Sept. 6, 1960 C. O. FIELDS 2,951,733

UNDERSTRUCTURE FOR A DESK TOP, STUDY TOP, TABLE OR SIMILAR MEMBER

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Fig. 1

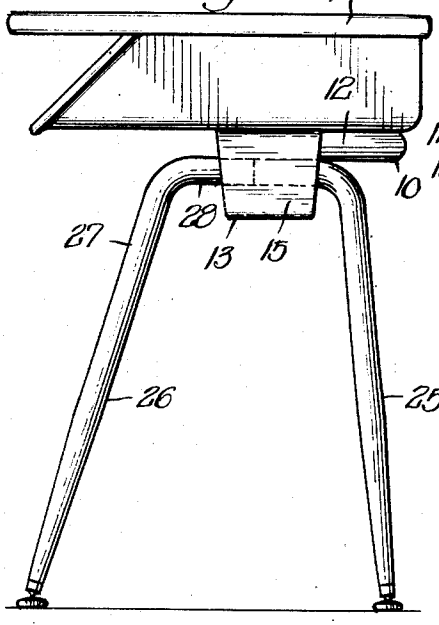


Fig. 2

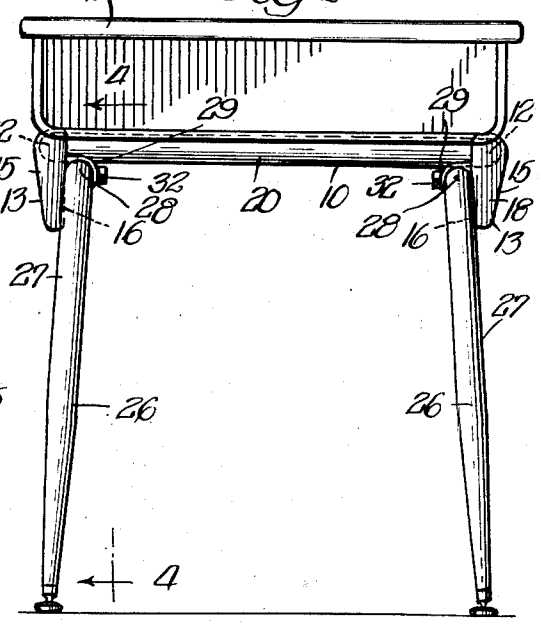


Fig. 4

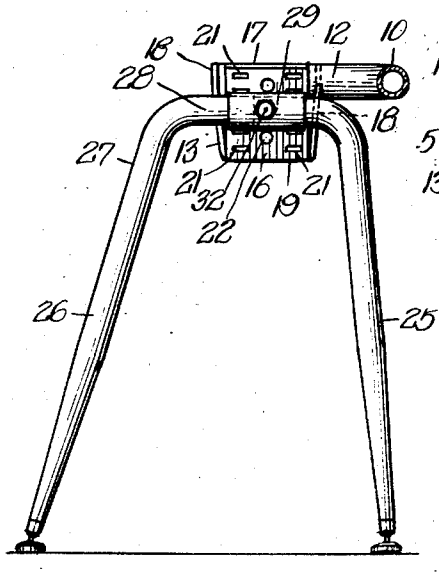
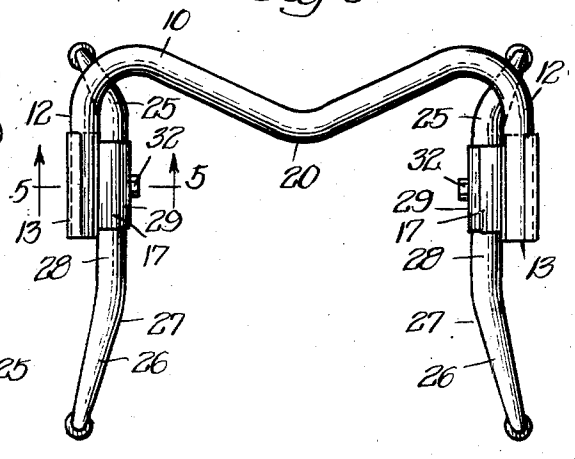


