Oct. 1, 1957 F. A. PONTIN 2,808,100

FOLDING PIECE OF FURNITURE OF STOOL OR TABLE TYPE

Filed Jan. 6, 1955 2 Sheets-Sheet 1

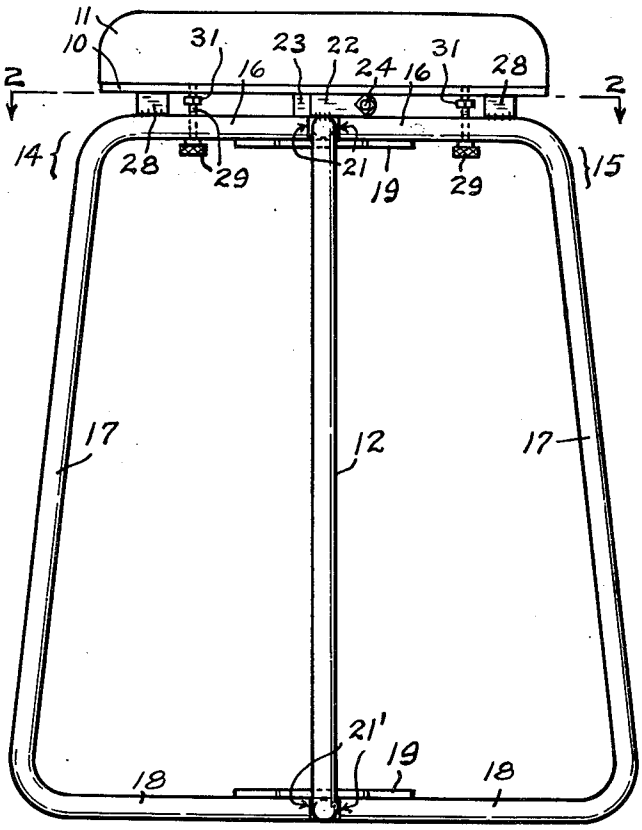


Fig. 1

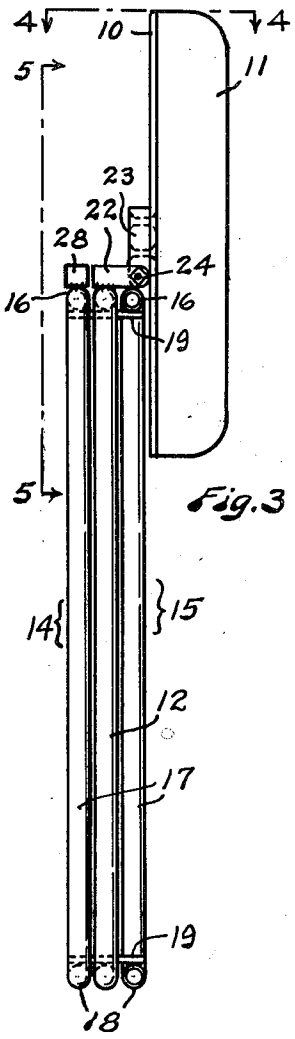


Fig. 3

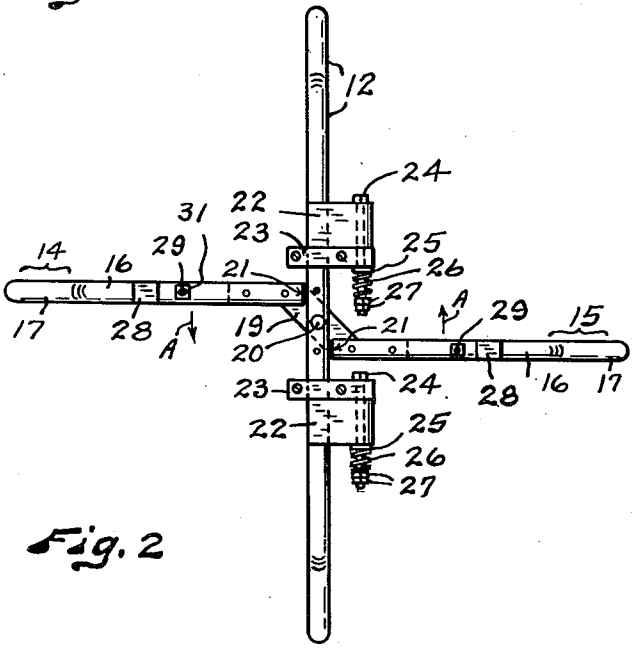


Fig. 2

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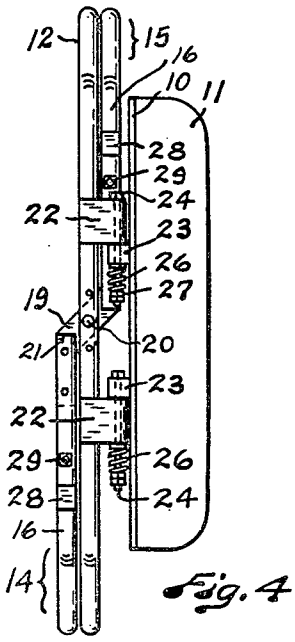


