June 29, 1965 R. A. McMASTERS 3,191,992

CHAIR DESK

Filed March 12, 1964

FIG. 1.

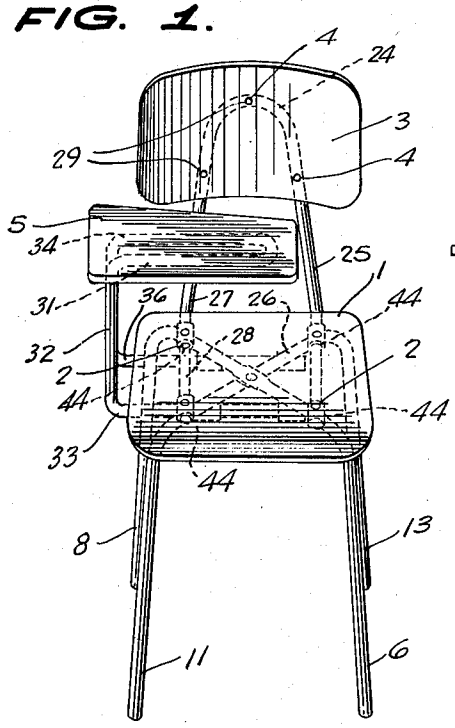


FIG. 2.

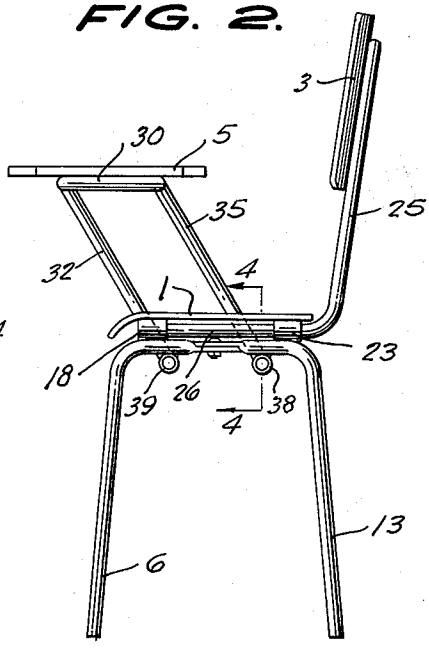


FIG. 4.

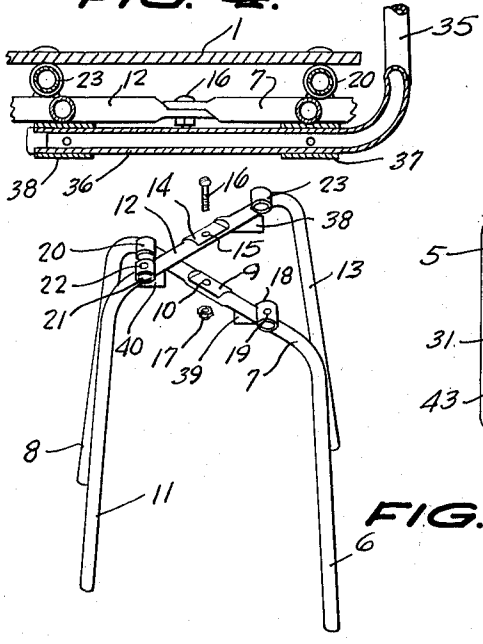


FIG. 3.

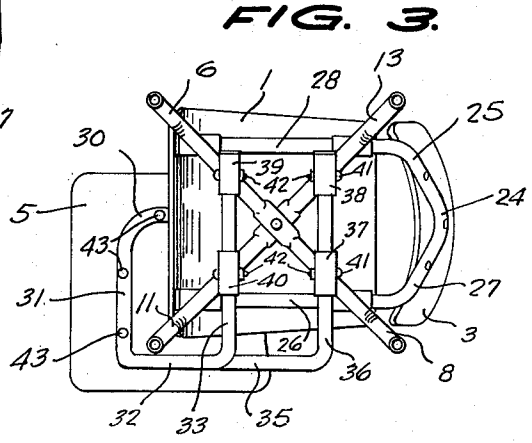


FIG. 5.

