(No Model.)

A. KRAUSE.

SCHOOL SLATE.

No. 308,774. Patented Dec. 2, 1884.

Fig. 1.

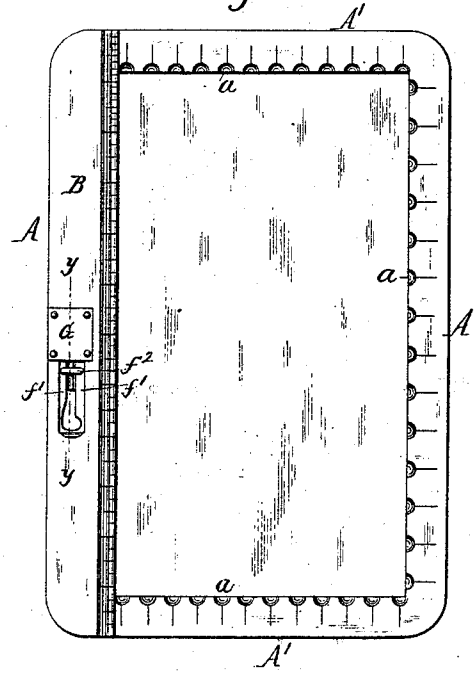


Fig. 3.

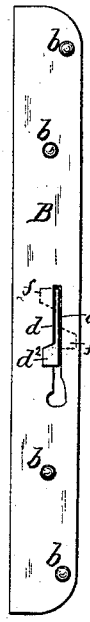


Fig. 2.

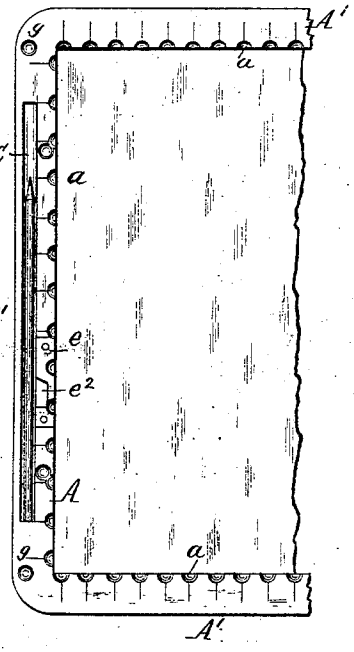


Fig. 4.

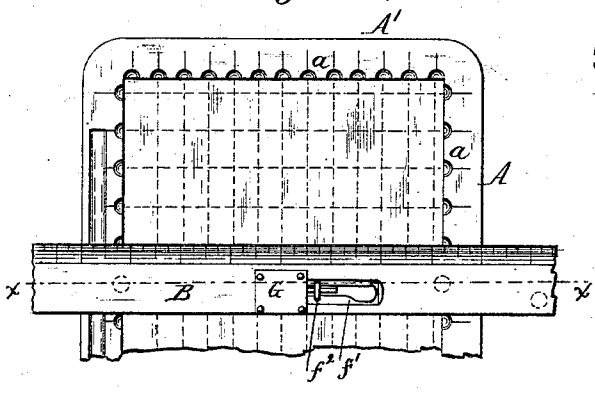


Fig. 6.

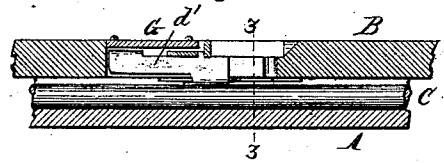


Fig. 7.

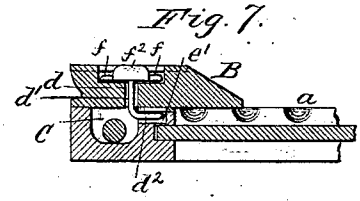
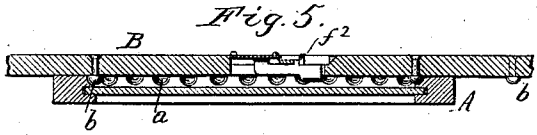


Fig. 5.



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Witnesses.

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UNITED STATES PATENT OFFICE.

ALBERT KRAUSE, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF TO SIGMUND FEYL, OF SAME PLACE.

SCHOOL-SLATE.

SPECIFICATION forming part of Letters Patent No. 308,774, dated December 2, 1884.

Application filed July 5, 1884. (No model.)

To all whom it may concern:

Be it known that I, ALBERT KRAUSE, of the city of Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in School-Slates, of which the following is a specification.

This invention relates to an improvement in school-slates, and has for its object to provide the slate with means whereby parallel lines can be drawn across the slate with the aid of a suitable ruler in an easy and expeditious manner, and also to provide means whereby the ruler can be readily secured to the slate, to prevent the same from becoming lost.

