Sept. 13, 1932. R. H. SOPER 1,877,469

METAL FURNITURE

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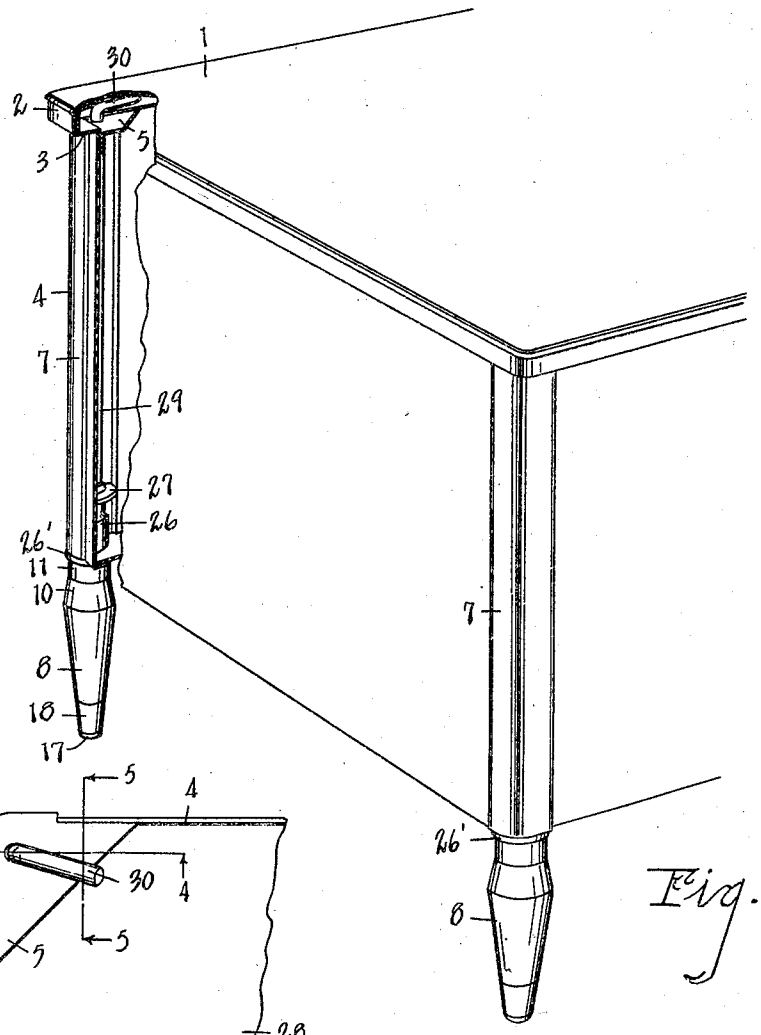



