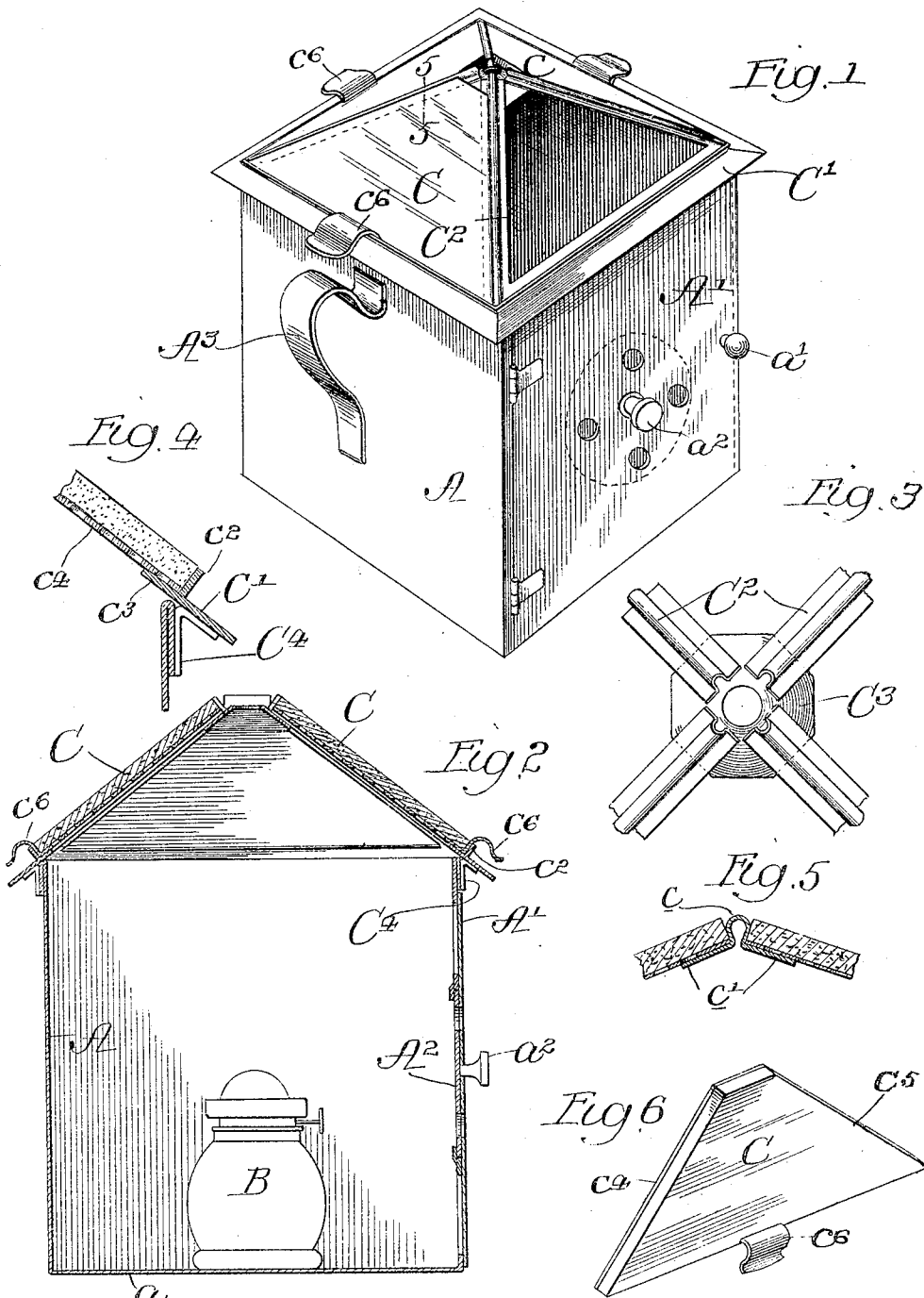


M. N. LONNGREN.  
 COLOR MATCHING DEVICE FOR CALCIMINERS.  
 APPLICATION FILED NOV. 28, 1904.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## COLOR-MATCHING DEVICE FOR CALCIMINERS.

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*To all whom it may concern:*

Be it known that I, MAGNUS N. LONNGREN, a citizen of the United States, residing at Highland Park, in the county of Lake and State of Illinois, have invented certain new and useful Improvements in Color-Matching Devices for Calciminers, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to a novel color-matching device for use by calciminers for the purpose of matching colors of calcimine or other water-color compounds which may be applied or which are proposed to be applied to a wall or ceiling.

