

UNITED STATES PATENT OFFICE.

789,610

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OBJECTS OF ARTIFICIAL MARBLE AND PROCESS OF PRODUCING SAME.

SPECIFICATION forming part of Letters Patent No. 789,610, dated May 9, 1905.

Application filed January 18, 1905. Serial No. 241,696.

To all whom it may concern,

Be it known that I, ROBERT HÜLSBERG, Ph. D., a subject of the German Emperor, and a resident of Sonneberg, in the Duchy of Saxe-Meiningen, Germany, have invented certain new and useful Improvements in Objects of Artificial Marble and Processes of Producing the Same, of which the following is a specification.

The present invention relates to improvements in objects of art and of practical use and of a process of producing the same. The surface of these objects is of about the same hardness as marble and they further have the glittering and cloudy appearance of marble, so that they can be called very perfect imitations of genuine marble. The process of manufacturing these objects is the following: About seventy per cent. of a pulverous material which hardens in water—for instance, gypsum or cement—twenty to twenty-five per cent. of barytes, and five to ten per cent. of coarsely-powdered mica or glass or flint-stone sand, and the necessary addition of water are mixed to form a liquid mass of the consistence of the mass of which plaster figures are made. The mass is then poured into molds similar to those used for the production of plaster casts and allowed to remain in it until the cast has become hard; but as the mold requires to be oiled or greased to allow of removing the cast, and as the oil or grease penetrates to a certain depth into the cast care must subsequently be taken to remove the grease. This can be effected simultaneously with the treatment required for giving the cast a cloudy appearance—in other words, the characteristics of genuine marble. To this end the cast taken out of the mold when it has become hard is first placed into a lye of alkaline compounds—for instance, into a concentrated solution of ammonia—and exposed to the action of the same for about twenty-four hours. The grease which has penetrated into the cast is hereby dissolved. The cast is then taken out of the bath and strewed with a siccative—for instance, chlorid of lime—and thereupon placed into a drying-

chamber, heated to a temperature of about 50° to 60° centigrade, where it is exposed to the action of the heat until the drying-powder can be easily removed. After the cast has been taken out of the drying-room and the powder has been removed it is plunged into liquid mineral wax—for instance paraffin—in order to perfectly close the pores of the same. The result of the treatment of the cast with the alkali lye is that the upper stratum of the same is not only freed from the grease, but at the same time hardened.

The admixture of mica or glass or flint-stone sand gives to the cast the crystalline texture of the genuine marble, as these particles of mica or sand glitter if rays of light fall directly upon them.

What I claim as my invention, and desire to secure by United States Letters Patent, is—

1. The herein-described composition of matter consisting of seventy parts of cement, twenty to twenty-five parts of barytes, five to ten parts of a glittering material and water, substantially as set forth.

2. A process of producing objects of art and of practical use formed of a cast mass hardened and impregnated on its surface, composed of gypsum, cement, barytes, particles of a glittering material and water, which consists in pouring the mass into oiled molds and exposing the cast, after it has hardened, for the purpose of removing the grease and hardening the surface, for about twenty-four hours to the action of an alkali lye and in cleaning it thereupon with water and strewing it subsequently with pulverous chemicals absorbing the moisture and then drying it in a drying-room and saturating it, after having removed the drying-powder, with liquid mineral fat, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT HÜLSBERG.

Witnesses:

F. F. DUMONT,
MAX SCHUSTER.