Fig. 1

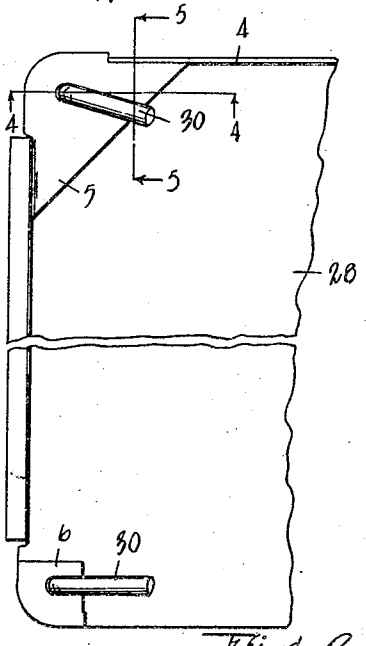



Fig. 2

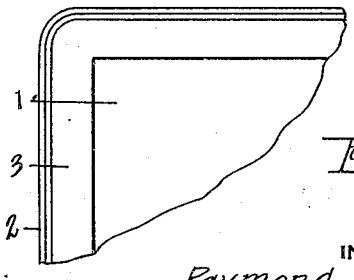



Fig. 3

INVENTOR

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METAL FURNITURE

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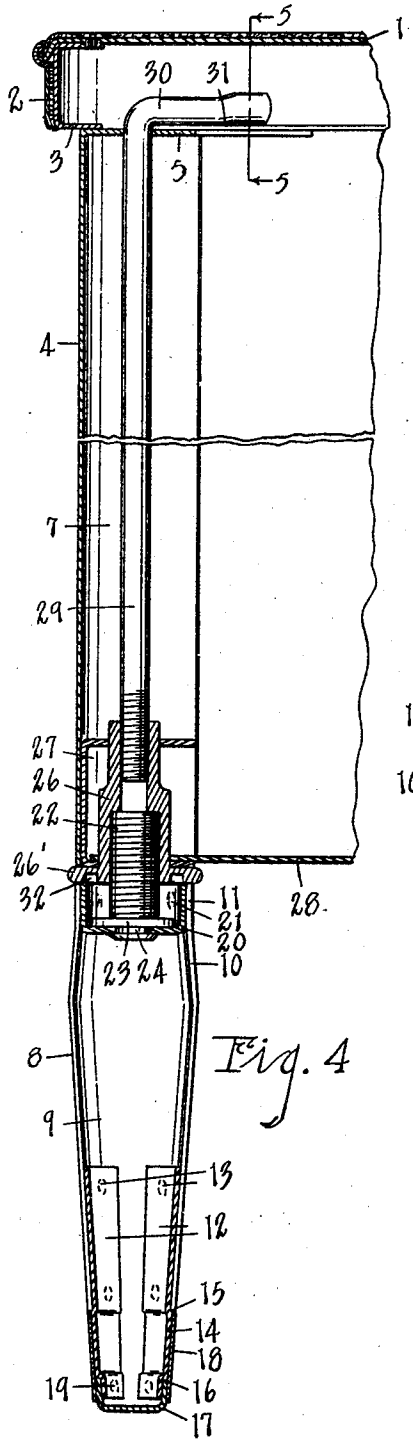



Fig. 4

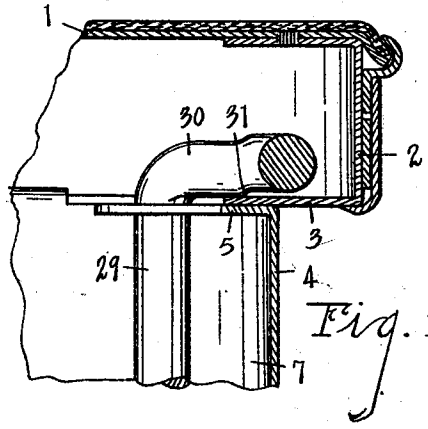



Fig. 5

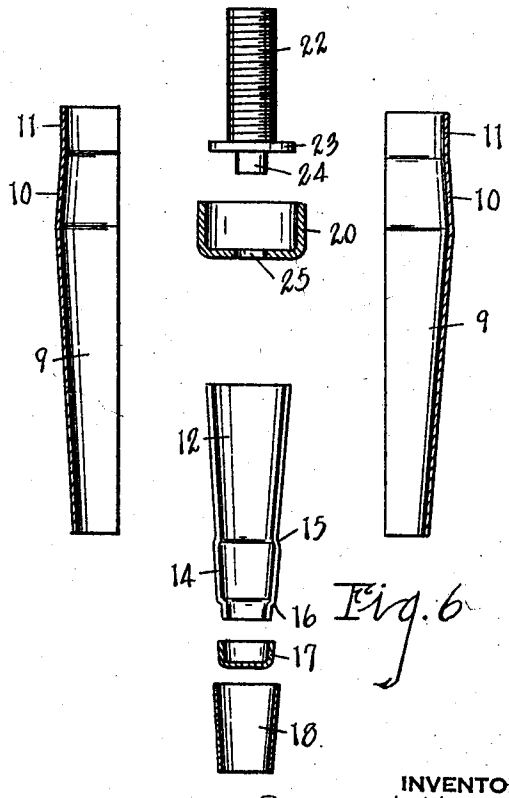



Fig. 6

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# UNITED STATES PATENT OFFICE

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## METAL FURNITURE

Application filed August 30, 1930. Serial No. 478,899.

The main object of this invention is to provide in metal furniture such as desks an improved means of attaching the top to the pedestal or body of the desk which enables the forming of the top and pedestal as a separate unit and the effective mounting of the top on the pedestal.

A further object is to provide a structure of this character which provides a very rigid connection for the parts.

A still further object is to provide an improved metal leg and mounting therefor.

Objects pertaining to details and economies of my invention will definitely appear from the description to follow. The invention is defined in the claims.

A structure which embodies the features of my invention is clearly illustrated in the accompanying drawings, in which:

Fig. 1 is a fragmentary perspective view of a desk embodying the features of my invention.

Fig. 2 is a fragmentary plan view of the pedestal.

Fig. 3 is a fragmentary inverted view of the top.

Fig. 4 is a fragmentary view mainly in vertical section on line corresponding to line 4—4 of Fig. 2.

Fig. 5 is a detail section on a line corresponding to line 5—5 of Figs. 2 and 4.

