Feb. 17, 1959 C. O. LARSON 2,873,987

LEG BRACKET

Filed May 15, 1958

FIG. 2

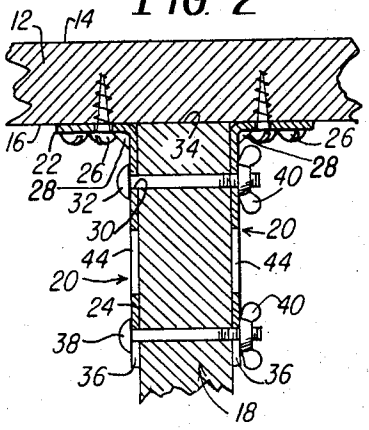


FIG. 1

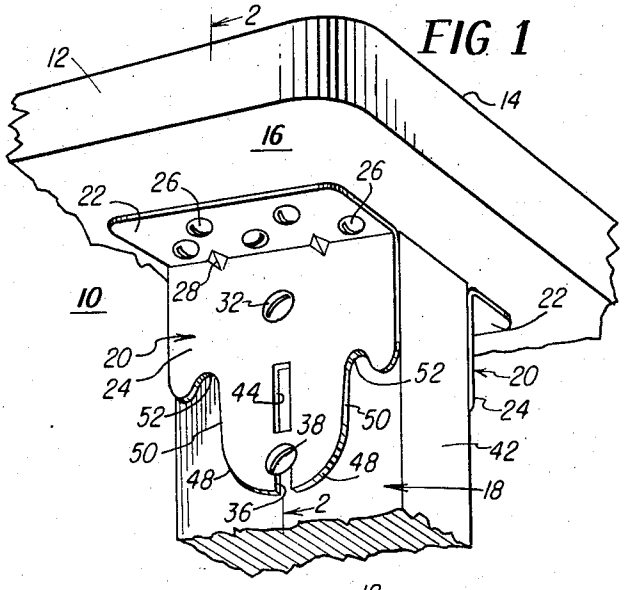


FIG. 3

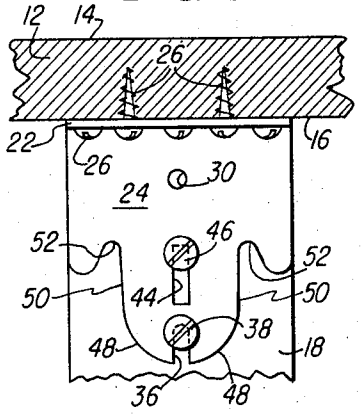


FIG. 4

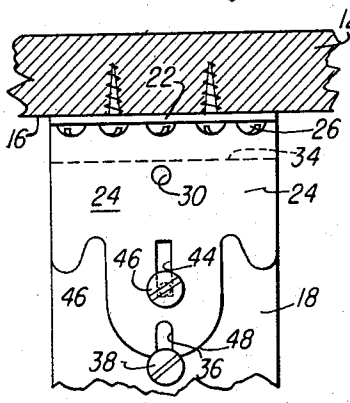


FIG. 6

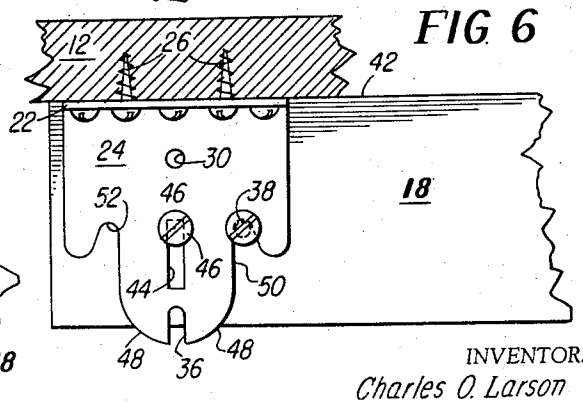
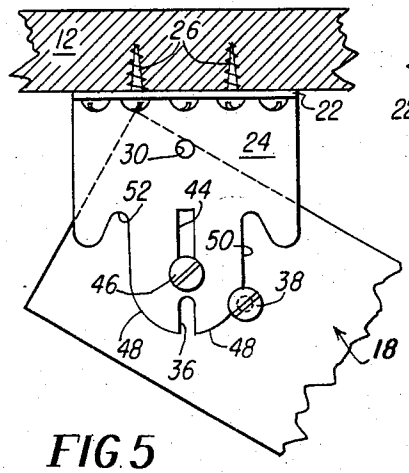


