Dec. 20, 1938. M. M. KONARSKI 2,140,635

SCHOOL FURNITURE

Filed June 5, 1936 2 Sheets-Sheet 1

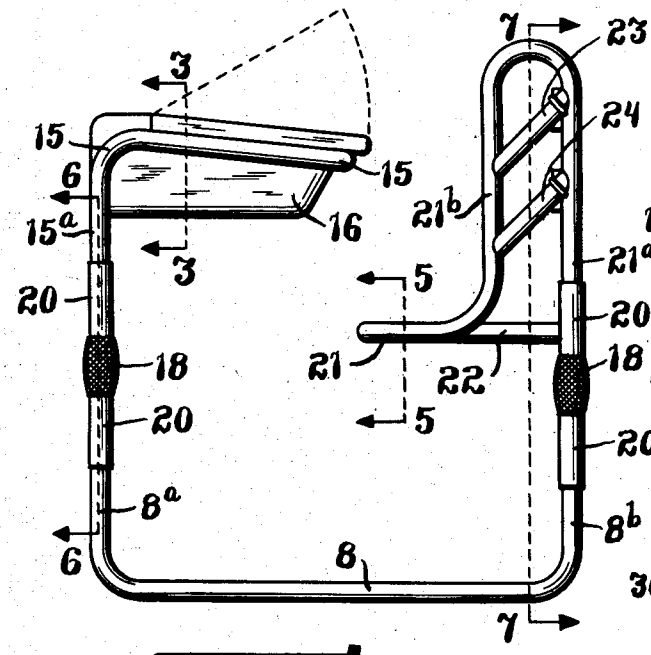


FIG 1

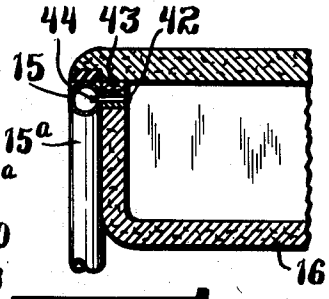


FIG 3

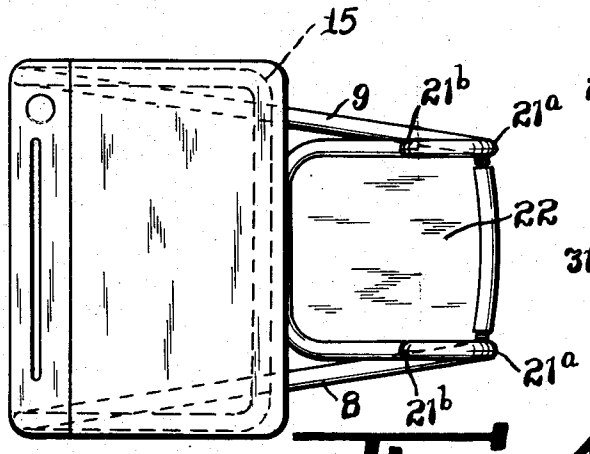


FIG 4

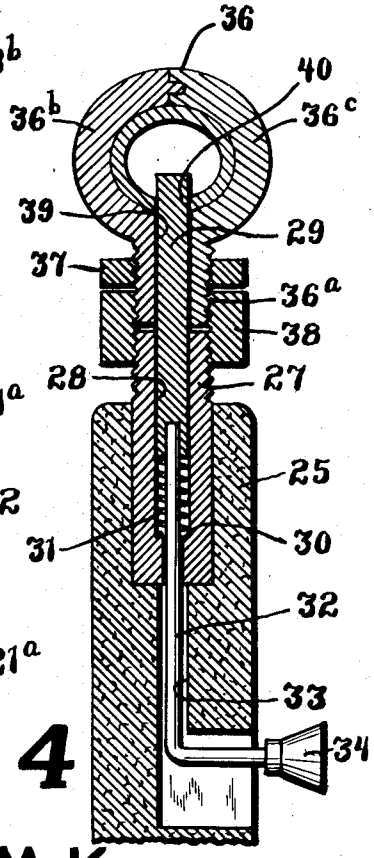


FIG 2



FIG 5

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SCHOOL FURNITURE

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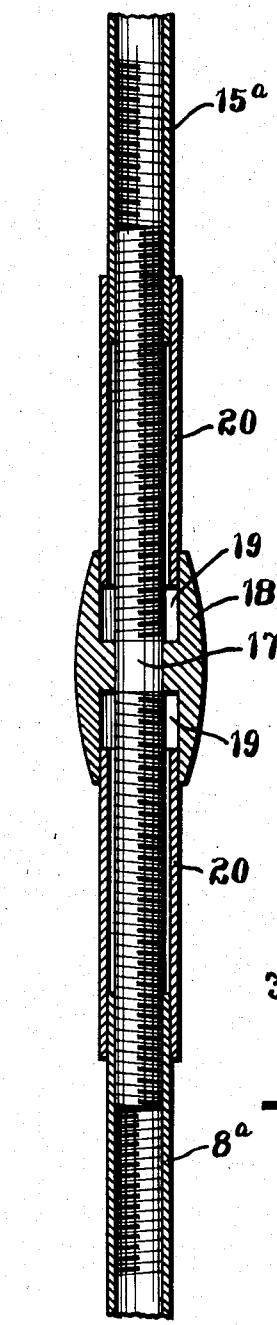


FIG 6

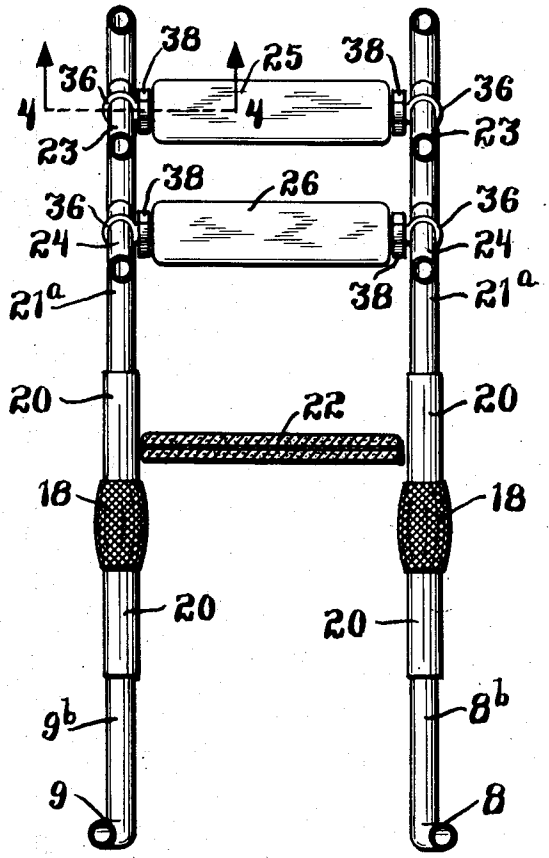


FIG 7

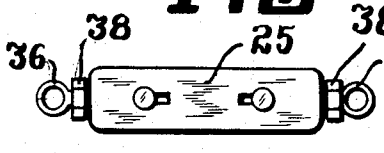


FIG 8

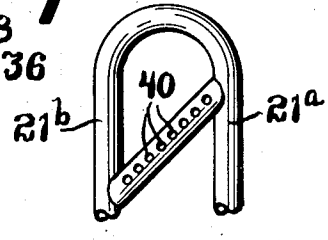


FIG 9

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SCHOOL FURNITURE

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Application June 5, 1936, Serial No. 83,653

8 Claims. (Cl. 155—124)

This invention relates to improvements in a combination desk and seat adapted to be used for school purposes.

School desks as ordinarily constructed, must be built in a plurality of sizes to accommodate pupils of different ages and sizes. Sudden shifts in population require modern school authorities to carry a large reserve stock of each size of desk. This necessitates a large investment and considerable storage space.

Objects of this invention are, to provide a combination desk and seat which will be strong and durable; which may be quickly and conveniently adjusted to comfortably fit pupils of any age and size whereby pupils in the same grade of different sizes may be comfortably and properly seated and desks of one size interchangeably used in all grades.

Other objects are to provide an adjustable desk and seat composed of separable parts which can be quickly and conveniently assembled and which will occupy a relatively small amount of space in shipment or storage.

