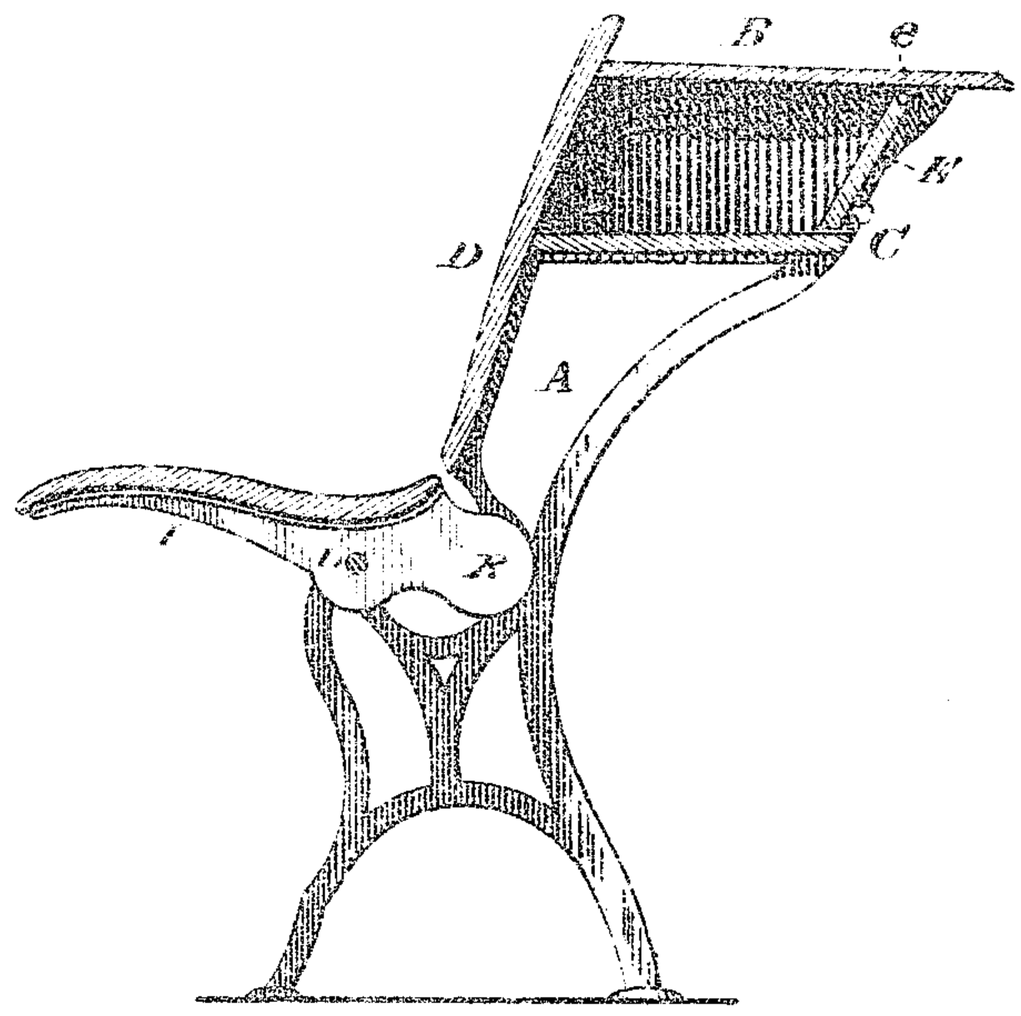
2 Sheets—Sheet 1.

J. H. NICHOLS.

School Desk and Settee.

No. 214,178. Patented April 8, 1879.

Fig. 1.



Witnesses.

Attest.

Walter Knight

Harry E Knight

Inventor.

Joseph H. Nichols

By Knight Bros.

Attys.

2 Sheets—Sheet 2.

J. H. NICHOLS.

School Desk and Settee.

No. 214,178. Patented April 8, 1879.

Fig. 2.