FIG. 5



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2,873,987

LEG BRACKET

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Application May 15, 1958, Serial No. 735,442

3 Claims. (Cl. 287—14)

This invention relates to a bracket structure for connecting legs to the under surfaces of flat supports such as a table top and more particularly to a bracket which is adapted in one arrangement to hold the leg in a rigid non-folding condition with respect to the table top and in another arrangement to permit folding of the leg with respect to the table top.

It is an important object of the present invention to provide an improved bracket of the type set forth for connecting legs to the under surfaces of a flat support such as table tops and the like.

Another object of the invention is to provide a bracket of the type set forth which can be assembled with suitable bolts to hold an associated leg in a rigid and non-folding position with respect to the associated table top.

Still another object of the invention is to provide an improved bracket of the type set forth which in addition to being suitable to hold a leg in a rigid non-folding condition can also support a leg in a folding condition with respect to an overlying associated table top.

These and other objects and advantages of the invention will be better understood from the following description when taken in conjunction with the accompanying drawing. In the drawing wherein like reference numerals have been utilized to designate like parts throughout:

Figure 1 is a perspective view with certain portions broken away of the underside of a table top or the like having two of the improved brackets of the present invention mounted thereon and supporting therebetween a table leg in a rigid non-folding condition, all in accordance with and embodying the principles of the present invention;

Figure 2 is a view in vertical section through the assembly of Figure 1 substantially as seen in the direction of the arrows along the line 2—2 of Figure 1;

Figure 3 is a side elevational view with certain parts in section and other parts broken away showing the assembly of Figure 1 arranged to permit folding of the leg, the leg being shown in the extended supporting position;

Figure 4 is a view similar to Figure 3 showing the attaching bolts loosened and the leg dropped to a lower, non-supporting position;

Figure 5 is a view similar to Figures 3 and 4 showing the leg partly moved toward the folded position; and

Figure 6 is a view similar to Figures 3 to 5 and showing the leg in the fully folded position and locked therein by means of the mounting bolts.

Referring now more specifically to Figures 1 and 2 of the drawing, there is shown a combination of a table top and a table leg and a pair of brackets made in accordance with and embodying the principles of the present invention, the combination or assembly being generally designated by the numeral **10**. The assembly **10** includes a planar support member in the form of a flat table top **12** having an upper flat surface **14** and a lower flat surface **16**. Mounted on and in position to support the table top **12** is a depending leg **18** held in operative position with respect to the table top **12** by means of a pair of identical brackets generally designated by the numeral **20**.

Each of the brackets **20** comprises an attachment flange **22** with which there is formed integral a side plate **24**, the flange **22** and the side plate **24** being disposed perpendicular to each other. The attachment flange has a plurality of apertures formed therein, five such apertures having been shown for purposes of illustration, to receive therethrough suitable fasteners such as the wood screws **26** which connect the bracket **20** to the overlying support surface **16**. Preferably the junction between the attachment flange **22** and the side plate **24** is reinforced by means of the reinforcing ribs **28**.

Referring particularly to Figure 2 of the drawing, it will be seen that the two brackets **20** are positioned apart a distance such as to receive the upper end of the leg **18** therebetween. In order to connect the leg **18** to the brackets **20**, an upper circular aperture **30** is provided in each of the side plates **24**, the aperture **30** being aligned horizontally in the center of the side plate **20** and being positioned upwardly near the juncture of the attachment flange **22** and the side plate **24**. A suitable aperture is formed in the upper end of the leg **18** in alignment with the apertures **30** in the side plates **24** whereby to receive therethrough a bolt **32**. The apertures are arranged so that the upper end **34** of the leg **18** is in abutment with the underneath support surface **16** of the table top **12**. In order to insure the rigidity of the leg **18** with respect to the brackets **20** and the table top **12**, a second elongated aperture is formed in the leg **18** parallel with the aperture receiving the bolt **32** therethrough. Each of the brackets is provided in the side plate **24** thereof with a slot **36** extending generally vertically and in alignment with the aperture **30**. The lower opening in the leg **18** is formed in alignment with the upper end of the slots **36** whereby to receive a bolt **38** therethrough.

