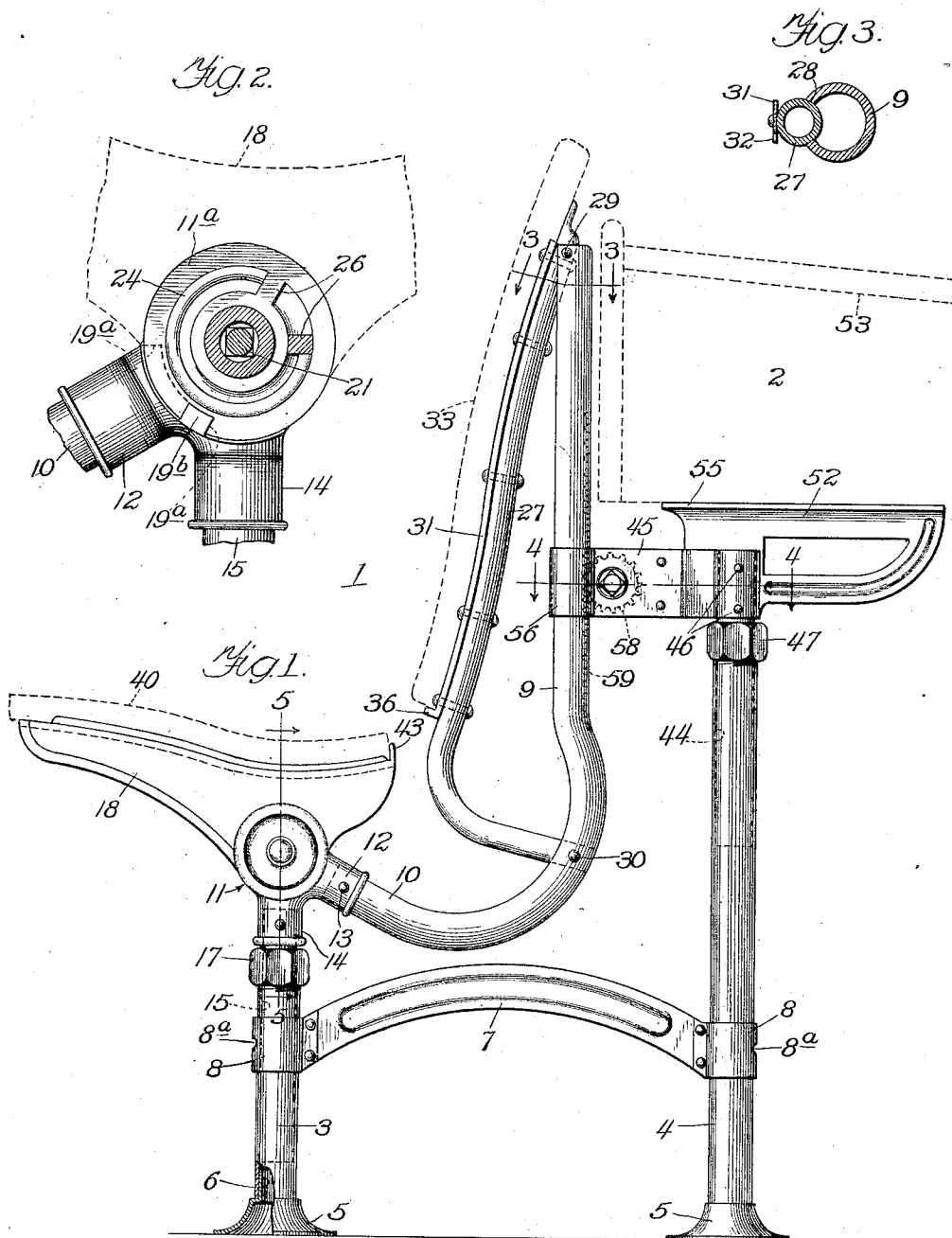


L. A. CHURGAY.
SCHOOL FURNITURE.
APPLICATION FILED DEC. 8, 1910.

1,044,745.

Patented Nov. 19, 1912.

2 SHEETS-SHEET 1.



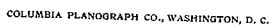
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APPLICATION FILED DEC. 8, 1910.

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2 SHEETS--SHEET 2.



UNITED STATES PATENT OFFICE.

LOUIS A. CHURGAY, OF CHICAGO, ILLINOIS, ASSIGNOR TO SEARS, ROEBUCK AND CO.,
OF CHICAGO, ILLINOIS, A CORPORATION OF NEW YORK.

SCHOOL FURNITURE.

1,044,745.

Specification of Letters Patent.

Patented Nov. 19, 1912.

Application filed December 8, 1910. Serial No. 596,191.

To all whom it may concern:

Be it known that I, LOUIS A. CHURGAY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in School Furniture, of which the following is a specification.

One of the objects of this invention is to provide an improved construction of framework for a combined seat and desk for use in schools and other places.

Another object of the invention is to provide an improved school seat and desk in which the seat portion and the desk portion are adjustable independently of each other.

A further object is to provide an improved connection between the framework and the wood of the seat portion.

Other objects and advantages of the invention will become apparent as the invention is better understood from the following detailed description.