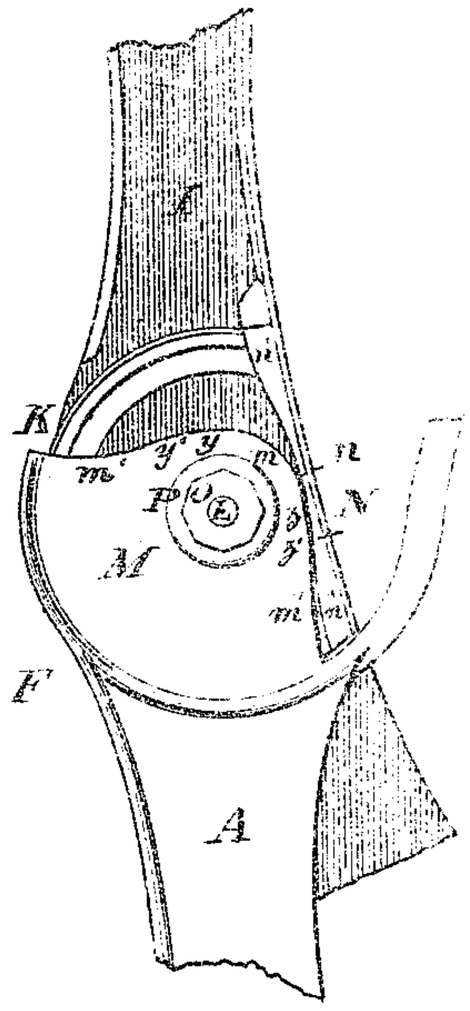


Fig. 3.

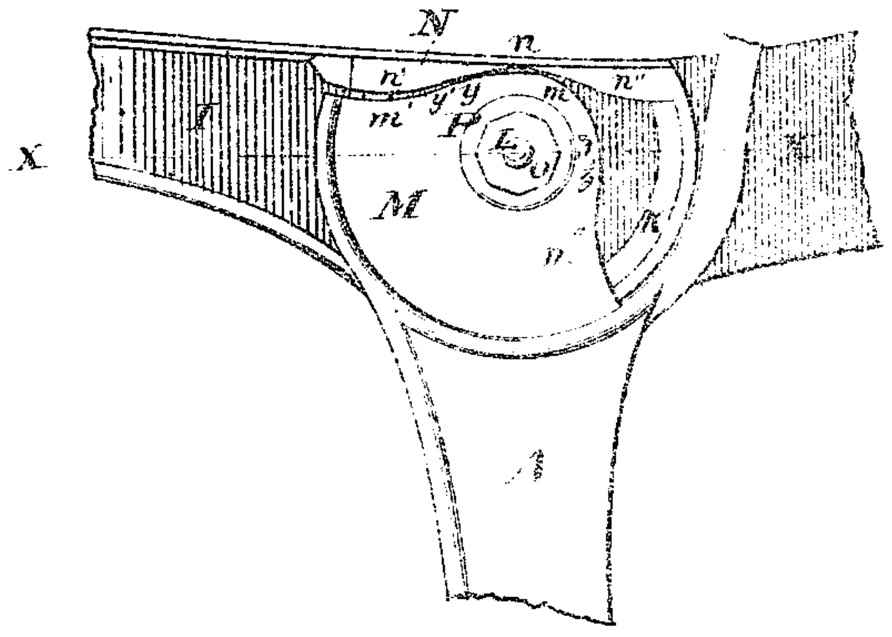
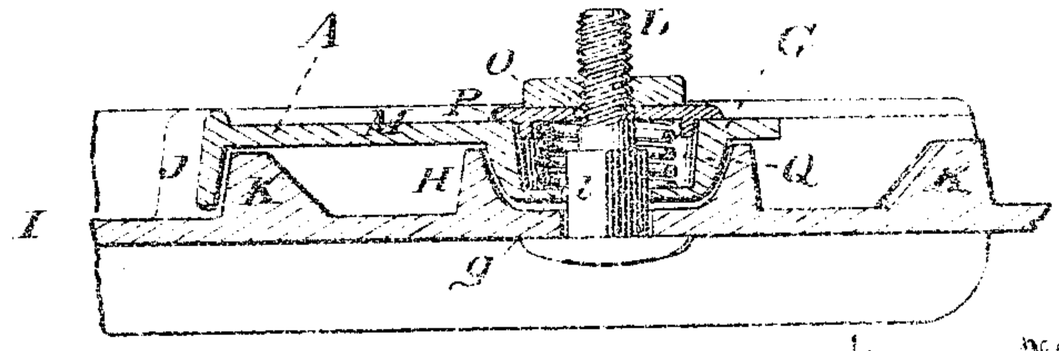


Fig. 4.