The above objects are accomplished and other advantages are gained by the novel construction, combination and arrangement of parts hereinafter described with reference to the accompanying drawings wherein there is shown an illustrative embodiment of the invention, it being understood that the invention is not confined to the exact design shown, and that changes and modifications may be made which come within the scope of the claims hereunto appended.

In the drawings:

Figure 1 is a side elevational view of a combined seat and desk constructed in accordance with this invention,

Figure 2 is a top plan view of same,

Figure 3 is a fragmentary, sectional view taken as indicated by the lines 3—3 of Figure 1,

Figure 4 is a fragmentary, horizontal, sectional view taken as indicated by the lines 4—4 of Figure 7,

Figure 5 is a fragmentary, vertical, sectional view taken as indicated by the lines 5—5 of Figure 1,

Figure 6 is a vertical, sectional view taken as indicated by the lines 6—6 of Figure 1,

Figure 7 is a vertical, cross sectional view taken as indicated by the lines 7—7 of Figure 1,

Figure 8 is a rear, elevational view of one of the back rests employed in reducing the invention to practice,

Figure 9 is a fragmentary, longitudinal view showing the inwardly, presented side of the upper portion of the seat frame.

Proceeding now to a detailed description of the invention, with reference to the particular adaptation thereof disclosed in the drawings, the numerals 8 and 9 denote base members each composed of metal tubing. The forward end portions 8*a* and 9*a* of the said base members are turned upwardly to form leg supports for the desk hereinafter described.

The rear end portions 8*b* and 9*b* of the members 8 and 9 are likewise turned upwardly to form leg supports for the seat hereinafter described. The numeral 15 is used generally to denote a desk frame which is preferably formed of one piece of metal tubing having downwardly turned end portions 15*a* which form the upper section of the desk legs. The middle portion of the frame 15 is turned rearwardly in the form of a horizontal loop which extends along the lateral sides and rear end of the desk and forms a support for the box portion 16 thereof.

The upturned portions 8*a* and 9*a* are internally threaded to receive the lower ends of the threaded rods 17. The upper end of each rod 17 is provided with screw threads of an opposite pitch and the downwardly turned portions 15*a* are internally threaded to receive the upwardly projecting portion of the rod 17.

The rod 17 is thus operatively positioned in each upturned portion 8*a* and 9*a* to adjustably secure the desk frame 15 on the base portions 8 and 9. Each rod 17 is provided with an exteriorly knurled hand grip 18 which is welded or otherwise suitably secured on the middle portion of the rod 17. The grip 18 is provided on each axial end thereof with a bore 19 which is substantially larger than the tubes 8*a* and 15*a*. A tube 20 is secured in each bore 19 with the upper tube 20 overlapping the downturned portion 15*a* and the lower tube 20 overlapping the upturned portion 8*a* or 9*a*. It will be seen that the tubes 20 thus cover the threaded portions of the rod 17 and that the knurled grip 18 may be operated to raise or lower the desk portion 15.

The upturned portions 8*b* and 9*b* are likewise internally threaded and a bolt 17 having a grip 18 and the tubes 20 are likewise operatively positioned therein. The numeral 21 denotes a seat frame which is formed of one piece of tubing having downturned end portions 21*a* each of which is secured on the upper end portions of a rod 17 positioned in one of the upturned portions 8*b* to adjustably secure the same in assembled relation in the manner hereinbefore described rela-

tive to the portions 8a and 15a. The downturned portions 21a extend upwardly and are bent forwardly, then downwardly to form vertical side members 21b from which the tube 21 is bent forwardly to form a loop adapted to support the seat 22.

On each lateral side of the seat, the side members 21a and 21b are connected with the cross members 23 and 24 which are preferably in the form of a tube and which are welded or otherwise suitably secured to the portions 21a and 21b. Each cross member 23 is inclined forwardly to form a support for the back members 25 and 26 hereinafter described.

While the back members 25 and 26 may be formed of any suitable material, I prefer to form the same of molded fiber composition. Each of the back members 25 and 26 is in the form of a slat having a threaded stud 27 embedded therein and projecting from each end thereof. Each threaded stud 27 is provided with an axial bore in which is slidably mounted a plunger 29 which projects beyond the end thereof for a purpose hereinafter described. The bore 28 is reduced in diameter adjacent the inner end of each stud 27 to provide a shoulder 30 against which is mounted a coil spring 31 which is positioned therein to normally move the plunger 29 to an outward position.