Preparatory to applying a calcimine or other water-color compound to a wall for decorative purposes it is necessary to determine prior to the application thereof the color thereof when the compound shall be applied and dried, and it is also desirable that the colors to be used shall be matched in order to determine the proper contrasting or harmonious shades. For instance, if it be desired to redecorate a wall with a calcimine of the same color as that already on the wall it is desirable in order to be assured of the exact color that a dried film of the calcimine be placed in a matching position relatively to the old coat. Furthermore, it is often desirable to match the border or wainscot color with the body color or a ceiling color with the body color, either before or after the body color is applied and dried, in order to produce the proper contrast of colors. Furthermore, it is often desirable at the time the colors are selected at the store to match the principal and subsidiary colors. In order to match colors correctly, it is necessary that they be matched after the color compound is dried. Various expedients have been employed for this purpose, all of which have been unsatisfactory by reason of their cumbersome use, the great waste of valuable time, and because also of the indifferent and unsatisfactory results of the matching process.

It is the object of this invention to provide a device which will facilitate the operation of matching colors of decorative compounds of

the character mentioned which will also conduce to the accuracy of the matching operation. To this end I propose to provide a device embracing in its construction a removable color-matching tablet to one face of which the color compound is applied and quickly dried and the portability of which enables it to be held in contrasting relation to a color on another like tablet or on a surface to which has been applied a color compound and dried. Such tablet is so arranged and constructed as to permit a coat of dried color compound to be readily washed therefrom and another applied thereto and to be thereafter quickly dried.

A device embodying my invention embraces, in general terms, one or more of such color-matching tablets, a support therefor, and a source of heat, preferably a lamp located in such position as to quickly dry the coat of fluid coloring material applied to the face of the tablet. Said face of the tablet is made smooth and preferably possesses the general constituency of the wall or other surface to which the color compound is to be applied. By making the receiving-face of the tablet of the same general constituency as the surface which is to receive the decorative color compound it is assured that the color will appear on the said surface when dried exactly like it appears on the matching-tablet. The practicable form of the device preferably embodies a suitable box having therein a lamp (constituting the heating device) and provided with suitable ventilating-openings and provided in one wall thereof with one or more of said color-matching tablets. Desirably, and as shown in the present instance, said tablets constitute part of the upper wall of the box-like structure, said tablets being supported on suitable framework having the general lines of a roof. It will be understood, however, that such color-matching tablets may be otherwise supported with relation to the heating or drying source.

The term "color-matching tablet" is intended to define or designate any suitably-sized removable body which is adapted to receive on its surface a layer of the material to be matched and adapted to be supported in drying proximity to the drying-flame or other source of heat.

Referring now in detail to the specific form

of device shown in the accompanying drawings, Figure 1 is a perspective view of the device, one of the color-matching tablets being removed. Fig. 2 is a vertical section thereof. Fig. 3 is a detail of the top wall, showing the manner of forming the tablet-supporting frame. Fig. 4 is a detail illustrating the manner of fastening the top wall to the body of the device when said top wall is made removable. Fig. 5 is an enlarged sectional view taken on line 5 5 of Fig. 1. Fig. 6 is a perspective view of one of the color-matching tablets.

As shown in the drawings, A designates a rectangular box, preferably made of sheet metal. Said box is provided with a bottom wall *a*, upon which is supported a suitable burner B, which furnishes heat to dry the color compound after it is applied to the tablets. One of the side walls of the box is hinged to the box to constitute a door A', provided with a hand-knob *a'* and a suitable fastening device (not shown) to lock the same closed. The door-opening is made sufficiently large to permit the introduction of the lamp or burner and its removal therethrough and also to afford means for lighting the lamp. One of the side walls of the box—that constituting the door, as herein shown—is provided with a damper A<sup>2</sup>, having a turning handle *a*<sup>2</sup> to admit to the box air to support combustion. Said box is shown as provided with a handle A<sup>3</sup>, by which it may be conveniently carried from place to place.

