No. 632,821. Patented Sept. 12, 1899.

G. W. MITCHELL.

FRAME FOR SLATES.

(Application filed Dec. 8, 1898.)

(No Model.)

Fig. 1.

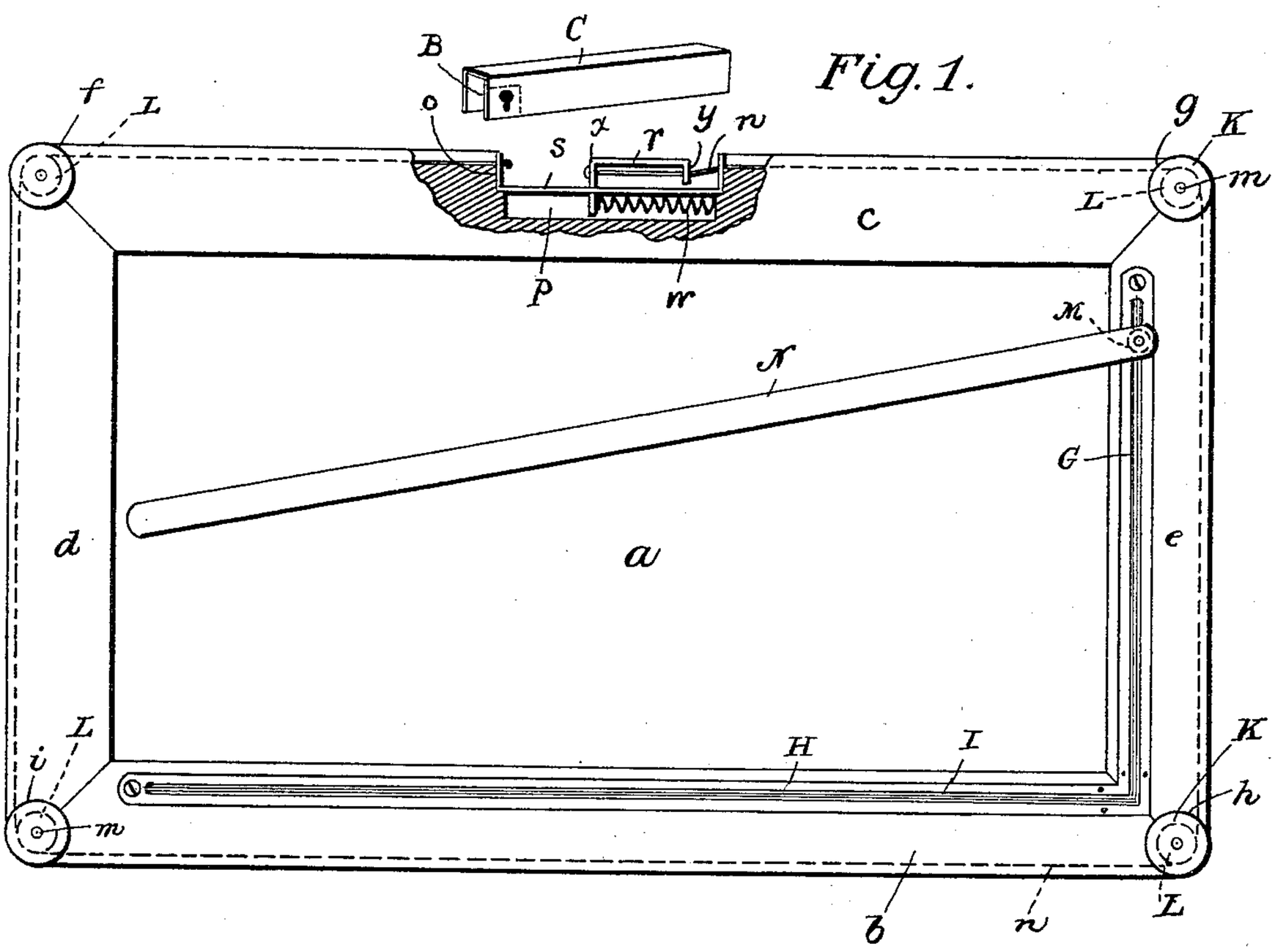


Fig. 2.