Fig. 3



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Fig. 5

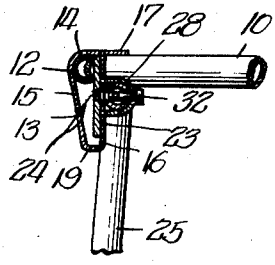


Fig. 6

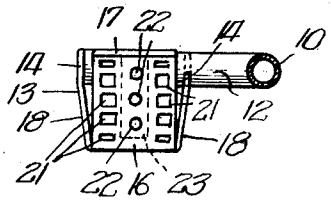


Fig. 7

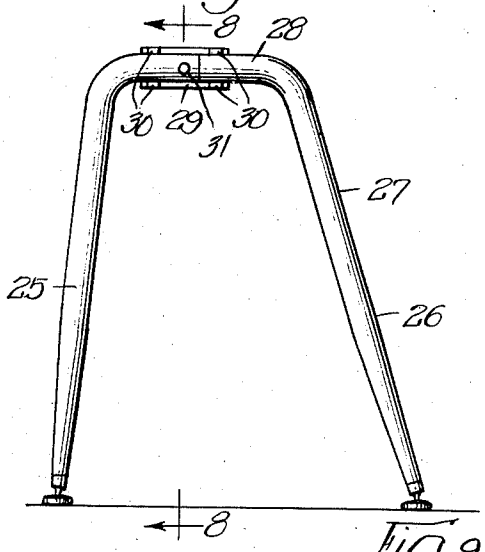


Fig. 8

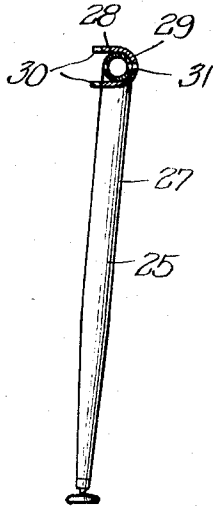
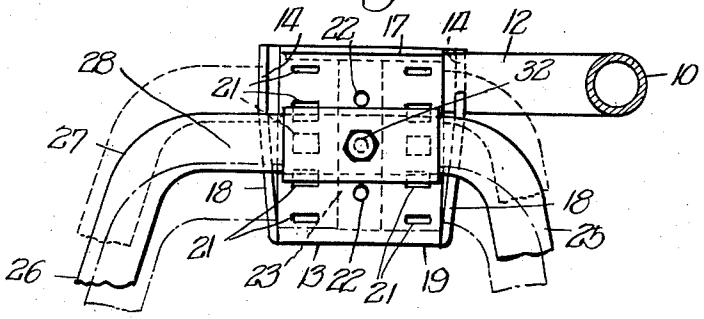


Fig. 9



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UNDERSTRUCTURE FOR A DESK TOP, STUDY TOP, TABLE OR SIMILAR MEMBER

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Filed Nov. 28, 1958, Ser. No. 777,066

7 Claims. (Cl. 311—110)

The present invention relates to desks and the like and has to do more particularly with the understructure thereof.

The principal object of the invention is to provide a new and improved understructure which is of strong and rigid construction, which will stably support the desk top or other member, and which can be easily adjusted to different elevations.

Other more specific objects and advantages of the invention will be evident to those skilled in the art upon a full understanding of the new understructure.

A preferred embodiment of the invention is presented herein for the purpose of exemplification but it will of course be understood that the invention is capable of being embodied in other forms coming equally within the scope of the appended claims.

In the accompanying drawings:

Fig. 1 is an end view of a desk equipped with the understructure of the invention;

Fig. 2 is a rear view of the desk;

Fig. 3 is a top plan view of the understructure, with the desk top removed;

Fig. 4 is a vertical section through the understructure, taken on the line 4—4 of Fig. 2;

Fig. 5 is a fragmentary vertical section, taken on the line 5—5 of Fig. 3;

Fig. 6 is an inner face view of one of the leg attaching brackets, with its associated leg structure removed;

Fig. 7 is a confronting face view of one of the leg structures, separated from its associated bracket;

Fig. 8 is a vertical section, taken on the line 8—8 of Fig. 7; and

Fig. 9 is a fragmentary view, similar to Fig. 4, showing the leg structure in full lines clamped to its associated bracket in an intermediate position, and also showing it in dotted lines in both raised and lowered positions.

