take of ordinary plastering finishing-lime, and air-slaked, one measured part; add to that three equal measured parts of alum, (ground;) then, if it is to be colored, mix with the alum one-half or one-quarter, according to desired tint, of equal measured part of color, (ordinary ochers are found to be best;) these to be pounded with the alum and afterward mixed or ground in a mill with the lime as mentioned above. Second. Then take eleven equal measured parts of calcined gypsum, one-sixth of one equal measured part of tartaric acid, and four equal measured parts of borax, (ground;) these to be separately ground first, and afterward together in a mill, and then mixed thoroughly with the above-mentioned ingredients.

The lower grades of said cement being intended for middle-class work—such as pantries, closets, tenement-house work, &c.—it will be merely requisite, in an economical point of view, to increase the proportions of lime to before-mentioned proportions of before-mentioned ingredients, to wit, alum, tartaric acid or cream-of-tartar, ground gypsum, (plaster-of-paris,) and borax. It is also found necessary to slightly alter the before-given proportions at the extreme hottest and coldest seasons of the year, by reason of climatic influences, slightly increasing the proportions of alum in the coldest weather, and slightly decreasing that same ingredient in the hot weather, thereby regulating what is technically termed in the plastering trade "the time of set," to suit the practical application of said material in all seasons of the year in about one uniform time of set, substantially for the purposes above set forth.

I am aware that a certain cement is imported into this country which contains some of the before herein-mentioned ingredients; but said imported cement is of little value as an article of practical use in the plastering trade for hard-finishing purposes, by reason of its too slow setting nature, and therefore unapplicable to general use in plastering.

What I claim as my invention is—

The composition of the herein-mentioned ingredients, to wit, lime, alum, borax, tartaric acid or cream-of-tartar, (ground,) or calcined gypsum, and suitable colors, as an article of commerce, substantially as described, for the herein-mentioned purposes set forth.

RICHARD WARWICK.

Witnesses:
JOHN WARWICK,
WILLIAM FAWKE.