

(No Model.)

T. KANE.
SLATE FRAME.

No. 260,688.

Patented July 4, 1882.

Fig. 1.

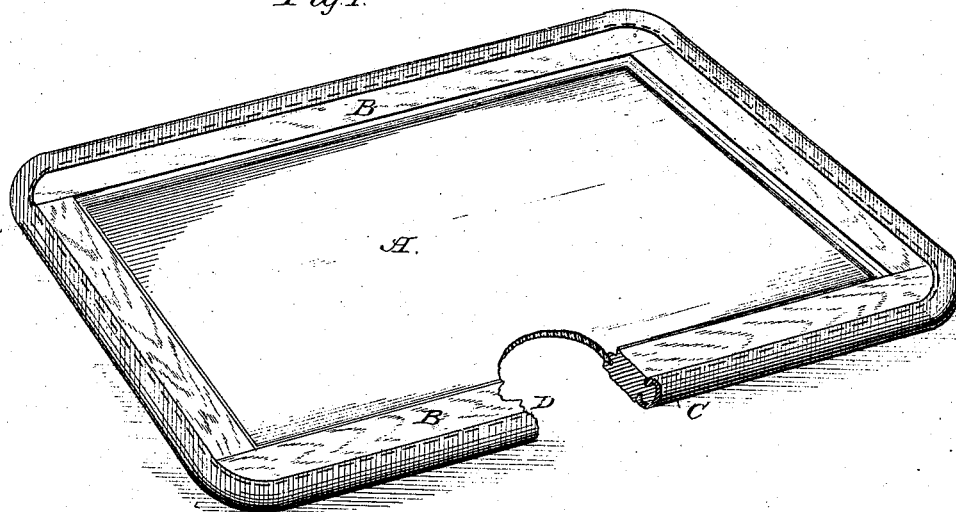


Fig. 2.

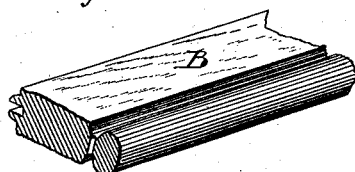


Fig. 3.

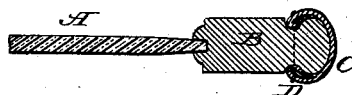


Fig. 4.

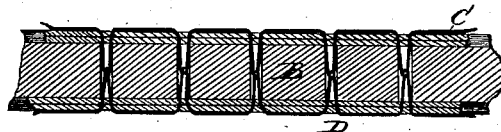


Fig. 5.



WITNESSES:

Wm. H. Shipley
Wm. H. Shipley

Thomas Kane

INVENTOR.

By Philip T. Dodge

ATTORNEY

UNITED STATES PATENT OFFICE.

THOMAS KANE, OF CHICAGO, ILLINOIS.

SLATE-FRAME.

SPECIFICATION forming part of Letters Patent No. 260,688, dated July 4, 1882.

Application filed March 30, 1882. (No model.)

To all whom it may concern:

Be it known that I, THOMAS KANE, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Slate-Frames, of which the following is a specification.

This invention relates to that class of slates in which a binding is secured over and around the outer edge as a means of preventing noise and protecting the desks from injury, the object of the invention being to provide a construction which shall be exceedingly cheap and simple, and under which there shall be less liability of the binding becoming detached than under the ordinary method of attachment.

To this end the invention relates to the improvement in the art of attaching the binding to wooden slate-frames, consisting in securing the same by machine-stitching passed through the binding and the previously-unperforated wood, and to the new article of manufacture—a wooden slate-frame having a binding or muffling attached thereto by machine-made stitches passing through and seated tightly in the wood.

I am aware that cords have been woven by hand both through and around the edges of previously-perforated slate-frames; also, that cloth or felt has been secured to slate-frames by a cord passed by hand through and around the previously-perforated edge of the frame; also, that cloth or felt folded over the edge of a previously-perforated frame has been stitched or sewed by hand, the frame being previously grooved and perforated to permit the passage of the needle and thread.

I have found in practical operation under the patents granted for the above-described methods that many and very serious difficulties are incident thereto, among which may be mentioned the expense incident to the preliminary perforation of the frames, the labor and expense incident to the application of the fastening medium by hand, and the liability of the fastening medium to become loose around the entire slate in the event of the breakage of the cord or thread at any one point. It is to remedy these difficulties that my invention is designed. I find in practical experience that by using for the slate-frame wood possessing, in its natural condition or when steamed, the proper degree of softness, and making the same,

at the point where the stitches are to be applied, of suitable thickness that I am enabled without difficulty to sew the felt, cloth, or other binding material directly to the imperforate frame without difficulty and with great rapidity.