The threaded ends of each of the bolts **32** and **38** is provided with a wing nut **40**. By tightening the wing nuts **40** upon the bolts **32** and **38**, the leg **18** can be firmly clamped between the brackets **20** whereby permanently to mount and attach the leg **18** with respect to the table top **12**.

In certain instances it is desirable to be able to fold the leg **18** so that one of the longitudinal sides **42** thereof lies against the underneath surface **16** of the table top **12**. To this end each of the side plates **20** is provided with an elongated slot **44** which is in general alignment with the lower slot **36**. The ends of each of the slots **44** are square as is best illustrated in Figures 1 and 3 of the drawing. There is provided in the leg **18** and positioned above the aperture receiving the bolt **38**, another aperture to receive a bolt **46** therethrough. The distance between the apertures receiving the bolts **38** and **46** is such that the bolts are positioned in the upper ends of the respective slots **36** and **44** when the upper end **34** of the leg **18** is in contact with the underneath surface **16** of the table top **12**.

As had been explained above, it is desirable on occasions to fold the leg **18** with respect to the table top **12**. Preferably this is done without removing the bolts **38** and **46**. Accordingly, the lower end of the elongated slot **44** is so formed that the bolt **38** clears the edges of the slot **36** when the bolt **46** is in the lower portion of the slot **44**. This relationship of the parts is illustrated in Figure 4 of the drawings. Thereafter it is desirable to pivot the leg about the bolt **46**, the bolt **38** moving upwardly along the edge of the side plate **24**. To this end the lower ends of the side plate **28** are curved as at **48**, the radius of curvature of the surface **48** being equal to the distance between the center of the bolt **46** and the adjacent edge of the bolt **38**. It will be noted that the lower end of the side plate **24** is formed symmetrical in this respect whereby the leg can be folded in either direction from the position illustrated in Figure 4 of the drawing.

After the leg has been folded to a position parallel to the under surface 16 of the table 12, it is found desirable to move the leg 18 upwardly so that one of the longitudinal edges 42 thereof is in engagement with and lies against the underneath surface 16 of the table 12. The lower end of the side plate 24, accordingly, is provided with a pair of parallel sides 50 which are formed tangential with respect to the curved edges 48. There is formed in alignment with the upper end of the elongated slot 44 and spaced therefrom to receive the bolt 38 therein a pair of notches 52. The notches 52 are adapted to receive the bolt 38 when the bolt 46 is at the upper end of the slot 44 as is best illustrated in Figure 6 of the drawing. With the leg in the position illustrated in Figure 6, tightening of the wing nuts 40 on the bolts 38 and 46 will clamp and lock the leg 18 in the illustrated folded position.

If it is desired to mount the leg 18 in such a manner that it cannot be folded with respect to the table top 12 whereby to provide a rigid structure, only the apertures in the leg 18 to receive the bolts 32 and 38 need be drilled. The assembly 10 is then made by attaching the brackets 20 to the table top 12 by applying the screws 26. The two holes to receive the bolts 32 and 38 are then drilled in the leg 18. After inserting the leg between the side plates 24 to the position illustrated in Figure 2 of the drawing, the bolts 32 and 38 can be inserted and the wing nuts 40 tightened thereon. This will serve firmly and permanently to mount the leg 18 in a rigid, non-folding condition with respect to the table top 12.

