UNITED STATES PATENT OFFICE.

AARON ANTHONY, OF SPRINGFIELD, ILLINOIS.

PLASTERING COMPOSITION.

SPECIFICATION forming part of Letters Patent No. 456,297, dated July 21, 1891.

Application filed March 30, 1891. Serial No. 386,929. (No specimens.)

To all whom it may concern:

Be it known that I, AARON ANTHONY, a citizen of the United States, residing at Springfield, in the county of Sangamon and State of Illinois, have invented certain new and useful Improvements in a Plastering Composition, of which the following is a specification.

My invention consists in an improved compound plaster for the first or rough coat for plastering walls; and the object of my invention is to produce a plaster which can be prepared dry at the factory and brought to condition for use by the addition of water, and which is readily worked, not subject to atmospheric influences, and which is light in weight, dries rapidly, and when applied is exceedingly tenacious and produces a very dense, hard, and strong body not liable to crack.

My improved plaster is composed of the following ingredients compounded in about the following proportions: sand, seven hundred and thirty-five pounds; plaster-of-paris, four hundred and seventy pounds; slaked lime, one hundred and ten pounds; sawdust, sixty-two pounds; fiber, one pound, and one pound of a mixture composed of sugar, forty-eight parts; slaked lime, forty-eight parts; bicarbonate of soda, two parts. I prefer to mix these various ingredients in a dry state, as the compound can be more readily transported, and when so mixed the compound may be barreled or sacked and carried to the places of use and there brought into a condition to be applied by rendering it plastic by the addition of water. This method of working renders it feasible to carry the plaster in the original package to the different floors of buildings, where it can be mixed on the ordinary mortar-board as applied or in larger quantities, if desired. It may also be found expedient, and in many cases more economical, to omit the sand until the plaster is to be applied; but in such case it will usually be found that a greater proportion of sand than above stated will be needed. The purpose of the various ingredients, specifically stated, is as follows: The sand, lime, and gypsum form the body of the plaster, the gypsum of course rendering the mass hard when water is added. The sawdust serves to render the mass light in proportion to its bulk and also serves to prevent injury to the composition by the action of frost. The fiber, which is preferably of vegetable origin, serves as a binder for the other materials and prevents waste, particularly when used with wood or metallic lath, and it also prevents undue spreading of the material upon the tools and renders the mass more readily applied. Of the sub-mixture the sugar serves as a retarder to the quick-setting propensity of the plaster-of-paris, while it renders the mass hard and increases its adhesive quality. The soda lightens the mass and renders it the more easily workable, and also, to some extent, serves to retard the setting. The lime, which is incorporated with the sugar and soda, making the sub-compound, is a convenient vehicle for combining these ingredients and increases the bulk of the sub-mixture, so as to render its even distribution in the compound possible.

The improved compound plaster above described can be easily and rapidly worked, and it sets quickly after being applied, so that the second coat may follow almost immediately. The plaster when dry will not crumble if openings are made through it, and the dry compound does not deteriorate, but is rather improved, by storing.

I do not limit my invention to the precise proportions of the ingredients stated, as said proportions will vary considerably, according to the quality or character of materials used. This is particularly true of the lime, gypsum, and sand. The quantity of sawdust used will vary, also, with its character—that is, whether it be produced from soft or hard wood, a greater quantity of the hard-wood sawdust being necessary.

The improved plaster herein described may be used for laying brick and setting tile as well as for covering walls.

I am aware that a plaster has been patented of which the ingredients are sand, sawdust, plaster-of-paris, slaked lime, sugar, and carbonate of soda mixed in the proportions of two and one-half pounds of sand, one and one-half pound of sawdust, four pounds of plaster, four pounds of slaked lime, one-fourth of one pound of sugar, and eighty grains of carbonate of soda. I have attempted to use the

plaster described in said patent, but have found by long-continued and extended experiment that the proportions stated therein are inoperative and that the reason why said proportions are inoperative is that the sugar and soda are largely in excess of the proper proportions, and said patent does not suggest any such variation in the proportion of said ingredients as would enable a skilled plasterer to produce a workable composition. The proportion of sugar stated in said patent, or any near approximation thereto, would render the plaster entirely useless, impracticable, and inoperative.

It will be noted that the proportion of sugar to the other ingredients in my improved plaster is radically different from that of said patented process and that the proportion of soda is also materially and substantially different. It will further be observed that my method of mixing the various ingredients is quite simple and effective, whereas the method of said patent is inoperative, as stated.

I claim—

1. A plastering composition consisting of the following ingredients in substantially the proportions stated, viz: sand, seven hundred and thirty-five pounds; plaster-of-paris, four hundred and seventy pounds; slaked lime, one hundred and ten pounds; sawdust, sixty-two pounds; fiber, one pound; sugar, forty-eight one-hundredths of one pound, and bicarbonate of soda, two one-hundredths of one pound.

2. The herein-described process of making a plastering composition, which consists in mixing in a dry state seven hundred and thirty-five pounds of sand, four hundred and seventy pounds of plaster-of-paris, one hundred and ten pounds of slaked lime, sixty-two pounds of sawdust, and one pound of fiber, and then incorporating with the mass a submixture composed of forty-eight one-hundredths of a pound of sugar, forty-eight one-hundredths of a pound of slaked lime, and two one-hundredths of a pound of bicarbonate of soda, or in like proportions for different quantities.

AARON ANTHONY.

Witnesses:
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