Fig. 6 is a view of the disassembled leg parts, a portion of which are shown in central longitudinal section.

In the embodiment of my invention illustrated the top 1 has a depending flange 2 at its edge, the lower edge of the flange being inturned at 3. The pedestal 4 has inturned flanges 5 and 6 at the corners thereof and the top is arranged on the pedestal with the inturned portions 3 of the top flanges overlapping the flanges of the pedestal. The pedestal is formed of sheet metal having portions 7 struck out at the corners thereof to simulate continuations of the legs 8.

The legs, designated generally by the numeral 8, are made up of outer members 9 formed as sheet metal stampings. These members are of downwardly tapered segmental cross section and are complementary when brought edge to edge. The upper portions of the legs are drawn inwardly at 10 and terminate in cylindrically curved top portions 11. The inner leg members 12 are also of segmental cross section, the upper portions thereof having a downward taper corresponding to the taper of the outer members so that the inner members may be arranged therein in overlapping relation to the joints of the outer members.

These inner members 12 are secured to the outer members by spot welding as indicated at 13 and have expanded portions 14 adjacent their lower ends providing upper shoulders 15 and lower shoulders 16. These inner or joint members are arranged with their shoulders 15 in abutting engagement with the lower ends of the outer leg members.

A cupped tip 17 is arranged on the lower ends of the members 12 with its edge in abutting engagement with the lower shoulders 16. The tapered ferrule 18 is arranged over this tip with its upper edge in engagement with the lower edge of the outer members forming a finishing piece embracing the upper portion of the tip. The tip is secured to the inner members by spot welding as indicated at 19.

The cupped cross piece 20 is arranged within the cylindrical portion 11 of the outer members and secured thereto by spot welding as indicated at 21. The threaded shank 22 has a flange 23 at its lower end resting within this cupped cross piece and a stud 24 arranged through the hole 25 in the cross piece and secured therein by upsetting or riveting the stud as shown in Fig. 4. This forms very secure connection or assembly for the parts of the leg.

The shank 22 is threaded into the lower end of the socket member 26. This socket

member is rotatively mounted in a U-shaped bracket 27 disposed in a corner of the pedestal at the bottom thereof with the arms of the brackets disposed horizontally. The pedestal bottom 28 is arranged above the lower arm of the bracket.

The top tie rod 29 serves also as a support for the leg. This tie rod has threaded engagement with the socket member and is rotatively mounted in one of the pedestal flanges. The tie rod has a laterally disposed arm 30 on its upper end which is preferably cammed as indicated at 31 so that by rotative movement of the tie rod the cam is brought into engagement with the inturned flange of the top. A rotation of the socket member applies clamping stress to the tie rod, the flange 26′ of the socket member having holes 32 therein to be engaged by a spanner wrench or the like. This flange also forms a seat for the upper end of the leg.

With the parts thus arranged they are very securely clamped together and the leg and top are both rigidly attached. At the same time they can be very easily disassembled as occasion requires permitting the shipping of the desk in the knockdown and the ready assembling of the same by unskilled persons. The structure has the further advantage that the securing parts are all concealed.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. The combination of a pedestal having an inturned horizontal upper flange, a top having an inturned flange overlapping said flange on said pedestal, a U-shaped bracket arranged within the pedestal at the bottom thereof with its arms disposed horizontally, a socket member flanged at its lower end and rotatively mounted in the arms of said bracket, the flange of said socket member being adapted to receive a wrench, a tie rod having a cammed arm at its upper end rotatively mounted in said pedestal flange and having threaded engagement with said socket member, the arm of said tie rod being adapted to be engaged with and disengaged from said flange of said top by rotative adjustment of the tie rod, and a leg provided with a shank having threaded engagement with said socket member.

2. The combination of a pedestal having an inturned horizontal upper flange, a top having an inturned flange overlapping said flange on said pedestal, a U-shaped bracket arranged within the pedestal at the bottom thereof with its arms disposed horizontally, a socket member flanged at its lower end and rotatively mounted in the arms of said bracket, the flange of said socket member being adapted to receive a wrench, and a tie road having a cammed arm at its upper end rotatively mounted in said pedestal flange and having threaded engagement with said socket member, the arm of said tie rod being adapted to be engaged with and disengaged from said flange of said top by rotative adjustment of the tie rod.

3. The combination of a pedestal having an inturned upper flange, a top having an inturned flange overlapping said flange on said pedestal, a socket member rotatively mounted on said pedestal, a tie rod having a top engaging arm at its upper end rotatively mounted in said pedestal flange and having threaded engagement with said socket member, and a leg provided with a shank having threaded engagement with said socket member.