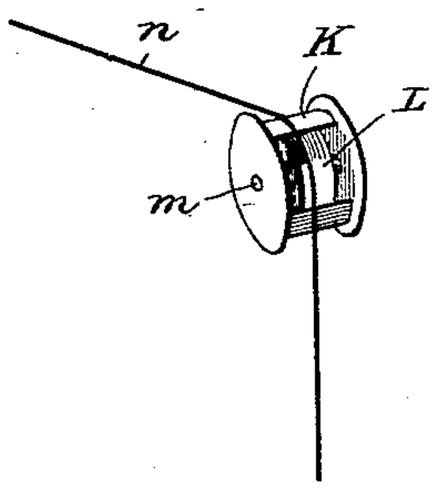


Fig. 3.

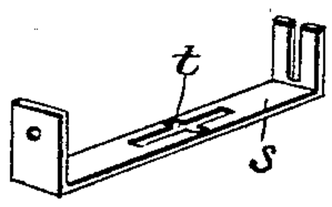
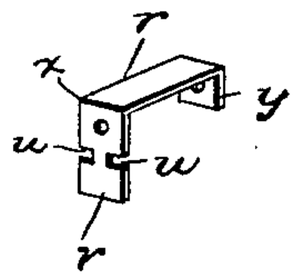


Fig. 4.



Witnesses
C. L. Whipple
C. L. Harding.

Inventor
George W. Mitchell
By Whipple & Harding
Attorneys

UNITED STATES PATENT OFFICE.

GEORGE W. MITCHELL, OF PENNINGTON, TEXAS.

FRAME FOR SLATES.

SPECIFICATION forming part of Letters Patent No. 632,821, dated September 12, 1899.

Application filed December 8, 1898. Serial No. 698,602. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. MITCHELL, a citizen of the United States, residing at Pennington, in the county of Trinity, State of Texas, have invented certain new and useful Improvements in Frames for Slates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to slates in general, and more particularly to the frames thereof, and has for its object to provide such a frame as may be readily removed from the slate when the latter becomes broken and may be quickly adjusted to a new plate.

A further object of my invention is to provide a ruler attachment for the slate-frame which will enable ready manipulation of the ruler to rule lines at all angles upon the slate.

In the drawings forming a portion of this specification and in which like letters of reference indicate similar parts in the several views, Figure 1 is a plan view of a slate, partly in section, showing the application of my invention. Fig. 2 is a perspective view of one of the corner-fastenings of my slate-frame. Fig. 3 is a perspective view of a detail of the frame, and Fig. 4 is a perspective view of the slide to which the tie-wire is secured.

Referring now to the drawings, in operating in accordance with my invention I employ a slate *a* of the usual rectilinear form, to which I secure a frame comprising side pieces *b* and *c* and end pieces *d* and *e*, which pieces have their inner edges grooved in the usual manner to receive the sharpened edges of the slate *a*, the ends of the side and end pieces being mitered to fit closely, as shown. Cut from the outer corners of the frame are semicircular or arc-shaped pieces, resulting in similar curvilinear recesses *f*, *g*, *h*, and *i*, adapted to receive cylindrical casings K, each having a flange at each end, which flanges impinge the faces of the frame and prevent lateral displacement of the casings. The ends of the casings are closed, as shown, and within each casing is arranged a roller L, arranged upon an axle *m*, having bearings in the end closures of the cylinder. A longitudinal section is cut from each cylindrical casing to expose a portion of the periphery of the roller, as shown.

