

(No Model.)

H. A. NEWMAN, J. D. WERDEN & O. A. STEMPEL.
ARTIFICIAL SLATE BLACKBOARD.

No. 490,979.

Patented Jan. 31, 1893.

Fig. I

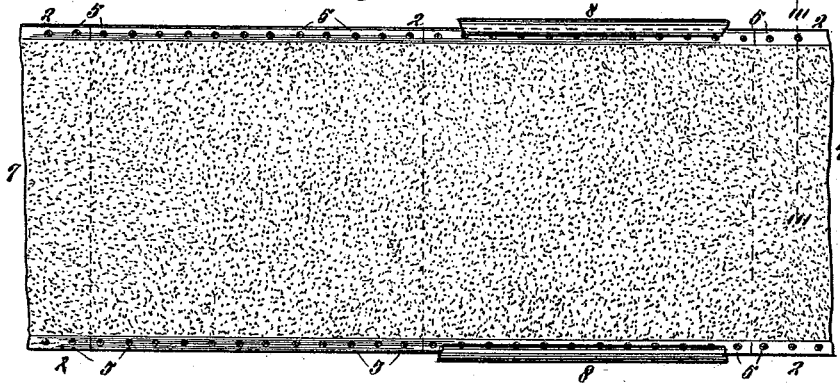


Fig. II.

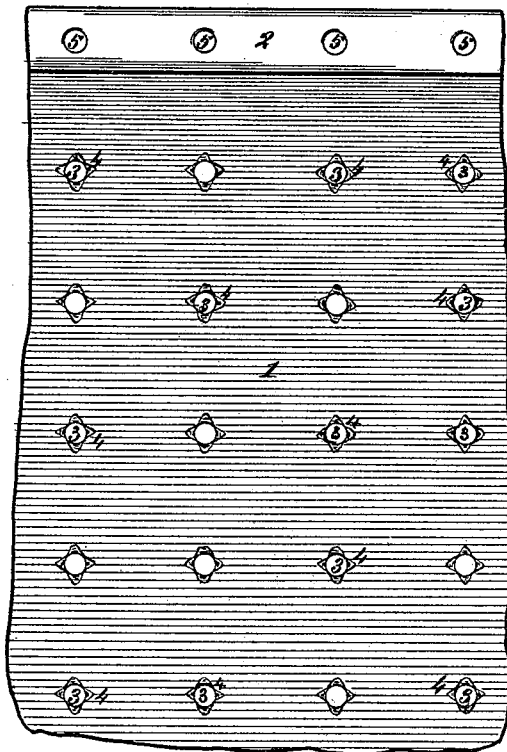
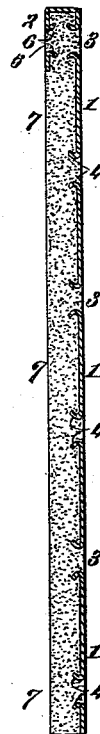


Fig. III.



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UNITED STATES PATENT OFFICE.

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ARTIFICIAL-SLATE BLACKBOARD.

SPECIFICATION forming part of Letters Patent No. 490,979, dated January 31, 1893.

Application filed February 6, 1892. Serial No. 420,520. (No specimens.)

To all whom it may concern:

Be it known that we, HENRY A. NEWMAN, of Huntsville, Randolph county, JAMES D. WERDEN, of Kansas City, in the county of Jackson, and OMAR A. STEMPEL, of the city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Artificial-Slate Blackboards, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to concrete, artificial slate black-boards, for use in school-rooms, lecture halls, &c., which concrete formation is reinforced by a sheet metal back, with flanged rims, the said sheet metal being perforated from the back, forming anchor like projections in front, and said flanged rims being perforated from the front, forming similar anchor like projections from said rims rearward, which forward and rearwardly projecting anchors securely hold the concrete of said artificial slate to said reinforce metal back, and rim; and the invention further consists in features of novelty hereinafter fully described and pointed out in the claim.

Figure I is a front elevation of our artificial slate or concrete black-board and shows a detail of the channel grooved molding that may secure said black-board to the wall. Fig. II is a detail of the metal reinforce backing plate, with its flanged rim and anchor projections; and Fig. III is a vertical section taken on line III—III, Fig. I and shows the artificial slate or concrete black-board, reinforced by the perforate metal back plate and flanged rim, and the projecting anchors from the metal plate that secure the concrete thereto.

Referring to the drawings:—1 represents the metal reinforce backing plate, and 2 is the flange rim at the foot and top of said plate, which rim may, when required, be also continued around the ends of said metal backing plate. 3 represent perforations in said metal back, which perforations are punctured from the back forward; without cutting out the

metal, so as to form forwardly projecting anchor clinches 4, that in conjunction with each other grasp and clutch the concrete. 5 represents like perforations from the front of said flange rim 2, which form like clutch anchors 6 to the anchors 4, except that said anchors 6 present backward, the reverse of the anchors 4, which present forward. 7 represents our artificial slate or concrete black-board compost, which after compounding is filled in said metal back reinforce frame, flush with the flange rims 2, and is composed of the following ingredients:—Cement (preferably Portland), fine, sharp sand, lamp-black and ultra-marine.

The above constituents are composted in preferably the following proportions:—Cement, (preferably Portland) sixty-four pounds; fine, sharp sand thirty-two pounds; lamp black two pounds; ultra-marine, two pounds; making in the aggregate one hundred pounds.

The respective amounts of cement and sand may be somewhat changed to accord with the grade and consequent price value of the artificial slates or cement black-boards to be constructed. Also the amount of lamp-black and ultra-marine that enters into the compost, may be varied in accordance with the color required for said construction.

The color desired for said artificial slate or black-board, may largely depend on the color of the chalk or pencil to be used in marking thereon. For instance, if white chalk is used for the marker a dark slate or black board is desirable, and if on the other hand red chalk is used for the marker, then a lighter color with a smaller quantity of lamp black, and a larger proportion of ultra marine in the compost may be made.

The advantage of our composition, over that heretofore well known, is, that a live bright color is secured and the marks thereon can be more readily seen than where a dead black is employed.

8 represents the usual channel groove molding attached to the walls of school and lecture rooms, and houses, for the sliding insertion of black-boards, in which our artificial

slates or cement black-boards are readily seated.

In this application we claim the frame to which the composition is applied.

5 We claim as our invention:—

A black board consisting of a metal backing plate 1 having a flanged rim 2, and punctures 3 and clinches 4 for holding the composition to the plate and to the rim whose flange

overlaps it, and the composition molded on to the plate within the flanged rim; substantially as described.

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In presence of—

BENJN. A. KNIGHT,
SAML. KNIGHT.