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CHAIR DESK

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1 Claim. (Cl. 297—160)

The present invention is directed to an improvement in chair desks and particularly chair desks having a metal frame.

The principal object of the present invention is to provide a chair having a desk top as a part thereof and which chair desk is sturdy and long lasting in use, is economical to produce and assemble, can be readily repaired, is comfortable to use and yet can be shipped unassembled, saving space and transportation costs, and assembled by the receiver thereof using conventional tools and without requiring special skills.

A further and important object of the present invention is to provide a chair desk provided by a tubular metal frame having pieces which can be readily shaped to form for large-scale production and seat, back and desk top formable from sheet material quickly and easily mountable upon said frame pieces for rigidly retaining said chair desk in its usable form.

Further objects of the invention will be in part pointed out and in part obvious from the following detailed description of the accompanying drawings, in which:

FIG. 1 is a front perspective view of the present chair desk;

FIG. 2 is a side elevation of said chair desk;

FIG. 3 is a bottom view of the present invention;

FIG. 4 is an enlarged cross-sectional view taken on line 4—4 of FIG. 2; and

FIG. 5 is an exploded perspective view of the leg pieces of said chair desk before assembly.

Referring now more particularly to the accompanying drawings, in which like and corresponding elements are designated by similar reference characters, numeral 1 designates the seat which has four openings 2 provided therethrough. Back 3 also has a plurality of openings 4 provided therethrough. The desk top is designated by the numeral 5. Said seat 1, back 3, and desk top 5 are formed from a sheet material which can be metal, wood, such as plywood, or a plastic or the like. For example, seat 1 can be formed from a high density rigid polyethylene with a compound curve forming a deep saddle in the required area plus a rolled waterfall front edge and back 3 can be provided from the same material and have a lateral curved configuration. Said material is lightweight, extremely durable, easily cleansed, stain resistant, maintenance free, waterproof, has a uniform color throughout and permits forming these pieces from a comfort-contoured solid one-piece with reinforced structural ribs.

Said desk top 5 can be produced from a board made of uniform wood particles with fortified urea formaldehyde resin binder and having a melamine face and laminated phenolic back.

The leg elements are provided by a pair of similar one-piece inverted U-shaped elements with one such element having a leg 6 connected by a base 7 to a second leg 8 with said legs 6 and 8 slightly diverging from said base. Base 7 has a flattened medial portion 9 with bolt hole 10 extending therethrough.

The second leg element has leg 11 connected by base 12 to a second leg 13 with legs 11 and 12 slightly diverging from base 12. Base 12 also has a flattened medial portion 14 with bolt hole 14 therethrough.

A tube 18 is fixedly mounted on base 7 adjacent leg 6 and has a bolt hole 19 through the same and said base. Tube 20 is fixedly mounted on base 7 adjacent leg 8.

A tube 21 is fixedly mounted on base 12 adjacent leg 11 and has a bolt hole 22 through the same and base 12. Tube 23 is fixedly mounted on base 12 adjacent leg 13.

Said tubes 18, 20, 21 and 23 can be welded on their respective bases.

An inverted V-shaped back support of one-piece tubular construction consists of rounded base 24 having one leg 25 with end portion 26 extending on an obtuse angle therefrom. A second leg 27 extends from base 24 and similarly has an end portion 28 extending on an obtuse angle from said leg 27. Legs 25 and 27 diverge from one another, but with end portions 26 and 28 being parallel.

Rivets 29 extend through holes 4 in said back and into said base 24 and legs 25 and 27 where they are expanded retaining back 3 on said back support.

A one-piece tubular desk top support is provided by a curved base 30 from which extends a U-shaped leg 31 which has an upright medial portion 32 and end portion 33. Similarly, a U-shaped leg 34 extends from said base 30 and has an upright medial portion 35 and end portion 36.