Fig. 4

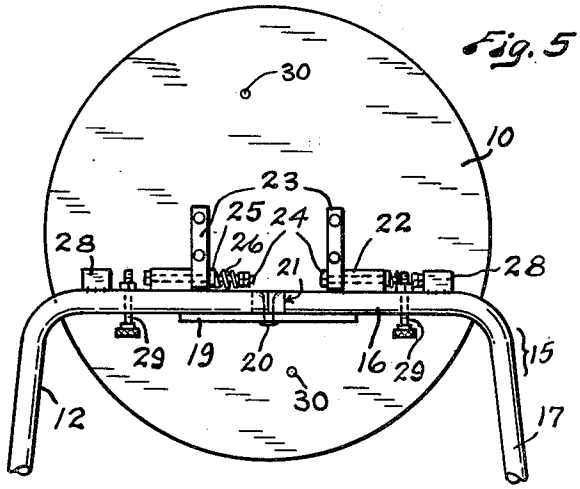


Fig. 5

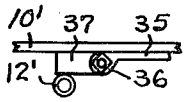


Fig. 8

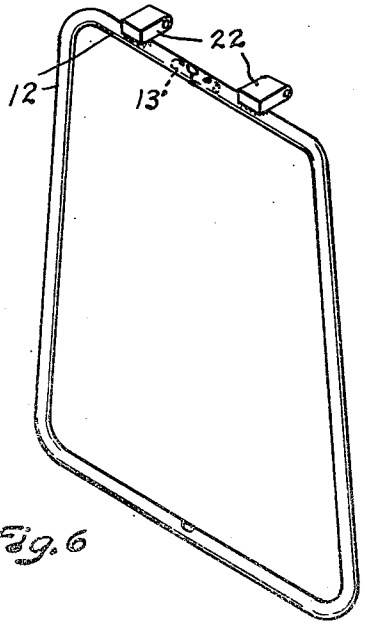


Fig. 6

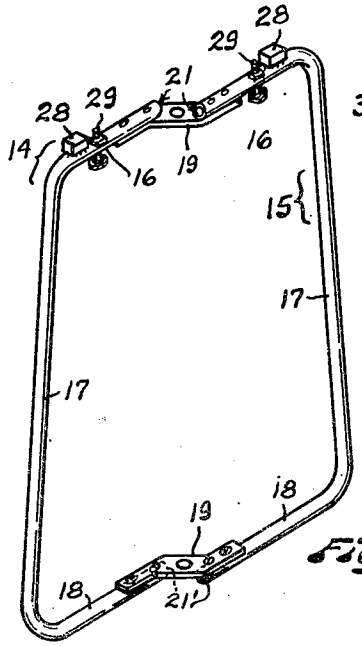


Fig. 7

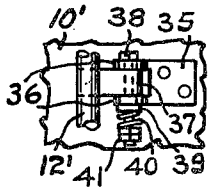


Fig. 9

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FOLDING PIECE OF FURNITURE OF STOOL OR TABLE TYPE

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Application January 6, 1955, Serial No. 480,220

2 Claims. (Cl. 155—149)

This invention relates to a folding piece of furniture of stool or table type.

An object of this invention is to provide a folding piece of furniture having a top and legs which fold compactly relative to each other.

Another object is to provide a folding piece of furniture of this nature which is simple and durable in construction, not expensive to manufacture, attractive in appearance, and one which is easy to set up and easy to fold.

Another object is to provide a folding piece of furniture having two relatively crossed leg members which fold compactly alongside of each other and having a top member hinged to one of the leg members and foldable alongside of the leg members.

Another object is to provide a folding leg construction which is particularly well adapted for use on stools, tables and like pieces of furniture and which forms a very strong and rigid support or leg structure for the furniture.

Other objects of this invention will be apparent from the following description taken in connection with the accompanying drawings.

Figure 1 is a side elevation of a folding stool constructed in accordance with this invention showing the same set up and ready for use.

Fig. 2 is a plan view looking down on broken line 2—2 of Fig. 1 showing the leg structure with the seat omitted.

Fig. 3 is an edge view of the stool as it may appear when it is completely folded.

Fig. 4 is a top view looking in the direction indicated by broken line 4—4 of Fig. 3 and showing the stool folded.