My invention consists, to that end, of the improvements which will be hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents an elevation of my improved slate with the ruler attached thereto. Fig. 2 is a similar view with the ruler removed. Fig. 3 is a rear view of the ruler. Fig. 4 is a fragmentary elevation with the ruler in position across the slate. Fig. 5 is a cross-section in line *x x*, Fig. 4. Fig. 6 is a fragmentary longitudinal section in line *y y*, Fig. 1, on an enlarged scale. Fig. 7 is a fragmentary cross-section in line *z z*, Fig. 6.

Like letters of reference refer to like parts in the several figures.

A represents the side pieces, and A′ the end pieces, of the frame of the slate, provided along their inner edges with notches or depressions *a*, of semicircular, square, or other suitable form.

B represents the ruler, which is provided on its under or rear side with studs or projections *b*, which are adapted to engage in the notches *a* in the slate-frame. The ruler is preferably provided with four studs or projections, *b*, two of which are arranged so as to engage with the notches in the side pieces, A, of the frame when the ruler is placed transversely on the slate, and the other two projections are arranged so as to engage with the notches in the end pieces, A′, of the frame when the ruler is placed lengthwise of the slate. The notches in the side and end pieces of the frame are arranged directly opposite each other, so that when the projections of the ruler are placed in two opposite notches a straight line can be drawn across the slate at right angles to the pieces of the frame on which the ruler is placed. By successively engaging the projections of the ruler in the notches *a* a series of parallel lines can be ruled over the entire surface of the slate. The projections *b* are made to correspond with the form of the notches *a*, so as to fit snugly in the same.

C represents a longitudinal groove or depression formed in one of the side pieces, A, and forming a convenient receptacle for a slate-pencil or other similar article. The receptacle C is covered by the ruler B when the latter is secured to the slate-frame.

d is a longitudinal slot formed in the ruler B, preferably near its center, and extending through the thickness of the ruler, and *d′* is a plate or bar arranged in the slot *d*, and adapted to be moved forward and backward in the slot *d*. The bar *d′* is provided at its lower end with a laterally-projecting lip, d^2, adapted to engage under a horizontal plate, *e*, secured to the side piece, A, of the slate-frame. The side frame, A, is recessed or cut away, as shown at *e′*, so as to permit the lip d^2 to engage under the plate *e*. The latter is provided with an opening, e^2, through which the lip d^2 can be introduced below the plate.

f represents horizontal guide-lugs projecting laterally from opposite sides of the bar *d′*, and sliding in grooves *f′*, formed on the upper face of the ruler on opposite sides of the slot *d*. The bar *d′* is provided with a thumb-piece, f^2, whereby it can be moved back and forth in the longitudinal slot *d*.

G represents a plate secured to the upper side of the ruler B, for confining the bar *d′* and the guide-lugs *f* in the recess of the ruler.

In order to attach the ruler to the slate, the lip d^2 is inserted through the opening e^2 of the plate *e*, and the bar *d′* pushed forward, so as to engage the lip d^2 under the plate *e*. By a reverse movement of the bar *d′* the ruler is detached from the slate.

The side frame, A, is provided on its upper side with notches or recesses *g*, for receiving the projections *b* of the ruler, whereby the ruler is retained in its proper position and held against lateral displacement. By this means the ruler is securely attached to the

slate and not liable to become lost, and serves at the same time as a cover to the receptacle C. Any other suitable fastening device—for instance, a turn-button—may be employed for securing the ruler to the slate-frame.

It is obvious that the notches in the slate-frame may be replaced by projections and the projections in the ruler by depressions, whereby the same result will be attained.

I claim as my invention—

1. The combination, with a slate having opposite pieces of its frame provided with corresponding series of notches or depressions, of a ruler provided near both extremities with studs or projections adapted to enter two notches on opposite pieces of the slate-frame, whereby the ruler is held in position on the slate, substantially as set forth.

2. The combination, with a slate having its frame provided with depressions *a*, of a ruler having projections *b*, adapted to enter said depressions, and a locking device whereby the ruler can be secured to the slate-frame, substantially as set forth.

3. The combination, with a slate having its frame provided with a recessed receptacle or groove, C, and depressions *a*, of a ruler provided with projections *b*, adapted to enter said depressions, and a locking device whereby the ruler is secured to the slate-frame over said receptacle, substantially as set forth.

4. The combination, with the slate-frame having a plate, *e*, of a ruler, B, provided with a locking-bar, *d'*, arranged in a recess in the ruler, and provided with a lip or plate, d^2, adapted to engage under the plate *e*, substantially as set forth.

Witness my hand this 20th day of June, 1884.

ALBERT KRAUSE.

Witnesses:
JNO. J. BONNER,
CARL F. GEYER.