Legs 31 and 34 are parallel including medial portions 32 and 35 and end portions 33 and 36, but medial portions 32 and 35 extend on a slant from said end portions 33 and 36.

Leg base 7 has a pair of tubes 39 and 41 fixedly mounted on a side thereof opposite to tubes 18 and 20 with tubes 39 and 41 extending normal to said tubes 18 and 20.

Leg base 12 has a pair of tubes 38 and 40 fixedly mounted on a side thereof opposite to tubes 21 and 23 with tubes 38 and 40 extending normal to said tubes 21 and 23.

Desk top leg end portion 33 extends through tubes 39 and 40 while desk top leg end portion 36 extends through tubes 37 and 38.

Bolts 41 extend through tube 37 and end portion 36, tube 38 and end portion 36, tube 39 and end portion 33 and tube 40 and end portion 33 and have retaining nuts 42 thereon.

Screws 43 extend through base 30 and legs 31 and 34 into desk top 5 retaining the same thereon.

Rivets 44 extend through holes 2 in seat 1 into tube holes 19 and 22 and into seat support leg ends 26 and 28 where they are expanded retaining said seat thereon.

Rivets 29 and 44 can be of the expansion type having a pin through the head which when struck expands the split end of the rivet and said pin becomes flush with the rivet head. Said rivets are preferably made of aluminum.

For shipping purposes, the chair desk elements can be packaged unassembled requiring much less space than when assembled greatly reducing shipping costs. That is, legs 6–8 and 11–13 can be laid flat with seat 1, back 3 and desk top 5 between the legs, back support 24–38 and desk top support 30–36 laid thereon providing a relatively flat package.

To assemble, flat portion 14 is placed on flat portion 9 and bolt 16 passed through opening 15 and nut 17 drawn on said bolt. Back support leg end portions 26 and 28 are inserted through tubes 23 and 18 and 20 and 21 respectively. Desk top support leg ends 33 and 36 are inserted through tubes 40 and 39 and 37 and 38 respectively and bolts 41 inserted therethrough and nuts 42 drawn onto said bolts 41.

Seat 1 is placed on top of tubes 18, 20, 21 and 23 and rivets 44 inserted through openings 2, 18 and 19 and into leg end portions 26 and 28 where said rivets 44 are expanded by striking with a hammer or the like.

Back 3 is placed on back base 24 and legs 25 and 27 and rivets 29 inserted through opening 4 into said base 24 and legs 25 and 27 whereupon rivets 29 are expanded by striking the same.

Desk top 5 is placed on support base 30 and legs 31

and 34 and screws 43 inserted through said base and legs 31 and 34 into the bottom of desk top 5 and the chair desk is ready for use. Only conventional tools such as a hammer, screw driver and pliers were required for the entire assembly.

The present chair desk is capable of considerable modification and such changes thereto as come within the scope of the appended claim are deemed to be a part of the invention.

I claim:

A desk chair comprising a pair of similar inverted one-piece U-shaped tubular leg members each having a base with a flat medial portion, said base medial portions having corresponding openings and being positioned superimposed with said openings in line, means extending through said base medial portion openings connecting said leg members together with said bases crossing one another, two pairs of tubes with each pair thereof fixedly mounted on and extending diagonally of one of said leg member bases on a side thereof opposite to the legs of said member bases with each tube on an opposite side of the medial portion of its leg member base, one tube of each pair thereof being in line with a tube of the other pair thereof, a chair back having a pair of supporting legs each extending through two of said tubes which are in

line, a chair seat mounted on said tubes for being-supported thereby and fixedly connected to said chair back legs, a desk top having a pair of legs and a further two pairs of tubes fixedly mounted on an opposite side of said leg member bases to said first two pair of tubes and extending normal to said first two pair of tubes, and one tube of each pair of said second mentioned tubes being in line with a tube of the other pair thereof with said in line tubes having a leg of said desk top extending therethrough.

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