Fig. 5 is an elevational view looking in the direction indicated by broken line 5—5 of Fig. 3, parts of the legs being broken away.

Fig. 6 is a detached perspective view of one of the leg members.

Fig. 7 is a detached perspective view of the other leg member.

Fig. 8 is a fragmentary side view showing a hinge means of modified form.

Fig. 9 is a bottom plan view of the hinge means of Fig. 8.

Like reference numerals designate like parts throughout the several views.

In the drawings 10 indicates a top member in the form of a metal plate having a padded seat 11 secured thereto. Obviously the shape and size of the plate 10 can be varied and any suitable top can be used instead of the padding 11. Also the plate 10 may, of itself, constitute the entire top.

The leg structure comprises two relatively crossed leg members. One leg member 12 is preferably formed of a single piece of metal tubing bent into generally rectangular shape but wider at the bottom than it is at the top to give greater stability. The top and bottom parts of the leg member 12 are parallel and the two sides are

preferably somewhat divergent from top to bottom. The two ends of the metal tubing used in forming the leg member 12 may be joined midway of the length of the top bar of said leg member by fitting them over a short metal bar 13, shown by dotted lines in Fig. 6 and riveting or welding them at the location of this bar 13.

The other leg member is of two part construction and is formed of two relatively transversely offset parts or halves 14 and 15. Each part 14 and 15 comprises a top bar 16, a side bar 17 and a bottom bar 18. The top bar 16 and bottom bar 18 of each part 14 and 15 are parallel. The top bars 16 and bottom bars 18 of the two leg parts or halves 14 and 15 are rigidly secured together by offset connector plates 19 which may be welded or riveted or otherwise rigidly secured to the top bars 16 and bottom bars 18. The two leg parts 14 and 15 and connector plates 19 thus cooperate to form a rigid two part leg, which extends across the leg 12. The two part leg member 14—15 has the same outline in side elevation as the leg member 12 but its two halves are transversely offset so that they always remain on opposite sides of the leg member 12 with the offset connector plates 19 extending across the leg 12. The upper offset connector plate 19 is on the lower sides of the top leg bars 16 and the lower offset connector plate 19 is on the upper sides of the lower leg bars 18. Two aligned pivot members 20 pivotally connect the offset connector plates 19 of the two part leg 14—15 with the leg 12. The ends 21 of the top bars 16 and the corresponding ends 21' of the bottom bars 18 are positioned so that they will abut against the adjacent parts of the leg member 12 when the leg 14—15 is at right angles thereto and thus function as stop members to help in positioning the leg 14—15 when the stool is being set up. The two legs are angularly movable relative to each other from an open or set up position in which they are at right angles to each other to a relatively folded position in which they lie alongside of each other.

The top bar of the leg member 12 and the top plate 10 are hinged together for folding movement by preferably two hinges. Each hinge, as shown in Figs. 1 to 7 inclusive, comprises a hinge block 22 welded, riveted or otherwise rigidly secured to the top bar of the leg 12 and extending sidewise therefrom and cooperating with another hinge block 23 which is rigidly secured to the top plate 10. A hinge pin or bolt 24 extends through each pair of blocks 22 and 23 and preferably has a washer 25, a compression spring 26 and two lock nuts 27 thereon. The spring 26 makes it possible to provide friction in the hinge and this friction helps to keep the parts in the folded position and prevents them from flopping around and makes the device more convenient to handle. The hinge blocks 22 and 23 are of substantial thickness so that the top member 10 is spaced a substantial distance above the top bar of the leg member 12 and the top member 10 is firmly supported on these blocks. Also the pivot bolts 24 are offset sidewise from the plane of the leg 12 far enough so that the seat will fold closely alongside of the two leg members when said leg members are in folded position. The blocks 22 and 23 thus function as hinge blocks and as rigid spacer means between the seat member 10 and top bar of leg 12.

Two spacer blocks 28 are welded or otherwise rigidly secured to the upper bars 16 of the leg parts 14 and 15 a substantial distance outwardly from the pivotal axis formed by the two pivot members 20. Two screws 29 extend slidably through holes in the top bars 16 of the leg member 14—15 and are adapted to screw into threaded holes 30 in the top plate 10. Stop members 31 are rigidly secured to the screws 29 above the bars 16 to prevent the screws 29 from dropping out of the holes in the bars 16 when the screws 29 are released from the

top plate 10. When this stool is set up and the screws 29 tightened into the threaded holes 30 in plate 10 they will clamp the plate 10 very firmly against the blocks 28, 22 and 23 and a very rigid and substantial structure will be provided.

