E. KIMBALL.
School-Desk.

No. 209,951. Patented Nov. 12, 1878.

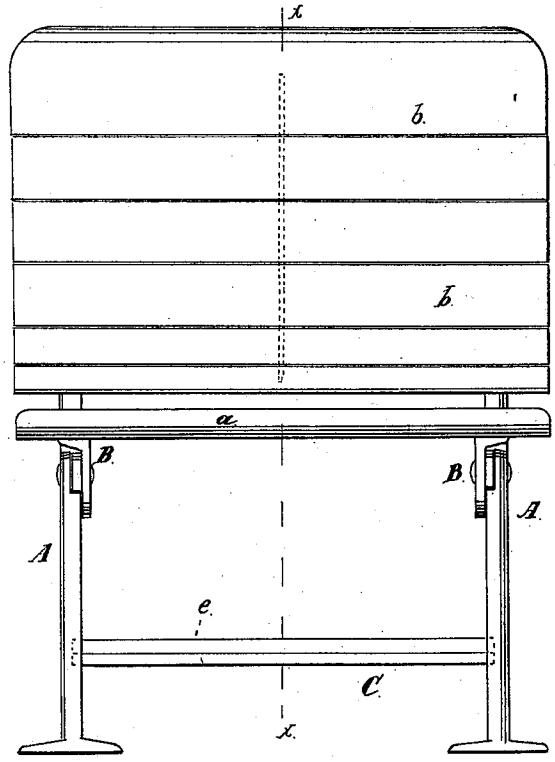


Fig. 1.

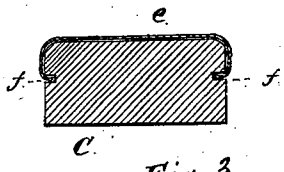


Fig. 3.

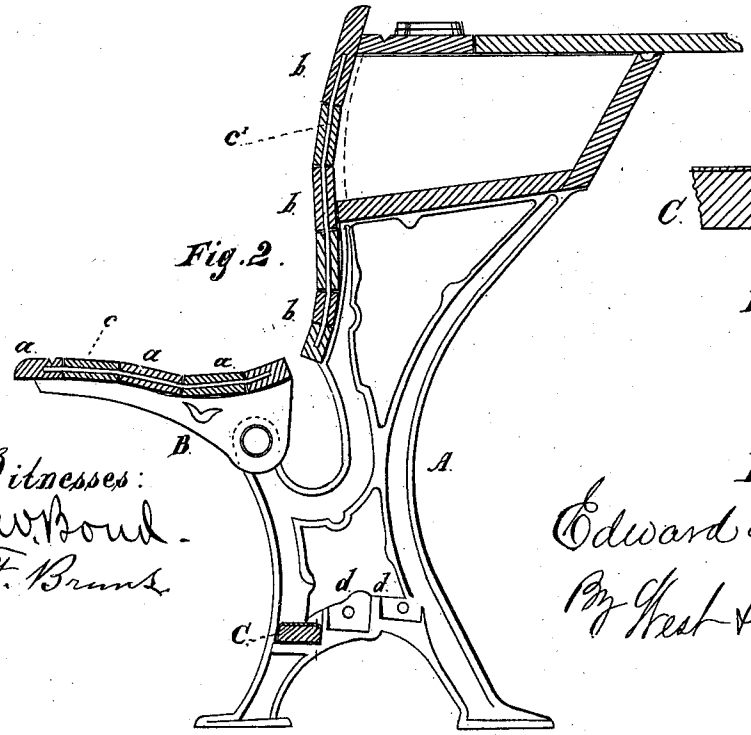


Fig. 2.

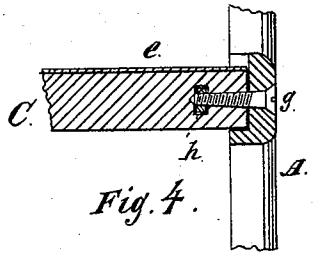


Fig. 4.

Witnesses:
C. W. Bond.
H. F. Brunt.

Inventor:
Edward Kimball
By West & Bond Attys.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

EDWARD KIMBALL, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN SCHOOL-DESKS.

Specification forming part of Letters Patent No. **209,951**, dated November 12, 1878; application filed December 11, 1876.

To all whom it may concern:

Be it known that I, EDWARD KIMBALL, of the city of Chicago, Cook county, State of Illinois, have invented new and useful Improvements in School, Hall, and other Seats, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation; Fig. 2, a vertical section on line *x* of Fig. 1; Fig. 3, a cross-section of the foot-rest; Fig. 4, a detail in section, showing the mode of fastening the foot-rest.

It is customary to make the seat and back of school-desks and hall-seats from long, narrow slats of wood. These slats, of course, spring more or less, and noise is produced by the contact of the edges of the slats.

The objects of my invention are, first, to stiffen the slats and prevent noise; second, to provide an adjustable foot-rest; and these objects I accomplish by means of a suitable wire inserted into the slats, as hereinafter described, by providing the seat-standards with a series of recesses to receive the ends of the foot-rest.

In the drawings, A represents a cast-iron standard for a school seat and desk; B, the seat-arms; *a*, the slats which form the seat; *b*, the slats of the back; *c*, a steel wire, which passes through the inner slats and into the outer slats of the seat; *c'*, a corresponding wire in the slats of the back.

In manufacturing, a hole is to be bored through each of the inner slats and into each outer slat. One end of the wire is then to be inserted into the hole in one of the outer slats, and the other slats are driven one after another upon the wire.

For seats of the length represented a single wire for the seat and a single wire for the back will be sufficient. In long seats one or more additional wires may be used, if necessary, located at suitable distances apart.

The slats are to be secured to the standards and seat-arms in the usual manner.

This construction strengthens the slats, keeps them securely in place, and prevents the rubbing of the edges together.

C is a foot-rest, the ends of which are supported and secured in a recess in the standards. I provide two or more of such recesses, *d*, in each standard; and the foot-rest can be located as may be required for the use of the pupils.

The adjustability of the rest has been proved valuable in use.

The rest C is secured in place by means of the screw or bolt *g* and nut *h*, as shown in Fig. 4.

The still rods or wires furnish a very efficient mode of strengthening and supporting the slats. They are noiseless, and cannot become loose or escape from the position in which they are placed.

What I claim as new, and desire to secure by Letters Patent, is as follows:

1. In combination with a slatted seat or back, metal rods or wires placed between the supports and passing through the intermediate slats and into the boundary-slats, so as to hold the rods in place and prevent the unequal springing of the slats, substantially as specified.

2. The standards A, provided with a series of recesses, *d*, in combination with the foot-rest C, substantially as and for the purpose specified.

EDWARD KIMBALL.

Witnesses:

ED. J. SMITH,

GEO. B. COOK.