The new understructure includes a tube **10** which extends horizontally substantially the full width of the desk top **11** or other member. The tube **10** is provided adjacent the sides of the desk top with horizontally bent generally parallel end portions **12**. The ends **12** extend into the upper portions of hollow vertically disposed brackets **13** where they are rigidly secured, preferably by being welded at **14**. The brackets **13** are provided with generally flat and preferably downwardly converging outer and inner walls **15** and **16**, with the inner walls **16** arranged vertically. The inner walls **16** are equipped at their upper edges with inwardly projecting flanges **17** to which the undersurface of the desk top **11** is secured. If the desk top is of metal, welding is preferably employed, whereas if of wood or similar material, screws are used. The brackets **13** are closed at their sides and bottoms by relatively narrow side walls **18** and relatively narrow bottom walls **19**.

The intermediate portion **20** of the tube **10**, between the brackets **13**, is preferably bent inwardly at an angle, in the form of a shallow V, in the same plane and in the same direction as the end portions **12** of the tube.

The vertical inner walls **16** of the brackets **13** are provided adjacent their side edges with vertically arranged series of slots **21**, and are also provided intermediate their side edges with a vertically arranged series of holes **22**. At the locations of the holes **22** the inner walls **16** of the brackets have secured to the backs thereof vertical reinforcing strips **23**, which strips are provided with tapped holes **24** in register with the holes **22**.

The desk or other member is provided adjacent its corners with tubular front legs **25** and tubular rear legs **26**, and the front leg **25** at each end of the desk is rigidly connected in the form of an inverted U with the rear leg **26** at the same end. These U-shaped leg structures **27** are detachably connected with the brackets **13** by being provided at substantially the centers of their horizontally extending cross-portions **28** with horizontally directed U-shaped fittings **29**. The fittings **29** embrace and are welded to the cross-portions **28** of the leg structures and are provided at their edges with small horizontally projecting tongues **30**. The fittings **29** are also provided with apertures **31** for the reception of cap screws **32**.

The U-shaped leg structures **27** are positioned against the inner walls **16** of the brackets **13** in any one of the several vertical positions of adjustment shown in Fig. 9, with the tongues **30** in interfitting engagement top and bottom with certain of the slots **21**, after which the cap screws **32** are passed through the backs of the fittings **29** into screw threaded engagement with the holes **24** in the reinforcing strips **23** behind the inner walls **16** and drawn up tight, thereby rigidly securing the leg structures to the brackets.

When the understructure is used in conjunction with a desk top the angle of rearward inclination of the rear legs **26** is preferably greater than the angle of forward inclination of the front legs **25**, as shown, but it will of course be appreciated that the angle of inclination of both the front and rear legs may be the same.

The front and rear legs are preferably structurally separate members, as shown, in which event they are rigidly connected to each other and to the fittings **29** which bridge the ends of the same, preferably by welding, but if desired the front and rear legs in each of the leg structures **27** may be made integral as one continuous member.

When the desk or other member is of non-metallic construction and the brackets **13** are of necessity screwed or riveted to the underside of the desk top, as distinguished from being welded to the same, the horizontally extending end portions **12** of the tube **10** may advantageously be extended through and beyond the upper portions of the brackets **13** for a short distance, whereby to provide for additional and more widespread points of support and attachment.

I claim.

1. In an understructure for a desk or similar member, a frame which is positioned against the underside of the member and is provided adjacent the ends of the member with horizontally extending generally parallel end portions, two brackets which are connected adjacent their upper ends with the end portions of the frame and with the underside of the member, front and rear legs adjacent the front and rear corners of the member, the front leg adjacent each end of the member being connected at its upper end by a horizontal cross-portion with the upper end of the rear leg at the same end of the member to provide adjacent each end of the member a two-leg structure of inverted U-shape form, said horizontal cross portions of the leg structures being disposed in inwardly offset relation to the end portions of the frame, and said brackets extending downwardly below the end portions of the frame, and means for rigidly connecting the cross-portions of the leg structures with the inner walls of the brackets.

2. In an understructure for a desk or similar member, a tube which is positioned flatwise against the underside of the member and is provided adjacent the ends of the member with horizontally extending generally parallel end portions, two downwardly extending hollow brackets in the upper portions of which the end portions of the tube are housed and secured, said brackets being connected at their upper ends with the underside of the member, tubular front and rear legs adjacent the front and rear corners of the member, the front leg adjacent each end of the member being connected at its upper end by a horizontal cross-portion with the upper end of the rear leg at the same end of the member to provide adjacent each end of the member a tubular two-leg structure of inverted U-shape form, and means for rigidly connecting the cross-portions of said leg structures with the brackets.