When the frame-sections are in place upon the slate *a*, they are held in position by means of a wire *n*, passed around the edge of the frame, as shown in dotted lines, tension of the wire being secured in a manner as will be now described. In one of the frame-sections (I have shown in the side section *c*) is formed a recess *o*, in which is a countersink *p*. The peripheral groove of the frame enters the recess *o*, and one end of the wire *n* is knotted to prevent it being drawn through the groove, the knot lying against an end wall of the recess, as shown. The opposite end of the wire *n* is passed through a slide *r*, adapted to move in the recess and countersink. At the base of the recess *o* and covering the countersink is a plate *s*, having a cross-shaped slot *t* therein. The slide *r* has recesses *u* in its sides adjacent its lower end resulting in a head *v*, which head plays within the countersink, the edges of the cross-shaped slot in plate *s* lying within the recesses *u* to prevent the slide rising from its operative position in the countersink. It will be noted, however, that the lateral extension of the cross-shaped slot is of such dimensions as to enable the withdrawal of the slide therethrough.

The end of the wire *n* being attached to the slide *r* it is desirable that the slide be kept in such a position as to place tension on the wire, and to accomplish this I place between the slide and the end of the countersink farthest from the knotted end of the wire above referred to a helical spring *w*, which being under tension keeps the wire taut, the wire being passed over the rollers L at the corners of the frame to enable the wire being drawn to the proper extent. In order to hold the slide in a proper position to receive pressure of the spring *w* thereon, the top of the slide is bent at right angles, as shown at *x*, and then downwardly at right angles, as at *y*, the downward extension being perforated to receive the wire *n*, which prevents rising or falling of the lateral extension and consequent displacing of the slide.

A casing C is provided to inclose the recess *o*, which said casing may be held in place in any desired manner.

It will be noted that when it is desired to remove the slate-frame a slender instrument is inserted through the slot *t* of plate *s* and is pressed upon the slide, which moves the slide against the influence of the spring *w* and up to a point directly below the cross extension of the cross-shaped slot *t*, when the slide may be lifted from its position and the wire *n* may be withdrawn from the peripheral groove of the slate-frame. The elements of the frame may be then separated, the corner-casings being removed, and the pieces of the broken slate may be taken out and disposed of.

When it is desired to put in a new slate, the frame-sections are put in place and the corner casings inserted, after which the wire *n* is passed around the frame, the knotted end is placed against an end face of the recess *o*, and after the spring *w* has been pressed to one side the slide is reëntered in the recess and countersink and the covering put in place. It will be noted that the corner rollers enable the binding-wire to be drawn very tight to hold the frame-sections firmly in their positions.

In order to provide a useful ruler attachment, I form in one end frame-section and a side frame-section a slot G and a slot H, respectively, which slots meet at one corner of the frame, a metallic plate I in the form of a right angle being placed over the slots G and H, similar meeting slots being formed in the plate, as shown. Within the slot G and adapted to pass therefrom into the slot H is a button M, the shank of which passes through the slot in the plate I. Secured to the outer end of the shank of the button is a ruler N, which lies parallel with the face of the slate and may be pivotally moved upon the button at any angle, while the end of the ruler may be moved at will, the button traversing the slots in the frame, as will be readily understood.

It will be appreciated that I may alter the specific construction and arrangement herein shown and described without departing from the spirit of my invention and that in the construction of my device I may employ such materials as may be deemed proper.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A slate-frame formed in sections, a peripheral groove about the frame, rollers at the corners of the frame, a binding-wire passed around the frame over the rollers and lying in the groove, and a spring having connections with one end of the wire and adapted to maintain tension of the latter.

2. A slate-frame formed in sections, a peripheral groove about the frame, rollers at the corners of the frame, a binding-wire passed around the frame over the rollers and lying in the groove, a recess in one frame-section, a spring-pressed slide in the recess, and connections between said slide and the wire to maintain tension of the latter.

3. The combination with a slate-frame having a groove therein of a button in the groove and a ruler having connections with the button, whereby the ruler may be moved longitudinally and pivotally.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. MITCHELL.

Witnesses:
A. R. JENKINS,
P. H. HUTCHING.