Each back member 25 or 26 is provided with a bore 33 which coincides with the reduced inner end portion of the bore 28 and in which is slidably mounted an elongated member 32.

The outer end of the elongated member 32 is suitably secured to the plunger 29 and the inner end thereof is operatively connected to a button 33 which projects from a slot in the rear face of each back member whereby the knob 34 may be moved to operate the plunger 29.

The numeral 36 denotes an eye member having a ring adapted to be mounted on one of the cross members 23 or 24 and which is provided with a threaded stud 36a which corresponds in shape and size to the stud 27. The eye member 36 is split to form the pieces 36b and 36c for the purpose of providing means whereby each eye member 36 may be positioned on one of the cross members 23 or 24. With the eye 6 assembled on one of said cross members, a nut 37 is operatively positioned on the stud portion 36a to hold the pieces 36b and 36c in assembled relation.

The numeral 38 denotes a nut which is threaded on the studs 27 and 36a to hold the same in assembled relation. The eye member 36 is provided with a radial bore 39 which extends axially through the portion 36a, in alinement with the bore 28 in the stud 27 and in which the plunger 29 is received as shown in Figure 4. Each cross member 23 and 24 is provided on the forwardly presented face thereof with a longitudinally directed row of bores 40 in which the plunger 29 is received to detachably hold the eye member 36 in a fixed position thereon.

The box portion 16 of the desk is preferably formed of fiber, molded in one piece with rounded corners and is adapted to be mounted with the upper portion thereof fitted within the loop in the desk frame 15. The box 16 is secured in the frame by the pins 42 which are entered through suitable inserts 43 in the lateral sides of the box 16 and are entered in bores 44 in the tubing 15 as shown in Figure 3.

The seat 22 is formed to fit within the loop in the seat frame 21. The forward and lateral sides of the seat 22 are preferably provided with an overhanging edge portion 22a which rests on the tubing 21. Suitable fingers 45 are secured to the bottom of the seat 22 and are entered in slots 46 to securely hold the seat in position in said loop.

In use, the down turned portions 15a of the desk frame 15 are placed in axial alinement with the upturned portions 8a and 9a of the base portions 8 and 9. The upper end of the shaft 17 is entered in the threaded bore of each downturned portion and the lower end of each shaft is entered in the threaded bore of the upturned portions 8a and 9a and the knurled handle 18 is rotated to operatively position the shaft 17 in said bores.

The downturned portions 21a of the seat frame 21 are likewise secured to the upturned portions 8b by means of a shaft 17. A desk box 16 is secured to the desk frame and the seat 22 and the back members 25 and 26 are secured to the seat frame as hereinbefore set forth.

It will be seen that the height of the desk 16 may be adjusted by operating the knurled handle 18 and that the height of the seat 22 may be likewise adjusted by operating the bolt 17 which connects the seat frame to the base members. To adjust the back member 25, on the cross members 23, the buttons 34 are moved inwardly to withdraw the plunger 29 from the bores 40 in the members 23. The eye members 36 are then moved on the members 23 to position the back member 25 in a selected position. The buttons 34 are released whereupon the springs 31 move the plungers 29 into one of the bores 40 thus securely locking each end of the back member 25 in a selected position on the cross member 23. The adjustment of the back member 26 on the cross member 24 is likewise accomplished. The desk and seat may be thus raised or lowered to comfortably fit pupils of any size. As the cross members 23 are inclined downwardly, the seat backs 25 and 26 may be moved forwardly and downwardly to fit pupils of the lower grades. In the position shown in Figures 1 and 7 the seat backs 25 and 26 are positioned to fit pupils in the higher grades. As the threaded portions of the shaft 17 are covered by the tubes 20, the furniture herein described may be adjusted to any height without exposing the threads in the shaft 17.

It will be seen that I have provided a strong, durable desk which may be manufactured at a low cost, which can be shipped or stored in a knocked-down condition and which can be quickly and conveniently assembled to provide a desk adjustable to fit pupils of any size.