3. In an understructure for a desk or similar member, two downwardly extending hollow brackets which are connected at their upper ends with the underside of the member adjacent opposite ends of the latter, tubular front and rear legs adjacent the front and rear corners of the member, the front leg adjacent each end of the member being connected at its upper end by a horizontal cross-portion with the upper end of the rear leg at the same end of the member to provide adjacent each end of the member a tubular two-leg structure of inverted U-shape form, the inner walls of the hollow brackets being substantially vertical and being provided with slots and tapped holes, and the cross-portions of the tubular two-leg structures being secured to fittings which are provided with horizontally projecting tongues and horizontally extending apertures, said tongues on the fittings interlocking within the slots in the inner walls of the brackets, and screws extending through the apertures in the fittings into the tapped holes in the inner walls of the brackets for clamping the leg structures to the brackets.

4. In an understructure for a desk or similar member, two downwardly extending hollow brackets which are connected at their upper ends with the underside of the member adjacent opposite ends of the latter, tubular front and rear legs adjacent the front and rear corners of the member, the front leg adjacent each end of the member being connected at its upper end by a horizontal cross-portion with the upper end of the rear leg at the same end of the member to provide adjacent each end of the member a tubular two-leg structure of inverted U-shape form, the inner walls of the hollow brackets being substantially vertical and being provided with slots and tapped holes, and the cross-portions of the tubular two-leg structures being secured to fittings which are provided with horizontally projecting tongues and horizontally extending apertures, said tongues on the fittings interlocking within the slots in the inner walls of the brackets, and screws extending through the apertures in the fittings into the tapped holes in the inner walls of the brackets for clamping the leg structures to the brackets, the inner walls of the brackets being provided with two or more sets of slots and tapped apertures for enabling the leg structures to be clamped to the brackets in different vertically adjusted positions.

5. In an understructure for a desk or similar member, a tube which is positioned flatwise against the underside of the member and is provided adjacent the ends of the member with horizontally extending generally parallel end portions, the center portion of the tube being bent horizontally in the direction in which the end portions of the tube extend, two downwardly extending hollow brackets in the upper portions of which the end portions of the tube are housed and secured, said brackets being connected at their upper ends with the underside of the member, tubular front and rear legs adjacent the front and rear corners of the member, the front leg adjacent each end of the member being connected at its upper end by a horizontal cross-portion with the upper end of the rear leg at the same end of the member to provide adjacent each end of the member a tubular two-leg structure of inverted U-shape form, and means for rigidly connecting the cross-portions of said leg structures with the brackets.

6. In an understructure for a desk or similar member, two downwardly extending hollow brackets which are connected at their upper ends with the underside of the member adjacent opposite ends of the latter, tubular front and rear legs adjacent the front and rear corners of the member, the front leg adjacent each end of the member being connected at its upper end by a horizontal cross-portion with the upper end of the rear leg at the same end of the member to provide adjacent each end of the member a tubular two-leg structure of inverted U-shape form, the inner walls of the hollow brackets being substantially vertical and being provided with slots, and the cross-portions of the tubular two-leg structures being secured to fittings which are provided with horizontally projecting tongues, said tongues on the fittings interlocking within the slots in the inner walls of the brackets, and means for rigidly clamping the fittings on the cross-portions of the leg structures against the inner walls of the brackets.

7. In an understructure for a desk or similar member, a tube which is positioned flatwise against the underside of the member and is provided adjacent the ends of the member with horizontally extending generally parallel end portions, two downwardly extending hollow brackets in the upper portions of which the end portions of the tube are housed and secured, said brackets being connected at their upper ends with the underside of the member, tubular leg structures adjacent the ends of the member, which leg struuctures are provided at their upper ends with horizontally extending portions, which horizontally extending portions are parallel to and are offset inwardly relative to the end portions of the tube, and means for rigidly clamping the horizontally extending portions of the leg structures against the inner walls of the brackets, in two or more vertically adjusted positions.

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