In the accompanying drawings, Figure 1 is a side elevation of a combined school seat and desk embodying the features of my invention, the wooden portions of the device being indicated in dotted lines. Fig. 2 is a vertical section through the hinge for the pivoted seat section. Fig. 3 is a section on line 3—3 of Fig. 1. Figs. 4 and 5 are sections on lines 4—4 and 5—5, respectively, of Fig. 1. Figs. 6 and 7 are a side elevation and top plan view of an alternative means for clamping the seat and desk in adjusted position. Figs. 8 and 9 are an edge and side view, respectively, of a spring embodied in said hinge. Fig. 10 is a fragmental view of the back portion of the seat, showing the means for fixing the wood of said back portion in place. Fig. 11 is a view similar to Fig. 10 illustrating the means for connecting the wood to the seat arms. Figs. 12 and 13 are views showing the under-cut grooves in the wood comprised in the seat portion. Fig. 14 is a section on line 14—14 of Fig. 10.

The embodiment of my invention which I have herein shown by way of example comprises a seat-and-back portion 1 and a desk portion 2, said portions being mounted, respectively, upon pairs of tubular standards 3 and 4. Said standards have feet 5 which may have tubular portions 6 at their upper side extending into the lower ends of the standards and secured therein in any

suitable way. The standards 3 and 4 at each side of the structure are suitably spaced apart and rigidly connected together by a brace 7 having sleeves 8 at its ends which surround the standards 3 and 4. The sleeves 8 may be secured in place on the standards by punching portions of the sleeves into the standards, as indicated at 8^a, to interlock the parts. The standards 3 and 4 and brace 7 at each side of the structure constitute a side frame.

The seat-and-back portion 1 comprises a tubular bar 9 at each side, the lower end of each of the bars being bent forwardly to form an arm for attachment to the pivoted seat section.

11 is a member having a sleeve 12 fitting over the forward end of the arm 10 and secured thereto in any way as by means of a pin 13. The member 11 also has a sleeve 14 which fits upon and is secured to the upper end of a tubular supporting member 15, the latter being slidably mounted in or telescoping with the standard 3. The upper end of the standard 3 is tapered and has a plurality of slots 16 therein (Fig. 5) said end being exteriorly threaded to receive a nut 17. By turning the nut 17 downwardly upon the threaded tapered end of the standard 3 said end may be compressed upon the tube 15 to lock the seat portion in position at any desired height.

The hinge connection between the seat arms 18 and the frame comprises a hinge portion 11^a of the member 11, each seat arm having a portion 19 which is rotatably mounted upon an annular boss 20 on the portion 11^a. A bolt 21 extends through said boss 20 and has a nut 22 threaded upon its inner end, said nut engaging a cap or plate 23 and clamping all of the members of the hinge together. A spring 24 which may consist of a split ring, is positioned in an annular recess 25 formed in the members 11^a and 19, said spring tending to force the members 11^a and 19 apart and prevent rattling of the hinge. The ends of the spring 24 engage lugs 26 (Fig. 2) upon the member 11^a and the seat arm member 19, respectively, said lugs being in such relative position that when the seat is turned down into operative position the spring 24 is placed under tension. When the seat is not occupied the spring 24 holds the seat in its raised position. Shoulders 19^a on the por-

tion 19 of the seat arm are arranged to engage a lug 19^b on the hinge member 11^a to determine the pivotal movement of the seat section.

5 The means for supporting the back comprises a tubular bar 27 at each side of the seat, the upper ends of said bars being attached to the upper ends of the bars 9 in any suitable way. In this instance the bars
10 9 have notches 28 in which the upper ends of the bars 27 lie, said upper ends being secured together by means such as rivets 29 extending therethrough. The lower ends of the bars 27 are bent rearwardly and are secured to the lower portions of the bars 9 in
15 any suitable way as by means of pins or rivets 30.

The bars 27 have secured to their forward sides strips 31 having a plurality of lugs 32
20 at one edge. The back 33, usually of wood, has undercut grooves 34 in its rear side to receive the strips 31 carried by the bars 27. Each groove 34 has notches 35 at one edge to receive the lugs 32 upon the strip 31 and
25 permit said strip to enter the undercut groove 34. The notches 35 extend farther laterally than the undercut wall of the groove 34. In assembling the parts the wood is associated with the strip 31 so that
30 the lugs 32 enter the notches 35 and the wood is then given first a sidewise and then a downward movement to carry the notches 35 out of register with the lugs 32 when the strip 31 will engage the undercut walls of
35 the groove 34 and securely hold the wood in place. Each of the strips has an angular lug 36 at its lower end to determine the downward movement of the wood.

The inter-engaging portions upon the seat
40 arms 18 are provided by forming a rib or bead 37 on the flange 38 of each arm and punching tangs or lugs 39 from said bead, said tangs lying out of the plane of the flange 38 of the seat arm. The wood
45 for the seat proper is provided with an undercut groove 41, notches 42 being formed at one edge of said groove to receive certain of the tangs 39, said notches extending farther laterally than the undercut portion
50 of the groove 41. In fixing the wood to the seat arms 18 the notches 42 are fitted over the proper tangs 39 and the wood is given a lateral movement to carry the tangs at the opposite side of the bead 37 into engagement with the undercut wall of the
55 groove 41; the wood is then given a rearward movement to carry the first mentioned tangs out of register with the notches 42, when the wood will be firmly secured in place. Angular lugs 43 may be formed at the rear end of the seat arms to limit the movement of the wood rearwardly.

