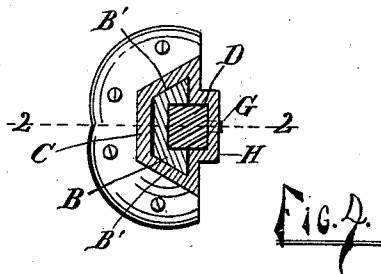
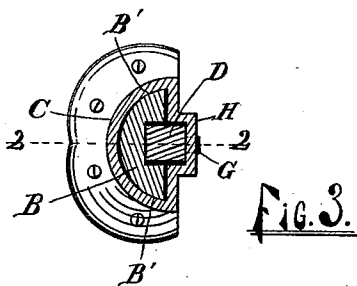
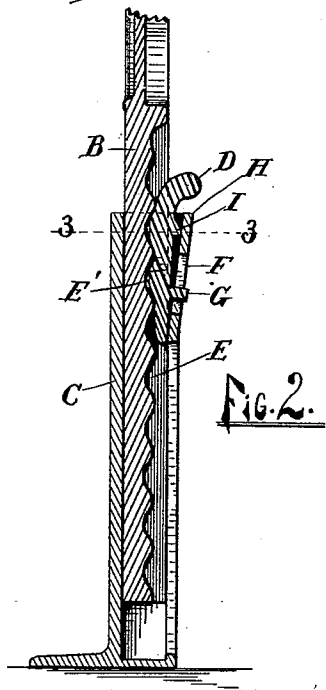
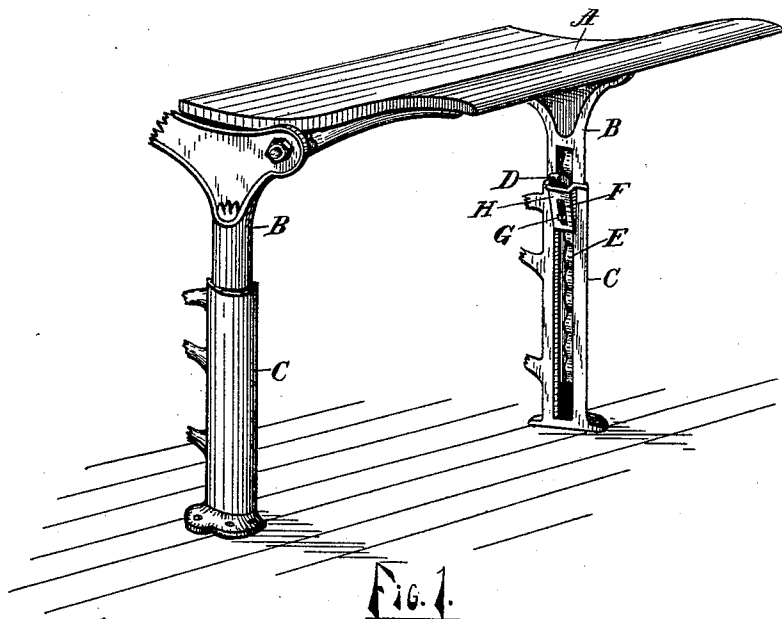


(No Model.)

E. C. GARD & C. M. WING.
ADJUSTABLE SCHOOL SEAT AND DESK.

No. 499,671.

Patented June 13, 1893.



WITNESSES:

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UNITED STATES PATENT OFFICE.

EZRA C. GARD AND CHARLES M. WING, OF MARCELLUS, MICHIGAN, ASSIGN-
ORS, BY DIRECT AND MESNE ASSIGNMENTS, TO MANLY B. WELCHER,
GEORGE P. BENTON, FRANK S. HALL, AND EZRA C. GARD, OF SAME PLACE.

ADJUSTABLE SCHOOL SEAT AND DESK.

SPECIFICATION forming part of Letters Patent No. 499,671, dated June 13, 1893.

Application filed July 20, 1892. Serial No. 440,687. (No model.)

To all whom it may concern:

Be it known that we, EZRA C. GARD and CHARLES M. WING, citizens of the United States, residing at Marcellus, in the county of Cass and State of Michigan, have invented certain new and useful Improvements in Adjustable School Seats and Desks; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in adjustable school seats and desks, or other like structures, and more particularly to the vertically adjustable supports or legs of the same, and its object is to provide the same with certain new and useful features, herein-after more fully described and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective of a device embodying our invention, being a school seat and its supports detached from the back and desk supports; Fig. 2, an enlarged vertical section of the adjustable leg on the line 2—2 of Figs. 3 and 4. Fig. 3 is a horizontal section on the line 3—3 of Fig. 2; and Fig. 4 is a similar view of a modified construction.

