

J. W. HYATT.  
Slate-Frame.

No. 199,907.

Patented Feb. 5, 1878.

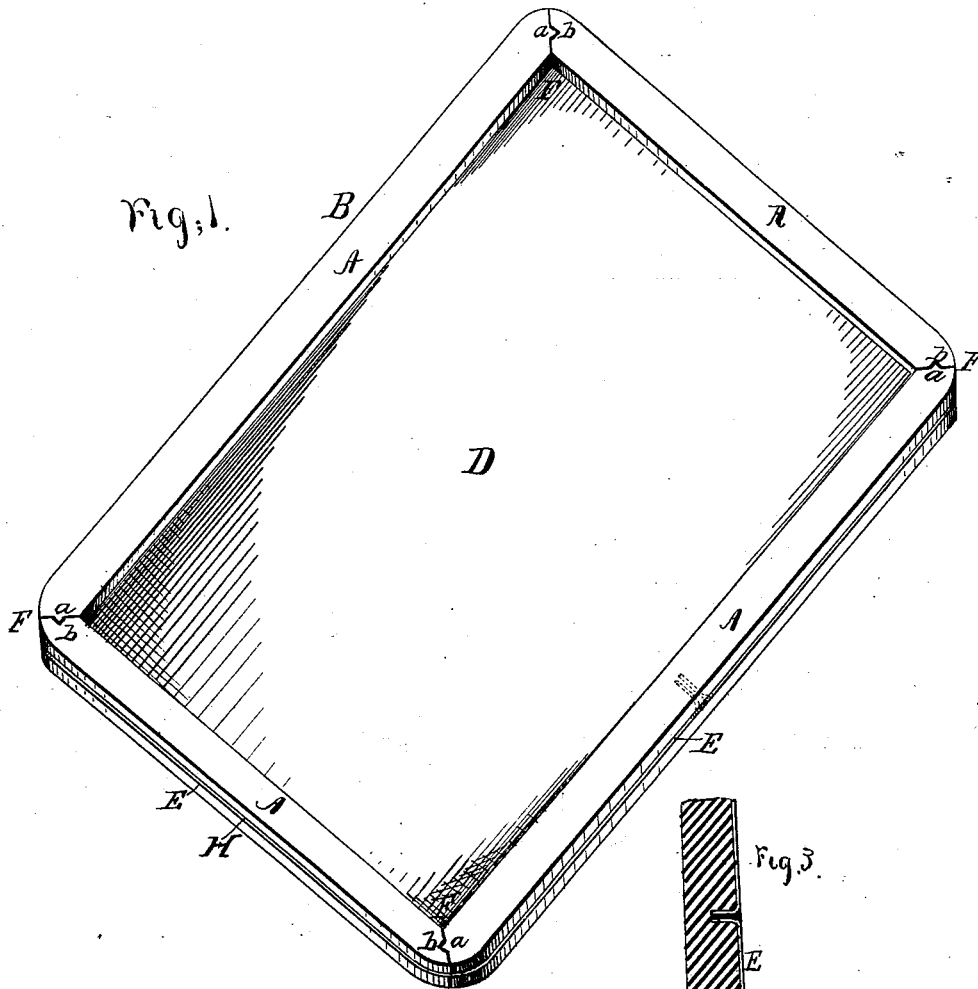


Fig. 1.

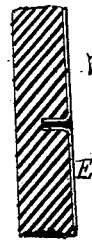


Fig. 3.

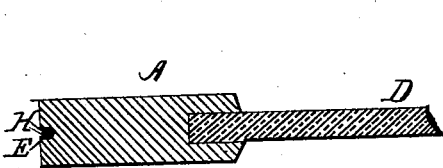
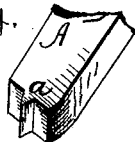


Fig. 2.



Fig. 4.



Witnesses;  
*Charles Fowler,*  
*Chas. Bull*

Inventor;  
*John W. Hyatt*  
By his Attys.  
*Cox & Cross*

# UNITED STATES PATENT OFFICE.

JOHN W. HYATT, OF NEWARK, NEW JERSEY.