In the particular form of device herein shown the color-matching panels C constitute the principal part of the top wall of the box, and the wall is made of general conical form, it being cut away at its extreme top to afford a vent for the products of combustion. As herein shown, four tablets are employed. Said tablets are of triangular form and are symmetrically disposed with respect to the side walls of the box. A greater or less number of tablets may be used. The tablets are supported on a skeleton-frame structure, which may or may not be removably fixed to the body of the box. Said skeleton structure consists of four base members C', surrounding the upper margins of the vertical walls of the box, and four converging inclined members C<sup>2</sup>, fixed at their lower ends to the base members C' and attached at their upper ends to a central plate C<sup>3</sup>, located at the apex of said conical upper wall. The cross-section of the inclined members is shown in Fig. 5. Said members are made of sheet metal, each consisting of a central longitudinally-formed rib *c* and side flanges *c'*. The said inclined roof members are attached at their lower ends to the base members C' of the roof in any suitable manner, as by soldering, and may be attached likewise to the central plate C<sup>3</sup>. Said base members of the roof structure are provided with upwardly-extending flanges *c*<sup>2</sup>,

against which rest the lower margins of the triangular-shaped color-matching tablets and which hold the tablets in place. The upper margins *c*<sup>3</sup> of said base members C' and the side flanges of the inclined members C<sup>2</sup> constitute the supports for the tablets, each tablet fitting removably in a triangular frame consisting of adjacent members C' C<sup>2</sup>. Said tablets are cut off at their upper ends and rest at their upper ends on the plates C<sup>3</sup>, before referred to. The said skeleton frame constituting the support for the tablets is shown as removably fixed to the box-support, but may be permanently attached thereto. When detachably supported on the box, any suitable means may be employed to prevent accidental detachment thereof from the box. The means herein shown consists of two or more spring-latches C<sup>4</sup>, which are attached to the base members of the roof structure and engage the outer faces, as herein shown, of the upper margins of the side walls of the box with inwardly-yielding pressure.

The tablets C are shown as made of composite structure, each consisting of a metal base-plate *c*<sup>4</sup> and a facing *c*<sup>5</sup>, preferably made of material resembling plaster and of such constituency as to receive the color-matching coat in the same manner and exhibit the same like an ordinary plaster wall. This construction of the receiving-face of the tablet insures that a color exhibited on a tablet will be the same as it will appear on a wall. Said base-plates *c*<sup>4</sup> are perforated in order to insure the adhesion of the plastic material thereto. Said tablets are provided with handles *c*<sup>6</sup>, turned upwardly from the base-plates, by which the tablets may be conveniently handled to remove the same and place them on the box in the operation of matching colors.

The operation of the device is sufficiently clear from the foregoing and need not be here repeated.

While I have shown a practical and in some respects a preferred form of the device, it will be understood that the structural details may assume widely-varied forms without departing from the spirit of the invention, and I do not wish to be limited thereto except as hereinafter made the subject of specific claims.

I claim as my invention—

1. A color-matching device, comprising a suitable frame, a heating device, and a color-matching tablet removably supported on and fitted to said frame within the influence of said heating device.

2. A color-matching device, comprising a suitable frame, a heating device, and a color-matching tablet removably supported on and fitted to said frame within the influence of said heating device and provided with a smooth plaster-like face to which a color compound is to be applied.

3. A color-matching device comprising a

suitable frame, a heating device, and a color-matching tablet removably supported on said frame, comprising a reticulated base-plate formed with a handle, and a layer of plaster-like material to which latter the color compound is to be applied.

4. A color-matching device, comprising a box-like frame having an opening, a heating device therein, and a color-matching tablet constituting one of the walls of said box-like frame and fitted in said opening.

5. A color-matching device, comprising a box, one wall of which is made of skeleton form, a plurality of color-matching tablets removably supported on and fitted to said skeleton wall of the box, and a heating device within the box.

6. A color-matching device, comprising a box, and a heating device therein, the upper wall of the box comprising a plurality of removably-supported color-matching tablets.

7. A color-matching device, comprising a box, a heating device therein, the upper wall of the box embracing a skeleton frame, and a

plurality of color-matching tablets removably supported thereon.

8. A color-matching device, comprising a box, a heating device therein, the upper wall of the box embracing a skeleton frame, and a plurality of color-matching tablets removably supported on said frame, one side wall of the box constituting a hinged door.

9. A color-matching device, comprising a box, a heating device therein, the upper wall of the box embracing a skeleton frame, a plurality of color-matching tablets removably supported therein, said upper wall of the box being provided with an opening and a damper fitted in one wall of the box.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 19th day of November, A. D. 1904.

MAGNUS N. LONNGREN.

Witnesses:

W. L. HALL,

GEORGE R. WILKINS.