Witnesses:
Walter Knight
Harry E. Knight

Inventor:
Joseph H. Nichols
by Knight Bros. Attys.

UNITED STATES PATENT OFFICE.

JOSEPH H. NICHOLS, OF PHILLIPSBURG, NEW JERSEY, ASSIGNOR TO JOHN C. BROOKE, OF CINCINNATI, OHIO.

IMPROVEMENT IN SCHOOL-DESK AND SETTEE.

Specification forming part of Letters Patent No. 214,178, dated April 8, 1879; application filed January 30, 1879.

To all whom it may concern:

Be it known that I, JOSEPH H. NICHOLS, of Phillipsburg, in the county of Warren and State of New Jersey, have invented a new and useful Combined School-Desk and Settee, of which the following is a specification.

My invention relates to improvements in those articles of school-furniture in which a writing-desk has a seat hinged or pivoted to its standards; and my improvement comprises an improved construction of seat-arm and of the contiguous portion of the standard, hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a sectional elevation of a combined desk and settee embodying my improvements, the seat being represented in its open condition. The following figures represent, on a larger scale, the parts composing the joint, Figs. 2 and 3 being side elevations of the same in the folded and the open positions, respectively, and Fig. 4 being an axial section at the line *x x* on Fig. 3, looking upward.

A represents one of two precisely similar standards, surmounted by a customary or any suitable desk, B, shelf, closet, or book-box C, and back D.

A self-closing door or flap, E, hung on pivots *e*, is provided at the entrance of the closet C.

At F the standard expands into the form of a vertical plate, M, whose interior wall or surface has a hollow conical boss, G, having a square orifice, *g*, to receive a bolt, L, whose square neck *l* fits, and is held from turning by said plate-orifice.

The bolt L is provided with a nut, O, a washer, P, and with a helical spring, Q, the latter occupying the recess of the boss G. Also projecting from said plate is a semi-annular flange, J, concentric with the said boss G. The sides of the boss G and flange J are tapering, and fit the correspondingly-tapering hub H and flange K upon the seat-arm F.

A portion, *m*, of the edge of said vertical plate is concentric with the boss G, and thence takes the form of two concave curves, *m' m''*.

The seat-arm I has a flange, N, of such curved contour, as represented, as at its mid-length *n* to fit and hug the concentric portion *m* of the vertical plate, and at its other portions, *n'* and *n''*, to approximate in its convexity and by a slightly sharper curvature the concave outline of the parts *m'* and *m''*.

The effect is to arrest the descent of the seat by impact of the surfaces at or near a point, *y*, which will be more or less removed from the concentric portion as the bolt L is loosened or tightened, or as a greater or less weight is applied to the seat, the point of impact traveling along the plate-edge, as from *y* to *y'*, as the seat descends or becomes weighted, but only gradually, and wholly without jar or concussion.

These actions are repeated at the parts *m'' n''* in the act of folding the seat, the point of impact shifting rearward, as from *z* to *z'*.

The nut O having been screwed home upon the bolt L, or advanced sufficiently thereupon to produce the necessary bearing of the conical surfaces, no further adjustment will be required for a long time; and should the parts wear too slack, the defect is quickly remedied by tightening of the nut; but to provide against a neglect of this precaution, there may be such a rear prolongation, R, of the seat-arm as to counterbalance the weight of the forward portion, and thus diminish the liability to concussion.

This counter-balance may so far outweigh the seat proper as (when the nut O has been sufficiently slackened) to cause the seat to fold of its own accord on being relieved of the weight of the occupant.

An additional shelf or closet, located below the closet C, and similarly closed by a gravitating flap, may be provided.

I am aware that hinge-joints for school-seats have already been constructed whereby the motion of the seat has been gradually stopped, and the noise incident on folding such seats has been deadened. Such I do not broadly claim; but

What I claim as new and of my invention is—

The joint for a folding seat or settee, con-

sisting of the hollow tapering [illegible] boss G and the semi-annular flange [illegible] vertical plate M of the standard [illegible] by the reverse curved edge [illegible] bination with the tapering hub H and flanges K and N upon the seat arm, and with the bolt L, nut O, and spring Q, substantially as set forth.

In testimony of which invention I hereunto [illegible] my hand.

JOSEPH H. NICHOLS.

Attest:

GEO. H. KO[illegible]ER.

GEO. H. KNIGHT.