Having thus illustrated my invention and described the same in detail, what I claim as new and desire to secure by Letters Patent is:—

1. In furniture of the character described, a tubular frame provided with longitudinally directed, spaced, base members, having upturned forward end portions forming desk supporting legs and upturned rearward end portions forming seat supporting legs; a desk frame extending upwardly and rearwardly from said desk supporting legs in the form of a loop, a seat frame extending upwardly from said seat supporting legs, then curved forwardly and downwardly with the middle portion thereof continued to form a forwardly projecting square loop, a seat secured in the last named loop and a back support secured on said seat frame.

2. In furniture of the character described, two tubular, longitudinally directed base members having upturned forward end portions forming

desk supporting legs; the rearward end portions of said members being upturned to form seat supporting legs; a one-piece tubular desk frame having vertical end portions, means to adjustably secure said vertical end portions to said desk supporting legs; a desk box mounted between said vertical end portions, said desk frame being extended rearwardly along the lateral sides and rear edge of said box; a tubular seat frame having vertical end portions; vertically adjustable means to secure the end portions of said seat frame on said seat supporting legs; said seat frame curved forwardly from said vertical end portions, then downwardly with the middle portion thereof continued forwardly in a horizontal loop, a seat secured in said loop and a back support adjustably secured on said seat frame.

3. In furniture of the character described, two tubular, longitudinally directed, spaced, horizontal, base members, each of said members having upturned forward end portions forming desk supporting legs; the rearward end portions of said members being upturned to form seat supporting legs; a one-piece tubular desk frame having vertical end portions each adjustably secured to one of said desk supporting legs, said desk frame being extended rearwardly in the form of a square loop, a desk box mounted in said loop; a tubular seat frame having vertical end portions; means to adjustably secure each vertical end portion of said seat frame on one of said seat supporting legs; said seat frame curved forwardly from said end portions, then downwardly with the middle portion thereof forming a forwardly projecting square loop, a seat secured in the last named loop and back members adjustably secured on said seat frame.

4. In furniture of the character described, longitudinally directed, spaced, base members having interiorly threaded upturned forward end portions, a tubular desk frame having downturned, interiorly threaded end portions, each positioned in coaxial alinement with one of said upturned portions, a threaded shaft operatively mounted in the bores of said coaxially alined end portions, a tube having the middle portion thereof secured to the middle portion of each shaft and arranged with the coaxially alined end portions slidably received in said tube, and a desk on said desk frame.

5. In furniture of the character described, a base portion having interiorly threaded upturned, tubular legs and an upper structure having downwardly presented, interiorly threaded portions, each positioned in coaxial alinement with one of said legs, a threaded shaft operatively mounted in each downwardly presented portion with the lower end portion thereof operatively mounted in one of said legs; a tube fixed to each threaded shaft, said tube telescopically arranged relative to the leg and to the downwardly presented portion in which the shaft is mounted.

6. In furniture of the character described, a seat frame formed of one piece of tubing having end portions forming vertical posts, said tubing curved forwardly from each of said posts, and extended downwardly to form at each side a pair of longitudinally spaced, side members with the intervening portion of the tubing arranged in a forwardly projecting, horizontal loop forming a seat support, each pair of side members provided with a tubular cross member and a seat back adjustably secured to said cross members and extending therebetween.

7. In furniture of the character described, a seat frame formed of one piece of tubing having end portions forming vertical posts, said tubing curved forwardly from each of said posts and extended downwardly to form at each side a pair of longitudinally spaced, side members with the central portion of the tubing arranged in a forwardly projecting, horizontal loop forming a seat support; downwardly inclined, parallel, tubular cross members connecting each pair of side members; a back rest adjustably secured to the like cross members at each side and extending therebetween.

8. In furniture of the character described, base members having upturned end portions providing supporting legs, a desk mounted on the forwardly presented legs, a seat frame formed of one piece of tubing having end portions forming vertical posts adjustably secured to the rearwardly presented legs, said tubing curved forwardly from each of said posts and extending downwardly to form spaced, side members with the central portion of the tubing arranged in a forwardly projecting, horizontal loop forming a seat support, each pair of side members provided with downwardly inclined, tubular cross members and a seat back adjustably secured to said cross members and extending between said side members.

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