

UNITED STATES PATENT OFFICE.

WILLIAM AUGUSTUS BATTERSBY, OF BROOKLYN, N. Y.

IMPROVEMENT IN THE MANUFACTURE OF ARTIFICIAL STONE.

Specification forming part of Letters Patent No. 105,889, dated August 2, 1870.

I, WILLIAM AUGUSTUS BATTERSBY, of the city of Brooklyn, county of Kings, State of New York, have invented a certain Method of Working and Manufacturing Ingredients into a Cheap, Useful, Beautiful, Artificial Stone; of the particulars the following is a specification.

Ingredients Used, and their Proportions.

Take, to make one pound, (16 ounces,) of—	
Sand, ground quartz, or other silicious materials, ounces.....	10
Uncalcined or calcined gypsum, ounces..	2
Litharge or oxide of iron, ounce.....	$\frac{1}{2}$
Sulphuric acid, caustic soda, oil, or petroleum residuum, ounce.....	$1\frac{1}{2}$
Resin, or other vegetable gums, ounce..	1
Colors, (various,) ounce.....	1
Total.....	16

Mode of Manufacturing.

The resin, sulphuric acid, caustic soda, is first boiled till mixed; then add the calcined or uncalcined gypsum; then the oxide of iron or litharge. When these are properly mixed add oil or petroleum residuum.

The whole should be boiled and worked in iron pan up to 500°, Fahrenheit, of heat; then add the sand, ground quartz, or other silicious material, in a semi-fused state, and increase the heat of the whole mixture to about 900° Fahrenheit.

When this composition is thoroughly amalgamated, it is necessary to slacken the heat

to about 300° Fahrenheit, which, when done, colors may be added and thoroughly mixed.

Mode of Casting.

The molds or patterns must be made from well-seasoned Michigan white pine, free from imperfections, and planed perfectly smooth.

The molds consist of, first, the wooden bed, sides, and other pieces, according to pattern. The sides of the frame must be clamped with iron or wooden clamps, securely to bed, to hold pattern true. The bed must then be dusted with plaster-of-paris, or fire-clay, or covered with tin or sheet-iron, dusted with plaster-of-paris or fire-clay.

Both these preparations are necessary in casting the before-stated compost, which, as soon as manufactured, is put into these molds; and left to cool thoroughly, which process takes about six hours.

As soon as this composition is cold it is taken out of the molds, and is a beautiful artificial stone, very durable, impervious to water, and will not be effected by either the heat of the sun or the frost.

I claim as my invention—

The combination of the before-named ingredients, worked and amalgamated by heat, and colored, substantially as and for the purpose hereinbefore set forth.

WILLIAM AUGUSTUS BATTERSBY.

Witnesses:

JNO. STANLEY KEELING,
ISAAC S. WATERS.