Figs. 8 and 9 show a modified form of hinge in which a hinge plate 35 of relatively thin metal is rigidly secured to a top plate 10' which corresponds to the top plate 10. The hinge plate 35 is provided with two spaced apart perforated outwardly extending ears 36. A hinge block 37 is rigid with the top bar of a leg member 12' which is similar to the leg member 12 and said hinge block 37 fits between the ears 36. A pivot bolt 38 having thereon a washer 39, a compression spring 40 and lock nuts 41 extends through ears 36 and hinge block 37. The lugs 36 are resilient enough to provide a substantial amount of friction in the hinge when the spring 40 is placed under compression.

In the set up position of this piece of furniture the screws 29 are preferably firmly tightened and this clamps the top member 10 securely to the legs thus providing a very solid and substantial structure. The device is quickly and easily folded by releasing the screws from the top plate 10, angularly moving the two leg parts 14—14 in the direction shown by the arrows A in Fig. 2 into a position parallel with and substantially against the leg member 12 and then folding the top as shown in Figs. 3 and 4. To unfold the device and set it up the top 10—11 is first angularly moved into a position at right angles to the legs, the two leg members are then opened out at right angles to each other, the ends 21 and 21' forming stops to approximately position the leg member 14—15 so the screws 29 will register with the holes 30 and the screws are tightened into the holes 30 to firmly bind all of the parts of the structure together.

The foregoing description and accompanying drawings clearly illustrate a preferred embodiment of this invention but it will be understood that this disclosure is merely illustrative and that changes may be made within the scope of the following claims.

I claim:

1. In a folding piece of furniture, two leg members each of generally rectangular outline, one of said leg members being plane and flat and having a top bar and a bottom bar which are parallel with each other and are connected by side bars and the other leg member comprising two relatively offset parts each formed of a top bar and a bottom bar connected by a side bar; two offset brackets rigidly connecting the two top bars and the two bottom bars of said two part leg member and extending across the top and bottom bars of the plane flat leg member with all of the top bars lying in a common plane and all of the bottom bars lying in a common plane, said offset brackets spacing the adjacent faces of the two parts of said two part leg member a distance apart at least equal to the thickness of said plane flat leg member; two aligned pivots connecting the respective offset brackets with the top and bottom bars of said plane flat leg members; hinge blocks of substantial thickness rigidly secured to the top bar of said plane flat leg member and extending sidewise therefrom; a top member having threaded holes therein; means pivotally connecting said top member with said hinge blocks in transversely offset relation from said plane flat leg member, said hinge blocks providing spacer means between said top member and the top bar of said plane flat leg member; spacer blocks rigid with and extending above the top bars of said two part leg member and terminating flush with said hinge blocks; and screws positioned near said spacer blocks and extending through the two top bars of said two part leg member and positioned to releasably engage within the threaded holes in said top member to rigidly secure said top member and said two leg members together in set up position.

2. In a folding stool, two tubular metal leg members each of generally rectangular outline, one of said leg members being plane and flat and of one piece construction and having a top bar and a bottom bar which are parallel with each other and are connected by side bars and the other leg member comprising two relatively offset parts each formed of a top bar and a bottom bar connected by a side bar; two offset brackets rigidly connecting the two top bars and the two bottom bars of said two part leg member and extending across the top and bottom bars of the plane flat leg member with all of the top bars lying in a common plane and all of the bottom bars lying in a common plane, the adjacent ends of the top and bottom bars of the two offset parts of said two part leg member being spaced a distance substantially equal to the thickness of said one piece leg member forming stops engaging the one piece leg member when the two leg members are substantially at right angles to each other and the planes of the adjacent faces of the two offset parts of said two part leg member being spaced from each other a distance substantially equal to the over-all thickness of said one piece leg member; two aligned pivots connecting the respective offset brackets with the top and bottom bars of said one piece leg member; hinge blocks of substantial thickness rigidly secured to the top bar of said plane flat one piece leg member and extending sidewise therefrom; a top member having threaded holes therein; friction type pivot means pivotally connecting said top member with said hinge blocks in transversely offset relation from said plane flat one piece leg member, said hinge blocks providing spacer means between said top member and the top bar of said one piece leg member; spacer blocks rigid with and extending above the top bars of said two part leg member and terminating flush with said hinge blocks; a screw positioned near each spacer block and extending slidably through each top bar of said two part leg member, each screw being aligned with a threaded hole in the top member when the ends forming the stop means of said two part leg member abut said one piece leg member, whereby easy engagement of said screws in the threaded holes of said top member in rigidly securing said two leg members and said top member in set-up position is provided; and a nut rigid on each screw preventing disengagement of the screw from its top bar and providing limited sliding movement of each screw thhrough its top bar.

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