I also find by experience that the binding thus sewed to the frame by a machine possesses a marked advantage over those stitched by hand to the previously-perforated frame, in that in the machine-sewing the two threads are drawn or driven tightly into the needle-holes in the frame and interlock with each other and with the wood of the frame in such manner that, although the thread may be severed at one point, there is no danger or tendency for it to work loose or release the binding at other points. This use of two threads, as in a sewing-machine, instead of one, as in hand-sewing, and the stitching and interlocking the threads tightly in the frame, instead of passing them loosely through large holes therein, as in hand-sewing, renders my improved system of attachment much stronger and more durable than those hitherto known in the art. Owing to the elastic character of the wood and the tendency of the grain to close together after the withdrawal of the needle upon the threads, the stitching of the binding to the wood has a peculiar effect as regards the security of the threads, which would not be the result in connection with other materials.

Another feature consists in combining with the wooden frame, having a continuous groove in its side faces, binding material having its edges folded or doubled and secured in the grooves by stitching, whereby it is given increased thickness, so as to project properly beyond the face of the frame, and at the same time held firmly in place. In this manner I am enabled, at a trifling increase of expense, to give the cushioning-surface a proper degree of thickness and to render the same hard and durable, so that it will not readily wear away. Various attempts have been made to secure the same thing by having special material woven with cord thereon, and by inserting cord beneath the material of uniform thickness. My method of doubling and applying the binding material is both cheaper and better than the others mentioned.

Another and third feature of my invention consists in constructing the frame upon which the binding is stitched with the grain of the wood running obliquely or diagonally to the edge of the frame, this result being accomplished by sawing obliquely or diagonally across the grain of the wood when manufacturing the frames. By thus constructing the frame I entirely avoid the danger of the wood being split and broken away during or after the operation of stitching or binding the same.

Referring to the accompanying drawings, Figure 1 is a perspective view of a slate provided with my improved binding, one edge being broken away to show the parts in section. Fig. 2 is a view of one of the frame-bars as it appears previous to the application of the binding. Fig. 3 is a cross-section through the slate-frame with the binding thereon on the line *x x*, Fig. 1. Fig. 4 is a longitudinal section on the line *y y*, Fig. 3. Fig. 5 is a cross-section illustrating a modified form of the frame.

A represents the body of the slate; B, the grooved wooden frame encircling the same. C represents the cloth, felt, or equivalent binding material; and D represents the machine stitches or threads passing through the cloth and the wooden frame, as shown. The oblique direction of the grain of the wood with reference to the edges of the frame is plainly represented in Fig. 1.

As it is considered desirable to give the wooden frame a thickness greater than that through which the machine can sew with readiness, the frame-bars are grooved or recessed lengthwise in any suitable manner on the line in which it is required to set the binding.

Instead of grooving the frame, its outer edge may be reduced in thickness.

It is manifest that binding of any suitable character may be stitched to the frame by a machine in the same manner as that herein represented.

It will be noticed that in the drawings the stitching is applied close to the edges of the binding, which are thus held down against or within the frame, and prevented from rolling upward.

In Fig. 5 of the drawings the separation of the stitches or threads, and the size of the holes through which they pass, are exaggerated for the purpose of illustrating the relations of the threads to each other. It is to be understood that in practice the threads are seated tightly against each other and against the wood.

Having thus described my invention, what I claim is—

1. As a new article of manufacture, a wood slate-frame, having a binding or muffling attached thereto by machine-made stitches passing through and seated tightly in the edge, substantially as described and shown.

2. As an improvement in the art of attaching binding to wooden slate-frames, securing the same by machine-stitching passed through the binding and the previously-unperforated frame.

3. The slate-frame having the continuous grooves or depressions in its side faces, in combination with the binding material having its edges folded or doubled and secured in said grooves by stitching, as described and shown.

4. In a slate, a wooden frame constructed with the grain of the wood arranged obliquely to the edge of the frame, in combination with a binding or muffling material secured to the frame by threads passing through the same, substantially as described, whereby the splitting of the frame is avoided.

THOMAS KANE.

Witnesses:

H. J. GREEN,
H. E. C. DANIELS.