Like letters refer to like parts in all of the figures.

A represents the seat commonly used in conjunction with a desk for school purposes, which seat is pivoted in the usual manner to, and supported by vertically adjustable posts B, which are adapted to slide vertically within hollow posts C suitably attached to the floor; both of said posts are semi-cylindrical, in the form of the device illustrated in Figs. 1, 2 and 3 the outer surface of the posts B being plano-convex, and the inner surface of the posts C being plano-concave, and the convex surfaces of the posts B are made of greater radius than the concave surfaces of the posts C, except at the sides B' B', whereby the contact is only along these sides B' B' as indicated in Fig. 3. Each post B is also adjustably secured within the post C by means of a wedge D, which engages the respective plane sides of said posts and forces the respective concave and con-

vex surfaces together with such force as to hold them in place by friction. The plane sides of the posts C are outwardly inclined at the top to form a suitable inclined plane for the wedges D, and each of said wedges is provided with a lug G, which engages an elongated opening or slot F in said inclined plane, whereby the wedge is free to move down to lock the post and when released is stopped from being thrown out at the top of the post by the lug G, engaging the upper end of the opening F. On each wedge is also a projection or shoulder I, which when said wedge is raised engages the upper end of the post C and retains the wedge in an elevated position until pushed inward. A channel is formed in the plane side of each post B to receive the wedge D, and the bottom of said channel, and the adjacent faces of said wedges are oppositely corrugated at regular intervals to interlock. The wedges thus engage their respective posts B only at regular intervals, thus aiding materially in adjusting two or more of the posts B at the same level, and also preventing the wedge from slipping on the post. The posts B and C may be made angular in cross section as shown in Fig. 4 if desirable, the essential feature of their construction being that they have contact along parallel lines at B' B' and do not touch along a line opposite the wedge, whereby the bearings of the posts press toward a common center; this effectually prevents lateral vibration of the post B in the post C, even though the fitting be not very accurate, which is not the case where the bearings are opposite each other or are arranged in a line. It is evident that the desk at the rear of the seat (not shown) may also be mounted upon similar adjustable supports B, engaging fixed posts C which may be made integral with the posts C as shown, and said desk may also be adjustably connected to the back of said seat.

In operation, as the seat is raised, the wedges are thrown upward and outward engaging the shoulders I with the tops of the posts C. The posts B are then free to move vertically any distance. When a little above the position desired the wedges are thrown in-

ward and the corrugations E E' engaged. The wedges D will now pass downward with the post B, and engaging the inclines H, will press against and bind said post in place as described, thus forming a structure that will not vibrate laterally, and that can be made of plain castings without bolts, rivets, screws, or machine work.

We do not limit our invention to school desks and seats. Many and various structures may be adjustably supported upon our device aside from these.

What we claim is—

1. A vertically adjustable leg or support, consisting of a hollow fixed post having one side of its upper end inclined and formed with an opening, an inner post movable in said outer post, and formed with a longitudinal channel and with the back of said channeled portion corrugated, and a wedge having one side corrugated and designed to engage the corrugated portion of said movable post, said wedge also having a lug operating in the opening in the inclined wall of the outer post, and a projection adapted to engage the top of said outer post, substantially as described.

2. A vertically adjustable leg or support, consisting of a hollow fixed post C having its top inclined to form an inclined plane and said inclined portion formed with a longitudinal opening, a post B adapted to move vertically in said post C, said posts B and C having inclined lateral sides in engagement with each other, and sides at an angle thereto always out of contact with each other, the side of said post B opposite said non-contacting sides having a longitudinal channel formed with a corrugated back wall, and a wedge having one side corrugated to engage said corrugated portion of post B, the opposite side of said wedge engaging said inclined plane and having a lug G operating in the opening therein and a projection I, said parts being arranged and operating substantially as described and for the purposes specified.

In testimony whereof we affix our signatures in presence of two witnesses.

EZRA C. GARD.
CHARLES M. WING.

Witnesses:

GEO. A. PAXSON,
HENRY GIDDINGS.