(No Model.)

M. W. FLEMING & C. R. LE SAUVAGE.

SCHOOL SLATE AND RULER THEREFOR.

No. 383,945. Patented June 5, 1888.

Fig. 1.

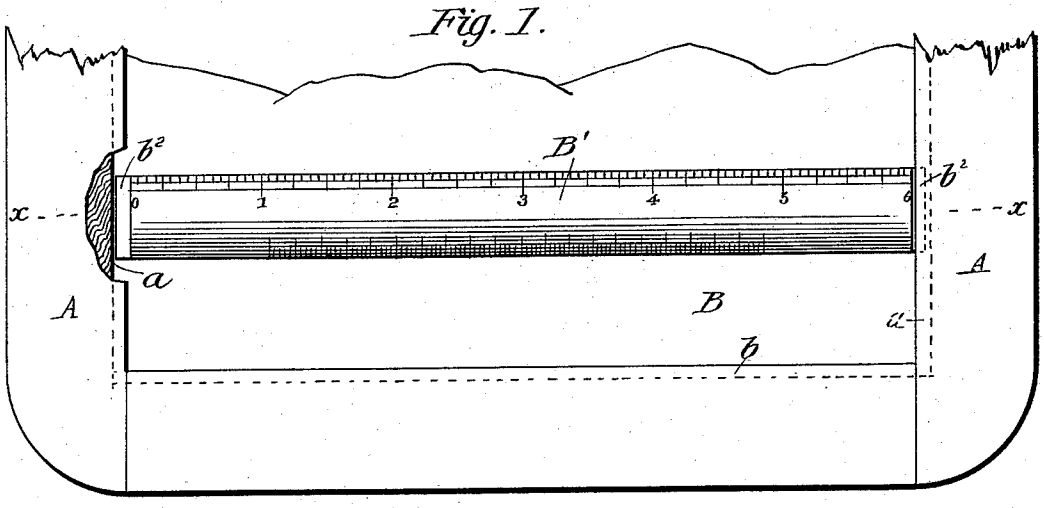


Fig. 2.

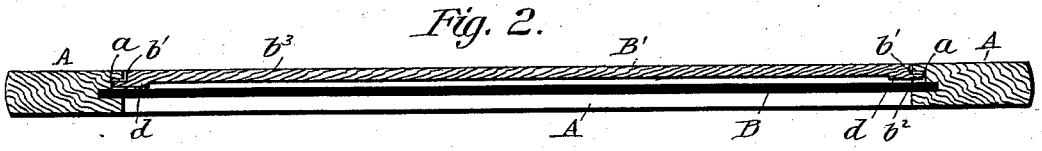


Fig. 3.

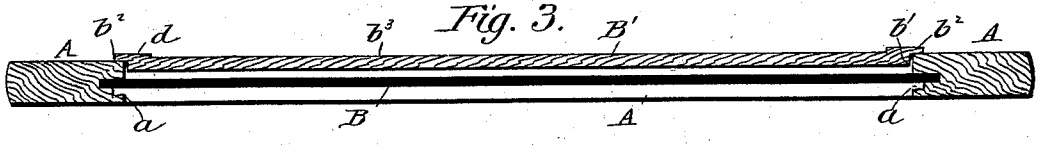
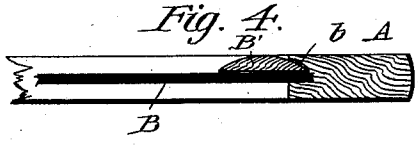


Fig. 4.



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SCHOOL-SLATE AND RULER THEREFOR.

SPECIFICATION forming part of Letters Patent No. 383,945, dated June 5, 1888.

Application filed August 5, 1887. Serial No. 246,203. (No model.)

To all whom it may concern:

Be it known that we, MAYBURY W. FLEMING, of New Brighton, in the county of Richmond and State of New York, and CHARLES ROSS LE SAUVAGE, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Slates, of which the following is a full, clear, and exact description.

The invention is an improvement in the class of slates having a straight edge or ruler, which may be moved or slid over its surface.

The construction and combination of parts are as hereinafter described.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a partial side elevation of a slate having our improvement applied. Fig. 2 is a transverse section on line *x x* of Fig. 1. Fig. 3 is also a transverse section on line *x x* of Fig. 1, illustrating the side uppermost opposite to that presented in Fig. 2; and Fig. 4 is a partial longitudinal section.

In carrying out the invention the side frames, A, of the slate B are provided at their inner edges above the surface of the slate with a longitudinal groove, *a*, and either the lower or upper end piece of the frame, or both, are also provided in like manner with a groove, *b*, which groove is preferably shaped to correspond with the contour of the upper longitudinal edge surface, the ruler adapted for use in connection with the slate. The groove *b* may be omitted, however, without departing from the spirit of the invention.

In further carrying out the invention, a ruler, B, is employed, of a length slightly greater than the length or breadth of the slate within the frame, according to the manner in which the ruler is to be used. The ends of the ruler are provided with a transverse rabbet, *b'*, in the upper face, whereby a lip, b^2, is produced, and the under surface of the ruler from a point near each end is transversely and longitudinally cut away, as at b^3, to form the reduced bearing-surface *d*.

In operation the lips b^2 of the ruler are entered the grooves or ways *a*, as shown in Fig. 1, the reduced surfaces *d* bearing upon the slate. The ruler may now be manipulated up or down without danger of dropping from the face of the slate, and when the end grooves, *b*, are employed the ruler may, if not in use, be carried down and pressed into said groove *b*, as shown in Fig. 4, whereby it is held in engagement with the slate out of the way and in position for immediate use.

It will be observed that owing to the slight bearing of the ruler upon the slate any drawing, lettering, or writing thereon will not be effaced or disfigured by the passage of the ruler up and down. The frame may be provided with grooves above each surface of the slate.

When it is desired to use the ruler upon the plain side, it is reversed and the rabbeted surface is made to rest upon the inner side edge of the frame, as shown in Fig. 3, which forms a guide in the use of the ruler and elevates it above the surface of the slate. To permit such reversal of the ruler it is obviously necessary that its corners shall be rounded or cut off, so that one of its ends may be turned out of the groove.

It is obvious that the slate-frame may be grooved either upon the sides, or at bottom and top, or both.

The ruler may be attached in the manner described, or in any manner which is essentially merely a modification of this method, to any slate or similar utensil which is used in schools or places of instruction, or by professional or amateur draftsmen, and the like, who use such utensils for drawing or mathematical or trade calculations.

The ruler may be made of wood, or of metal, or of both, or of any material or combination of material, and the said ruler may be marked or graded, or shaped (straight, or curved, or with angles) to suit any purpose of instruction, or drawing, or measuring.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a slate, and a frame attached thereto provided with grooves in the

inner edges above the surface of the slate, of a ruler having rabbeted ends adapted to slide in said grooves, and a centrally-recessed under surface whereby a bearing-surface is provided at the ends only, substantially as set forth.

2. A ruler for slates, provided with rabbeted ends, a centrally-recessed under surface, and bearing-surfaces upon the under side at the ends only for use, as set forth.

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