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88,548

UNITED STATES PATENT OFFICE.

FRANÇOIS COIGNET, OF PARIS, FRANCE, ASSIGNOR TO L. MANGEON, OF
NEW YORK CITY.

IMPROVED MODE OF TREATING AND MANIPULATING CEMENTS IN THE MANUFACTURE OF ARTIFICIAL STONE.

Specification forming part of Letters Patent No. 88,548, dated April 6, 1869.

To all whom it may concern:

Be it known that I, F. COIGNET, of the city of Paris, in the Department of La Seine and Empire of France, have invented certain new and useful Improvements in the Manufacture of Artificial Stones; and I do hereby declare that the following is a full and exact description thereof, which will enable any one skilled in the art to make and use the said invention.

In the ordinary way of employing hydraulic cements a large quantity of water is used, so as to obtain a thin mortar having the consistence of cream. This mortar is always used at once, and it is indicated by all good practical authors as a great blunder to let the cement-mortar set before you use it.

In my process, in order to obtain artificial stones of the greatest tenuity and hardness, I proceed thus: I introduce the hydraulic cement in a dry state into a proper mill, and when it is in motion I introduce just enough water to moisten the cement, and by prolonged and energetic trituration I obtain a thick plastic paste. This plastic paste is now mixed with from two to three parts in bulk of good, sharp, fine sand, and the mixture is again returned to the mill, where it is again energetically triturated. As it comes out of the mill it is heaped up and left at rest for a few minutes, when it is mixed with a further quantity of good, sharp, clean sand of proper coarseness

in the proportion of from two to four parts, according to the object for which it is to be employed, and it is again passed through the mill a third and even a fourth time, if necessary. It comes out of the mill in the proper state of plastic powder or short paste, and in that state is one of the best artificial stone-pastes that can be obtained, which, by proper agglomeration, will produce stones of the greatest hardness.

What I claim, and desire to secure by Letters Patent, is—

1. The use of hydraulic cement, ground with a relatively small quantity of water into a thick plastic paste for cementing sand in the manufacture of agglomerated artificial stones.

2. The herein-described process of retarding the crystallization or setting of hydraulic cements, by repeated and prolonged triturations, whereby the proper amount of sand may be incorporated therewith.

3. As a new article of manufacture, the artificial stones or monolithic structures made of hydraulic cement and sand prepared and agglomerated, substantially in the manner herein specified.

FRANÇOIS COIGNET.

Witnesses:

EMILE BARRAULT,

L. OLMART,

Both of 17 Boulevard St. Martin.