

# United States Patent Office.

JOSIAH JONES, OF BROOKLYN, NEW YORK, ASSIGNOR TO THOMAS KENNEDY, OF BRANFORD, CONNECTICUT.

*Letters Patent No. 68,885, dated September 17, 1867.*

## IMPROVEMENT IN THE MANUFACTURE OF MINERAL KNOBS.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOSIAH JONES, of Brooklyn, in the county of Kings, and State of New York, have invented a new Process for the Manufacture of Mineral Knobs; and I do hereby declare the following to be a full, clear, and exact description of the same.

This invention relates to an improvement in what are known to the trade as mineral knobs, that is, knobs composed of clay of different colors.

Before describing my new process it may be well to briefly state the old process, and the objections in the old process which are overcome in the new.

There are generally employed three kinds or colors of clay, which are unavoidably of different formation and density. These clays are ground separately in mills prepared for the purpose, each clay delivered from its respective mill in a soft, wet, plastic mass. Then each mass is cut into thin slices, and the slices packed in alternate courses of each clay, then re-cut and worked until the clay assumes the proper veiny appearance. This mass is then cut into square blocks, each block being of the proper size to form a single knob. These blocks are taken separately and rolled into a ball, then set to be partially dried; and, when sufficiently dried, they are taken to the press, and pressed into proper form and nearly of the size of the knob when complete. They are then set for still further drying, until in the proper condition to be turned. They are then placed in the lathe, and the surface finished preparatory to baking; but, before being placed in the oven, it is necessary that they be thoroughly dried.

In the process of drying, the surface cracks more or less, owing to the different formation of the clays. It is, therefore, necessary, before placing in the oven, that the cracks be filled and burnished off; and, in the process of baking, a large per cent. of the knobs are more or less cracked, so as to render them useless, or of an inferior quality.

The object of my invention is to reduce the labor required in the manufacture, to avoid the cracking, and to produce a better and more beautiful article.

I will now proceed to describe my new process, whereby the object of my invention is fully accomplished.

I first take each clay separately, and dilute it with water until reduced to a semi-fluid state. This fluid clay I strain into a vat, each clay into its respective separate vat, and evaporate the water therefrom by heat or otherwise, until the residue is in a perfectly dry state. I then grind or pulverize each clay separately; then mix the ground clays in proper proportions, preferring equal quantities; or the several clays may be mixed in the process of grinding; and, after the clays are so mixed, I dampen the mass; and the best means known to me for doing this is to wet the clay, and place it in a vat, in the bottom of which is a large quantity of plaster of Paris; and, stirring the clay on this plaster-of-Paris bottom, the plaster absorbs from the clay the water to a certain extent; and at this point the clay is in a proper state for further use, that is, so dry that the particles will not readily adhere the one to the other. A portion of this clay is then placed in the press, and compressed into the required form. Leaving the press, it is in the proper state for turning, and is taken directly to the lathe, and there turned and finished in the usual manner; thence (after being dipped in glazing material) is taken to the oven and baked in the usual manner.

By this process the several clays are mingled in the most thorough manner, and, not requiring to be dried, avoids the natural shrinking of the old process, and the consequent cracking, so that every knob is perfect; and by this process but five hands are employed to accomplish the same amount of labor as eleven hands did by the old.

The knob produced is mottled instead of veiny, as in the old method, and far more beautiful in its appearance; and no clay is wasted in the process of pressing, whereas by the old method at least ten per cent. of the clay is necessarily wasted at the press in forming the blank.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent, is—

The process herein described for the manufacture of mineral knobs.

JOSIAH JONES.

Witnesses:

HERBERT JONES,  
JOHN H. SHUMWAY.