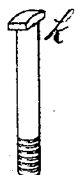
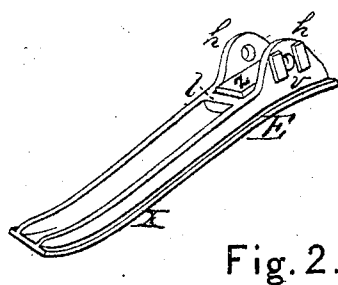
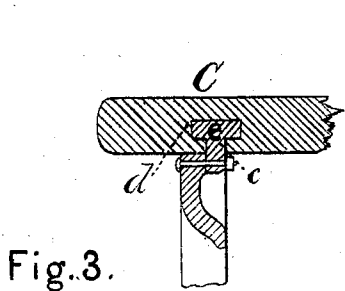
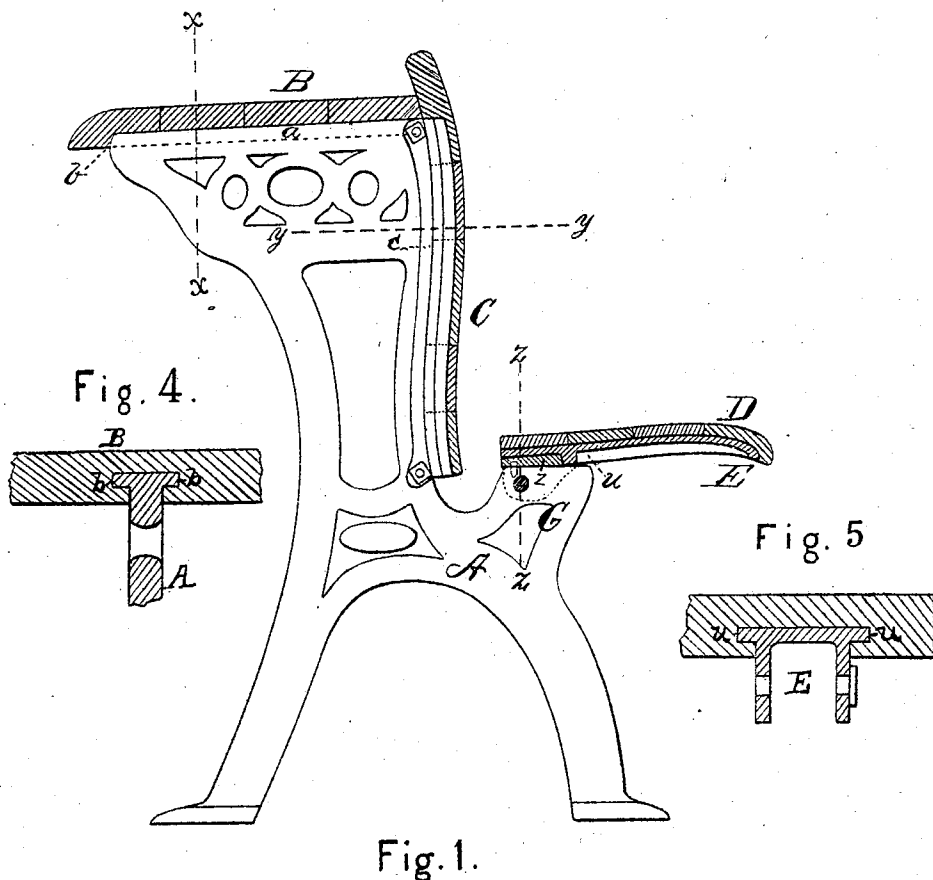


J. L. RITER.
School-Furniture.

No. 136,548.

Patented March 4, 1873.



WITNESSES.

Geo. E. Vopham,
E. A. Bates.

INVENTOR.

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UNITED STATES PATENT OFFICE.

JOHN L. RITER, OF BROWNSVILLE, INDIANA.

IMPROVEMENT IN SCHOOL FURNITURE.

Specification forming part of Letters Patent No. 136,548, dated March 4, 1873.

To all whom it may concern:

Be it known that I, JOHN L. RITER, of Brownsville, in the county of Union and State of Indiana, have invented a new and valuable Improvement in School Furniture; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a cross-section of my school-desk. Figs. 2 and 3 are detailed views of the same. Fig. 4 is a view taken through the line *xx*, and Fig. 5 is a view taken through the line *zz*.

This invention has relation to the construction of school desks and seats having iron standards; and it consists in the T-shaped tongue-and-groove connection of the desk-boards and the upper edges of the iron standards, whereby the desk is prevented from warping; in letting the long arm of the seat-hinge into T-shaped grooves made near the ends of the seat-boards; in the T-rib connection between the boards of the back and the front edge of the iron standard; and in the manner of constructing the cushioned hinge, whereby the bolt is prevented from becoming loose and the rubber cushion is preserved.

The object of this invention is to provide durable school furniture which may be packed in small compass for transportation and may be readily set up in a strong and secure manner, in the school-room, by unskilled hands.

In the accompanying drawing, the letter A indicates the iron side frame or standard, cast with suitable open-work for lightness. The upper or desk edge of this frame is provided with a T-shaped rib, *a*, which is designed to enter the T-shaped transverse grooves *b* in the desk-boards B, securing them firmly so that they cannot become displaced or warped. On the front edge of the standard is attached a removable T-shaped rib, *c*. Slots *d*, of suitable form to slip over this rib, are cut in the boards C of the back. When the back is set up these boards are secured in place by slipping their slots *d* over this T-shaped rib. Under ordinary shrinkage these

boards will not become loosed from this rib if the side flanges *e* are made of proper depth. The fibers of the wood will shrink together, narrowing the depth of the slot and causing it to close upon the flanges of the rib with force. The back is designed to be set up with these ribs in place for shipment. D indicates the seat-boards, which are grooved transversely near the ends at *n* for the reception of the T-shaped rib X of the hinge-arm E. This arm is removable and provided with ears *h*, which embrace the seat-arm G of the standard and are perforated for the passage of the bolt *k*. In order to prevent the bolt from turning, and thereby loosening the nut, the head of the bolt is squared and is received between two straight projections, *v*, cast on the outside of the ear *h* on either or each side of the bolt-hole.

On the under side of the hinge-arm is cast a transverse rib or stop, *l*, sufficiently far forward to be just in front of the cushion *z*, which is designed to be thick enough to project somewhat below the stop. The cushion thus receives the first shock when the seat is put down upon the seat-arm G, and deadens the noise of contact. As the seat is pressed down the stop *l* comes to the seat-arm, sustaining the pressure and preserving the rubber cushion.

I am well aware that dovetailing the parts, as shown in the patent of George Munger, dated September 4, 1866, is not new, and therefore I do not claim such invention.

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

1. The removable ribs *c*, with the side flanges *e*, in combination with the grooves *d* in the slats of the back C, substantially as shown and described.

2. The combination, with the ears *h*, of the hinge-arm E having the projections *v* on each side of the bolt-hole, and the bolt-head *k* having parallel sides, substantially as specified.

3. In a hinge-arm, the combination of the cushion *z*, the stop *l* cast in front of the cushion-seat, and the ears *h*, substantially as shown and described.

4. The combination, with the slotted boards of the desk, seat, and back, of the standards

having the flanged desk-ribs, the removable back-ribs, and the hinged seat-arms having flanged ribs, all arranged substantially as specified.

5. The combination, with the ear of the hinge-arm having the projections on each side of the bolt-hole, of the bolt-head having parallel sides, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN L. RITER.

Witnesses:

JAMES M. CARLOS,
JOHN F. CARLOS.