4. The combination of a pedestal having an inturned upper flange, a top having an inturned flange overlapping said flange on said pedestal, an adjusting member rotatively mounted on said pedestal, and a tie rod having a top engaging arm at its upper end rotatively mounted in said pedestal flange and having threaded engagement with said adjusting member.

5. The combination of a pedestal having an inturned upper flange, a top having an inturned flange overlapping said flange on said pedestal, a tie rod rotatably mounted on said pedestal flange to be engaged with and disengaged from said top flange by a rotative movement of the tie rod, and means for longitudinally adjusting said tie rod.

6. The combination with a pedestal, of a top, a tie rod for said top, a socket member rotatively mounted on said pedestal and having threaded engagement with said tie rod, and a leg having threaded engagement with said socket member.

7. The combination with a pedestal, a top, a tie rod for said top mounted directly on said pedestal, a leg socket mounted on said pedestal for applying clamping stress to said tie rod, and a leg engaged in said socket.

8. The combination of a pedestal and a top arranged thereon, a tie rod for said top mounted on said pedestal, said tie rod having a top engaging arm adapted to be engaged and disengaged from said top by rotative movement of the tie rod, and means for adjusting said tie rod longitudinally for applying clamping stress thereto.

9. The combination with a pedestal, a top, a tie rod for said top mounted directly on said pedestal, a leg socket connected to said tie rod, and a leg engaged in said socket.

10. The combination of a threaded leg socket, a leg comprising downwardly tapered outer members of complementary segmental cross section, downwardly tapered inner members of segmental cross section arranged within said outer members in overlapping relation to their joints and welded thereto, said inner members having outwardly expanded portions adjacent to but spaced from

their lower ends providing upwardly and downwardly facing shoulders, the upwardly facing shoulders being in engagement with the lower edges of the outer members, a cupped tip arranged on the lower ends of said inner members with its edge in engagement with the lower shoulders thereof, a tapered ferrule sleeved upon the expanded portion of said inner members with its upper edge in abutting engagement with the lower edge of the outer members and embracing the upper portion of said tip, a cup-shaped cross member arranged within and welded to said outer members, and a threaded attaching shank secured to said cross member.

11. A leg comprising downwardly tapered outer members of complementary segmental cross section, downwardly tapered inner members of segmental cross section arranged within said outer members in overlapping relation to their joints and welded thereto, said inner members having outwardly expanded portions adjacent to but spaced from their lower ends providing upwardly and downwardly facing shoulders, the upwardly facing shoulders being in engagement with the lower edges of the outer members, a cupped tip arranged on the lower ends of said inner members with its edge in engagement with the lower shoulders thereof, a tapered ferrule sleeved upon the expanded portion of said inner members with its upper edge in abutting engagement with the lower edge of the outer members and embracing the upper portion of said tip, and a cup-shaped cross member arranged within and welded to said outer members.

12. A leg comprising downwardly tapered outer members of complementary segmental cross section, downwardly tapered inner members of segmental cross section arranged within said outer members in overlapping relation to their joints and welded thereto, said inner members having outwardly expanded portions adjacent to but spaced from their lower ends providing upwardly and downwardly facing shoulders, the upwardly facing shoulders being in engagement with the lower edges of the outer members, a cupped tip arranged on the lower ends of said inner members with its edge in engagement with the lower shoulders thereof, a tapered ferrule sleeved upon the expanded portion of said inner members with its upper edge in abutting engagement with the lower edge of the outer members and embracing the upper portion of said tip.

13. The combination of a threaded leg socket, a leg comprising downwardly tapered outer members of complementary segmental cross section, downwardly tapered inner members of segmental cross section arranged within said outer members in overlapping relation to their joints and welded thereto to project from the lower end, a cupped tip arranged on the lower ends of said inner members, a tapered ferrule sleeved upon the inner members with its upper edge in abutting engagement with the lower edge of the outer members and embracing the upper portion of said tip, a cup-shaped cross member arranged within and welded to said outer members, and an attaching shank secured to said cross member.

14. A leg comprising downwardly tapered outer members of complementary segmental cross section, downwardly tapered inner members of segmental cross section arranged within said outer members in overlapping relation to their joints and welded thereto to project from the lower end, a cupped tip arranged on the lower ends of said inner members, and a tapered ferrule sleeved upon the inner members with its upper edge in abutting engagement with the lower edge of the outer members and embracing the upper portion of said tip.

In witness whereof I have hereunto set my hand.

RAYMOND H. SOPER.