H. L. ANDREWS.

School-Desk and Seat.

No. 164,248. Patented June 8, 1875.

Fig 1.

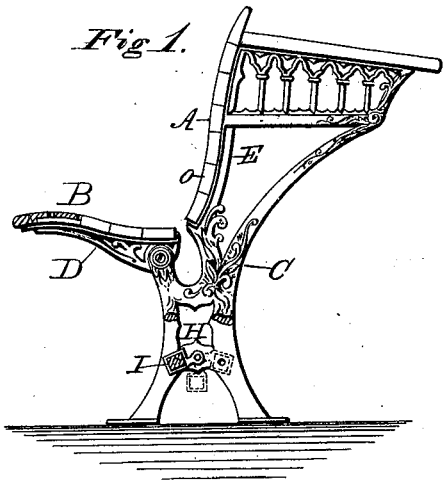


Fig 2.

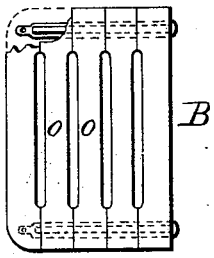


Fig 3.

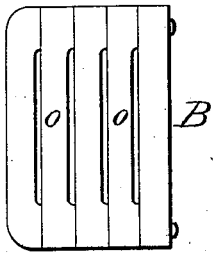


Fig 4.

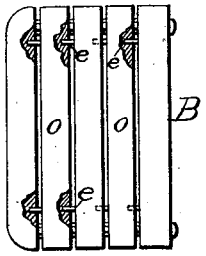
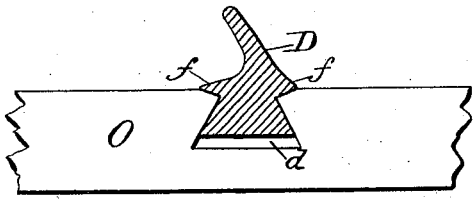


Fig 5.



Witnesses.

Harry King.

Willie W. Dodge.

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UNITED STATES PATENT OFFICE.

HERBERT L. ANDREWS, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN SCHOOL DESKS AND SEATS.

Specification forming part of Letters Patent No. **164,248**, dated June 8, 1875; application filed April 15, 1873.

To all whom it may concern:

Be it known that I, HERBERT L. ANDREWS, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in School Desks and Seats, of which the following is a specification:

My invention relates to school-furniture; and the invention consists, first, of a peculiar style of dovetail-joint for securing the woodwork to the frame, by which provision is made for the shrinkage of the wood, whereby the splitting of the same is prevented. It further consists of slats for the seats and backs, resting against each other at their ends, with open spaces between them for ventilation and coolness, and secured to the frame by dovetail-joints, all as hereinafter more fully set forth.

Figure 1 is a side elevation of the desk complete. Figs. 2, 3, and 4, represent the open slotted seats. Fig. 5 shows the dovetail.

The general style of the desk is shown in Fig. 1, and, having been heretofore patented by me, need not be further described. In this class of articles, it has been customary to make them with the slats or boards composing the back and seat placed close together, and sometimes to secure them by means of an ordinary dovetail; but these methods are objectionable, for the reason that seats and backs thus made are hot and not easy to sit upon, and besides, when the wood shrinks, it is apt to split at the dovetails.

To remedy these objections, and produce a better article, I make both the back A and the seat B of a series of narrow slats, *o*, with spaces between them, as represented in Figs. 2, 3, and 4. These spaces may be formed in various ways. In Fig. 2 I have shown the slats *o* as having a portion cut away on each edge, in Fig. 3 as being cut away on one edge only, and in Fig. 4 the slats are shown with dowel-pins *e* inserted, so as to hold the slats slightly asunder, thus forming spaces between them. I prefer the latter plan, for the reason that it saves material, and also unites the slats and renders them more firm.

The frame C, which is made of cast-iron, has its upright bars E and the arms D of the seat cast or formed of dovetail shape in cross-section, and, as shown in Fig. 5, these parts each have a flange, *f*, formed on their sides, so that when the dovetail is inserted in a corresponding groove cut in the slats these flanges *f* will bear upon the outer surface of the wood, as there shown. The groove I make deeper than the dovetail, so that when the latter is inserted there will be left between its inner face and the bottom of the groove a space, *d*, as shown in Fig. 5. It will thus be seen that the dovetail may be driven in very tight, without any tendency to split the wood at either edge of the groove, as it would, if the metal extended down to and bore against the wood at the bottom of the groove, as is the usual custom, especially if the wood should shrink, as it generally does, more or less. The slats, being very narrow, can be readily driven on the bars, and made to conform to any desired curve, and yet be held very firmly in position. As the frame is constructed with a shoulder at the bottom of the back bars E, and also at the inner ends of the arms D, the slats can be driven on from their opposite ends, and secured by simply inserting a screw in each end of the last slat, thus avoiding the use of any other screws or fastenings.

By this mode of construction I am enabled to produce a superior article, inasmuch as the open seat and back are cooler and admit of ventilation. The small number of screws and fastenings used also enables them to be set up very quickly, these articles being usually shipped in pieces, and set up where used. The peculiar dovetail adds greatly to the strength and durability of the article.

I am aware that school-desks have been made with slats closely united, and that their seats have been formed with a hollow, or single curve, and also that the parts have been united by means of an ordinary dovetail-joint, and therefore I do not claim these; but

Having described my invention, what I do claim is—

1. The herein-described dovetail-joint, hav-

ing a space left between the face of the metal that enters the groove and the wood, to prevent the latter from being split by shrinkage, substantially as set forth.

2. A school seat or settee, having its seat or back composed of a series of open slats, resting one against another at their ends, and secured to the frame by means of a dovetail-joint, as set forth.

HERBERT L. ANDREWS.

Witnesses:
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