

(No Model.)

P. E. DEMAREST.
SLATE RULER.

No. 425,495.

Patented Apr. 15, 1890.

FIG. 1

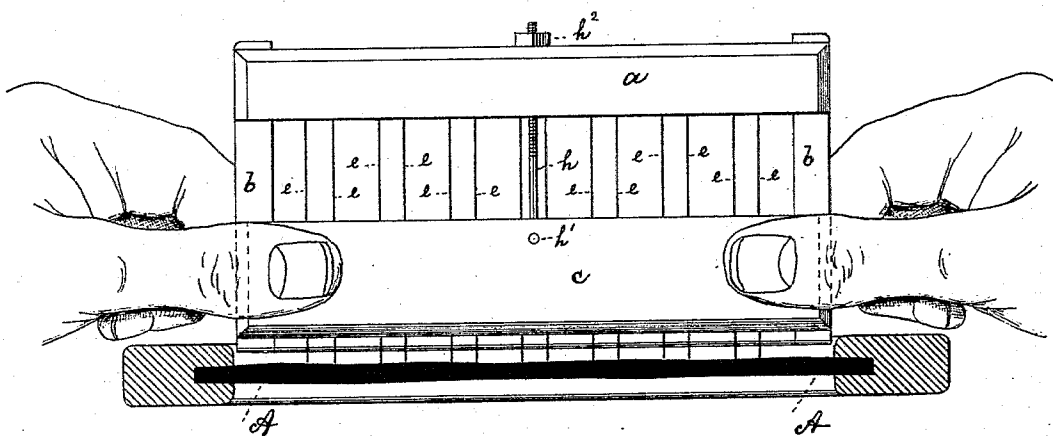


FIG. 2

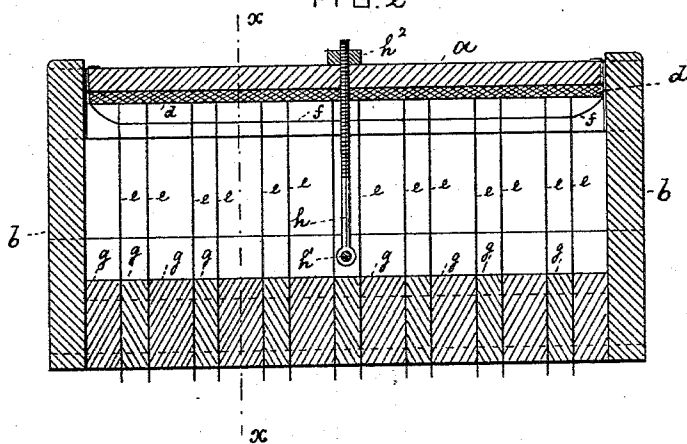


FIG. 3

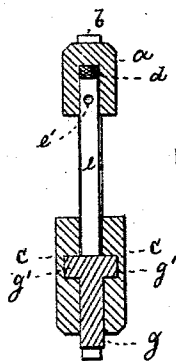
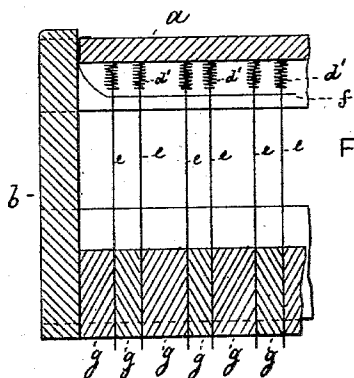


FIG. 4



WITNESSES

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PETER E. DEMAREST, OF LONG ISLAND CITY, NEW YORK.

SLATE-RULER.

SPECIFICATION forming part of Letters Patent No. 425,495, dated April 15, 1890.

Application filed December 6, 1889. Serial No. 332,795. (No model.)

To all whom it may concern:

Be it known that I, PETER E. DEMAREST, of Long Island City, Queens county, New York, have invented an Improved Slate-Ruler, of which the following is a specification.

This invention relates to a device for ruling a school-slate, the invention being more particularly designed for causing a constant contact of the marking or scratching tools with the slate, even though the latter have an uneven surface.

The invention consists in the various features of improvement more fully pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved slate-ruler, showing it in use upon a slate. Fig. 2 is a vertical longitudinal central section thereof. Fig. 3 is a cross-section on line *xx*, Fig. 2; and Fig. 4, a vertical longitudinal section through a modification.

The letter *a* represents a grooved slide, slotted at the ends to embrace a pair of upright rails *b*, that are connected at their lower ends by a pair of face-plates *c*. Within the groove of the slide *a* there is placed a rubber spring or cushion *d*, and against this cushion there about the upper ends of the marking, scratching, or ruling tools *e*, as shown. These tools are placed at such distances apart as may be desired, and are held in place by means of a wire *f*, passing through eyes *e'* of the markers, the ends of the wire being connected to the slide *a*. At the lower ends the markers *e* pass between a series of laterally-sliding blocks *g*, which are secured between the face-plates *c* by a tongue-and-groove joint—that is to say, the plates *c* have longitudinal grooves upon their inner faces, and these grooves are engaged by tongues *g'* of the blocks *g*. Between every two markers one block *g* is placed, and thus the markers are kept at a proper distance from one another. The face-plates *c* are connected to the slide *a* by means of a central screw-bolt *h*, attached at its lower end by means of pin *h'* to the plates *c*, and passing with its upper end loosely through a perforation of slide *a*. Here the screw-bolt is surrounded by a nut *h²*.

The ruler should be of such a length as to extend across the slate, and thus by drawing the device once over the slate the latter will be completely ruled.

To use the device, it is grasped at the ends of the face-plates *c*, as shown in Fig. 1, and is pressed downward upon the slate while being drawn across it. Even if the two hands do not exert an equal pressure the marker will be forced upon the slate with an even degree. This desirable result is due to the fact that the pressure of the hands is transmitted by bolt *h* and nut *h²* to the center exactly of slide *a*. As this slide can move down the rails *b* in a rectilinear direction only, it is plain that it must descend parallel with the slate-body. The spring *d* will, as the device is drawn across the slate, keep the markers *e* in constant contact with the latter, even though the slate have an uneven surface. As but a slight pressure is sufficient to mark the slate, full or unbroken lines will in all cases be obtained. If by any unevenness of the slate any one of the markers should be deflected laterally, the combined action of all the other markers and of the intermediate sliding blocks *g* will have a tendency to force such marker back into its proper position.

In Fig. 4 I have shown the rubber spring *d* replaced by a series of coiled springs *d'*, one for every one of the markers.

As the markers wear off during use the nut *h²* is turned down to a proportionate extent. Thus the markers can be used up from end to end.

What I claim is—

1. The combination of a pair of connected rails with a slide and with a series of markers secured to the slide and a spring acting upon the markers, substantially as specified.

2. The combination of a pair of rails with a slide, a series of markers, a spring acting upon the markers, and with a wire for securing the markers to the slide, substantially as specified.

3. The combination of a pair of rails with a plate for connecting the rails, a slide carrying markers and embracing the rails, and

with a central bolt connected to the plate and passing loosely to the slide, substantially as specified.

4. The combination of a pair of rails with
5 grooved plates *c* connecting the rails, a slide carrying markers and embracing the rails, and with a series of sliding blocks between

the markers and engaging the grooved plates, substantially as specified.

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Witnesses:

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