## IMPROVEMENT IN SLATE-FRAMES.

Specification forming part of Letters Patent No. **199,907**, dated February 5, 1878; application filed December 15, 1877.

### *To all whom it may concern:*

Be it known that I, JOHN W. HYATT, of the city of Newark, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Frames for School-Slates, of which the following is a specification, reference being had to the accompanying drawings.

The invention relates to an improved frame which, in the present instance, is applied to inclosing the edges of a school-slate; and consists in three or more pieces of material having mitered joints, the miter being provided upon one side with a stud or projection, which is received into a corresponding recess on the other side, to prevent the material slipping. The frame is furthermore encompassed by a wire which is received in a channel upon the edge of the frame, but sunk into the frame at its corners, which are preferably curved or rounded.

In this manner a very secure frame is constructed, such being the object of the invention.

Figure 1 is a perspective view of the invention. Fig. 2 is an enlarged transverse section of the same. Fig. 3 is a detached sectional view, showing the manner in which the ends of the wire are secured. Fig. 4 is a detached perspective view of the stud *a*.

In the accompanying drawings, A represents the bars of wood forming the frame B, which bars are, in the present instance, properly grooved upon their inner edges to receive the edges of the slate D, their outer edges being centrally provided with the groove or channel E, which is somewhat less in size than the diameter of the wire H, in order to afford friction therewith to prevent the wire slipping. The groove E may be made either by hand or any suitable machinery, and is continuous around the entire frame when the bars are united.

The bars A are united by the miter F, and are, respectively, provided, one with a stud or protuberance, *a*, which projects beyond the face of the transverse cut, and is received into the recess *b*, which is indented beyond the surface of the transverse face of the opposite bar. Thus, the stud *a* being received

into the recess *b*, the miter or joint is secure, and the bars cannot slide from each other.

Obviously this construction can be employed whether the corners of the frame be rounded or not; and, if the miter be glued, will assist materially in strengthening the joint. Of course, two or more studs and a corresponding number of recesses may be used.

Within the groove E, upon the outer edges of the bars A, is provided the wire H, which is somewhat greater in diameter than the width of the groove. If the frame be made rectangular the grooves should extend to the end of the outer edges, the wire being wrapped or secured therein, and having its ends bent at a right angle to enter the apertures *d* in the channel adjacent each other, whereby, together with its friction in the sides of the groove, the wire is held in place.

But if the frame have round corners the groove E is continued only on the straight edge of the bar, the wire being laid therein, and where it passes over the round corner being sunk or forced into the material composing the frame; the latter is the preferred construction.

Obviously the encompassing wire can be crowded into the frame throughout its entire periphery, or it can be secured in the channel by adhesive matter, or the groove may be continued over the rounded corners, as desired. The wire may be milled, corrugated, or otherwise ridged, to enable it to have a more secure hold upon the wood about the groove. The ends of the wire may be twisted together, soldered, or otherwise attached together.

It is clear also that cord, or chain, or strips of metal, or other ligaments, may be used as an equivalent for the wire, though greatly inferior thereto.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A slate-frame provided about its outer edge with a continuous groove to receive a binding-ligament, substantially as specified.
2. A slate-frame the parts of which are united by a continuous wire, or its equivalent, placed around the outer edge of the frame, substantially as specified.

3. A slate-frame the parts of which are all united by a single ligament wholly or partially sunken into the outer edge of the frame, and entirely encompassing said frame, substantially as specified.

4. A slate-frame having a miter provided with a transverse stud, as specified, in combination with a continuous wire that entirely encompasses the frame, substantially as set forth.

5. The slate-frame B, provided with the groove E and continuous wire H, entirely encompassing the frame, substantially as specified.

6. The combination of the stud *a*, as specified, recess *b*, and continuous wire H, entirely encompassing the frame, substantially as set forth.

In testimony that I claim the foregoing improvement in frames for school-slates, as above described, I have hereunto set my hand.

JOHN W. HYATT.

Witnesses:

ABRAHAM MANNERS,  
HARRY COX.