65 A tube 44 is slidably mounted in the upper portion of each of the standards 4, said tube carrying at its upper end a pair of

complementary brackets 45, said brackets being fixed in place by any suitable means such as pins or rivets 46. The tube 44 is secured in adjusted position on the standard
70 4 by providing a nut 47 threaded upon the upper end of said standard, said upper end being tapered and slotted so that the nut 47 will compress it upon the tube 44. If desired the nuts 17 and 47 may be dispensed with, and the slotted portions of the standards 3 and 4 may be clamped upon their
75 respective sliding tubes by means of a clamp 48 (Figs. 6 and 7) adapted to surround the slotted upper ends of the standards, said clamp having ears 49 arranged to be drawn
80 together by means of a screw 50 passing loosely through an opening 51 in one of the ears and screw threaded in the other ear. The brackets 52 for supporting the desk proper 53 lie in slots 54 (Fig. 4) in the
85 upper ends of the tubes 44 and between the ends of the complementary brackets 45. Said brackets 52 may have flanges or ears 55 to which the desk proper 53 may be fixed. The forward ends 56 of the brackets 45 surround the bars 9 of the seat-and-back portion 1 and form guides for said bars 9.

Rotatably mounted in openings 57 in each pair of the brackets 45 is a pinion 58 adapted to engage with a rack 59 formed in the
95 rear side of the bar 9 in any suitable way. A square rod 60 has its ends lying in openings in the opposite pinions 58 and said pinions are provided with lateral extensions 61 which are adapted to be engaged by a
100 wrench for turning the pinions.

As will be observed, if either the seat-and-back portion 1 or the desk portion 2 is rigidly clamped in place by means of the
105 nuts 17 or 47, and the other one of said portions is loosened by means of one pair of said nuts, said loosened portion may be adjusted in position upon its standards 3 or 4 to any desired height by rotating the pinions 58, said pinions 58 or the bars 9 having the
110 racks 59 thereon traveling, depending upon which one of the portions 1 or 2 is fixed.

As will be seen, the greater portion of the framework is composed of commercial tubing. It has heretofore been the practice to
115 form the framework of school furniture of castings which were given a finishing coat of japan or the like. By forming the framework of commercial tubing it is possible to oxidize the framework, the latter finish being not only more pleasing in appearance, but also more durable and satisfactory in every
120 way.

While I have herein described my invention in considerable detail, I realize that
125 various modifications within the scope of the invention will occur to persons skilled in this art, and I, therefore, do not limit myself to the exact construction herein shown and described.

I claim as my invention:

1. In a school seat and desk, in combination, two side frames, two desk-supporting brackets adjustably connected to said side
5 frames, two pairs of complementary brackets, each pair embracing at one end one of the desk-supporting brackets and being rigidly secured thereto, the opposite end of each pair forming a guide, each pair being provided
10 adjacent said guide with pinion bearings and an interior space for a pinion, a seat and a back supported by said side frames, said back having a sliding engagement with said guides and being provided
15 with rack portions, pinions supported by said bearings and located in said spaces and engaging said rack portions, and an operative connection between the pinions.

2. In a combined school seat and desk in
20 combination, a framework comprising tubular standards, a desk portion slidably mounted on certain of said standards, a seat-and-back portion slidably mounted on others of said standards, said seat-and-back portion
25 comprising a pair of tubular bars having their lower ends bent to form arms attached to the pivoted seat section, a second pair of bars to which the back of the seat-and-back portion is secured, the upper
30 ends of said second bars being attached to the upper ends of the first mentioned bars, and the lower ends thereof being bent rearwardly and attached to the lower portions of the first mentioned bars, and brackets
35 attached to the desk portion and slidably engaging the first mentioned bars.

3. In a combined school seat and desk in combination, a pair of tubular standards, members slidably mounted in the upper ends of said standards, a desk carried by said
40 members, a pair of complementary brackets fixed at one end upon the upper end of each of said members, a seat portion comprising a pair of tubular bars having racks formed therein, said brackets embracing said bars,
45 and a pinion rotatably mounted between the brackets of each pair and meshing with one of said racks.

4. In a combined school desk and seat in combination, a framework comprising a
50 pair of tubular standards at each side, bracing means for spacing apart and securing together said standards, a member slidably mounted in the upper end of each of said standards, a desk mounted upon said mem-
55 bers at the rear of the structure, a seat mounted upon the members at the forward end of the structure, means for clamping said members against movement in said standards, racks carried by said seat, brackets
60 secured to certain of said members, and pinions rotatably mounted in said brackets and meshing with said racks, said pinions being connected to move together.

In testimony whereof I affix my signature
65 in presence of two witnesses.

LOUIS A. CHURGAY.

Witnesses:

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J. T. WATTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."