UNITED STATES PATENT OFFICE.

CHARLES N. WAITE, OF MEDFORD, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO JOHN MORRISON, OF SAME PLACE.

MARKING-CRAYON.

SPECIFICATION forming part of Letters Patent No. 346,002, dated July 20, 1886.

Application filed November 30, 1885. Serial No. 184,344. (No specimens.)

To all whom it may concern:

Be it known that I, CHARLES N. WAITE, of Medford, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Marking-Crayons, of which the following is a specification.

This invention relates to crayons for marking on blackboards, &c.

Crayons are ordinarily made by reducing calcine plaster by water to a thin batter and pouring it into molds, in which it sets or hardens. The material of the crayons is very dry, and the portion left upon the blackboard in making marks constitutes a fine dry powder or dust, which is scattered by the act of erasing the marks, and creates much annoyance, particularly in school-rooms. An attempt has been made to remedy this objection by mixing a small proportion of soap or soapy material with the plaster; but this treatment of the material causes it to adhere too closely to the blackboard, so that it is not easily rubbed off, and gives the surface of the board a greasy or gummy quality, which prevents it from cutting the crayon freely when the latter is used to make marks.

My invention has for its object to improve crayons of this class, so that the material left by them on the board will not scatter or form an objectionable dust when rubbed off, and will not impair the surface of the board.

To these ends my invention consists in combining with calcine plaster or other like marking material a hydroscopic substance, which will absorb sufficient moisture from the air to prevent the formation of dust when the material left on the board in marking is rubbed off, the material thus treated being also capable of easy and complete removal from the board, all of which I will now proceed to describe.

In carrying out my invention I apply to calcine plaster or other suitable marking material a suitable proportion of any suitable hygroscopic material—such as glycerine, chloride of calcium, chloride of zinc, or any other suitable substance capable of absorbing moisture from the atmosphere. This hygroscopic substance may be added to the marking material either before or after it is formed into a crayon. When added to calcine plaster before molding, it is preferably mixed with the batter into which the plaster is converted; but when added to the formed crayon a dilute solution of the hygroscopic substance is made, with which the crayon is saturated.

The quantity of the hygroscopic substance will vary with different substances, and care must be taken not to make the quantity too great, the marks made by the crayon being faint or lacking in whiteness, if too much of the hygroscopic substance is present.

When glycerine is used as the hygroscopic substance, the glycerine should constitute about five per cent. of the weight of the completed crayon.

Other substances may require to be used in greater or less quantities.

My improved crayon has a softer and pleasanter feeling than the ordinary dry crayon, and its use is not attended with dust, either in making or erasing the marks. The material adheres to the board sufficiently to answer all requirements, and is capable of easy removal by an eraser, and does not clog the surface of the board nor impair its cutting effect, but, on the contrary, seems to improve the surface of the board with respect to its crayon cutting or taking capacity.

As I have before stated, soap has been added to the material of white marking-crayons to render them dustless. Paraffine has also been recommended for the same purpose. These substances are not hygroscopic, however, and they make the marking material greasy or sticky, so that it injures the surface of the blackboard.

My invention is not limited to calcine plaster, but may be used with any analogous material adapted to make erasable marks.

I claim—

A marking material of the class described, containing a hygroscopic substance, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 27th day of November, 1885.

CHARLES N. WAITE.

Witnesses:

C. F. BROWN,

H. BROWN.