If desired, the assembly described above can be converted to a folding leg assembly by drilling a third hole in the leg 18 to receive the bolt 46 therethrough. Alternatively, a new leg 18 may be provided and only two holes drilled therein to receive the bolts 38 and 46. To assemble the leg 18 whereby to permit folding thereof, only the bolts 38 and 46 are inserted in their respective apertures. If the bolts are then moved to the upper ends of their respective slots 36 and 44, the leg 18 will be in the supporting position and can be retained in that position by tightening the wing nuts 40. If it is thereafter desired to fold the leg 18 against the surface 16 of the table top 12, this can be readily done in the manner illustrated pictorially in Figures 4 to 6 of the drawings. The wing nuts 40 on the bolts 38 and 46 are first loosened, this permits the leg 18 to be dropped to the position illustrated in Figure 4. More specifically, the bolt 46 moves to the lower end of the slot 44. The bolt 38 moves out of the slot 36. The leg 18 can now be moved to the position illustrated in Figure 5 by pivoting the leg about the bolt 46. It will be noted that the bolt 38 rides along the curved edge 48 of the bracket 20. Thereafter the leg may be urged against the under surface 16 of the table 12 to the position illustrated in Figure 6. The leg can be held in this position by simply tightening the wing nuts 40 on the bolts 38 and 46.

It will be seen that there has been provided a bracket and an assembly which fulfill all of the objects and advantages set forth above. More specifically, the bracket can be utilized either to provide a rigid non-folding support leg or a folding support leg on an associated support member. Although one preferred form of the invention has been illustrated in the drawings and described for illustrative purposes, it is to be understood that various changes and modifications can be made therein without departing from the spirit and scope of the invention. Accordingly, the invention is to be limited only as set forth in the following claims.

I claim:

1. In combination a bracket having a pair of spaced side plates adapted to be attached to a planar support to extend normally thereto, means for securing said side plates to the under surface of said support, a leg having an upper end portion shaped to be slidably disposed between said spaced side plates, each of said side plates having vertically disposed elongated closed slots formed

therein and disposed normal to the plane of said support, said closed slots being formed centrally of the lateral marginal edges of each of said plates, each plate having an additional elongated open slot spaced from and disposed in line with the closed slot of each of said plates, said open slots of each plate having the outer ends opening onto the lower marginal edge of each of said plates, each of said side plates having an aperture formed therein and disposed toward the under surface of said support and in alignment with said slots, a pair of spaced bolts normally disposed in said slots and aperture, said leg being mounted rigid and non-folding with respect to said support when one of said bolts is disposed in said aperture and the other of said bolts is disposed in said open slot, said leg being foldable with respect to said support when said pair of spaced bolts is disposed in said aligned closed and open slots, said bolts when positioned in said slots passing through the upper central portion of said leg and being spaced apart such that when the upper bolt is at the upper end of the upper closed slot the lower bolt will be at the upper end of the lower open slot and when the upper bolt is at the lower end of its slot, the lower bolt will be disposed wholly beyond the open end of the lower open slot, and the lower walls of each plate beginning with the outer open end of said open slots curving arcuately outwardly in opposite directions from each adjacent wall of said open end of said open slot and then extending substantially parallel to and directed away from said open slot toward the opposite end of said plate and forming on opposite marginal sides of said plate in equally spaced relation from the walls of said closed slots a pair of notches spaced laterally and equally from and in line with the upper end of said closed slots, said notches being open at their bottom portions and in position to receive the lower bolt therein.

2. The combination as set forth in claim 1, wherein each of the bolts has one end provided with a head overlying the marginal walls of the associated aperture and slot and notches with which said bolt cooperates, the opposite end of each of said bolts being threaded, and fastening means engaging said threaded ends and pressing against the marginal walls of the associated slots and notches.

3. A bracket for use with a support member having an under surface and a leg comprising a pair of spaced apart plates, means for securing said plates to the under surface of the support member with the plates disposed substantially perpendicular to the under surface, said plates being positioned to receive therebetween the upper end of the leg, each of said side plates having vertically disposed elongated closed slots formed therein and disposed normal to the plane of said support, said closed slots being formed centrally of the lateral marginal edges of each of said plates, each plate having an additional elongated open slot spaced from and disposed in line with the closed slot of each of said plates, said open slots of each plate having the outer ends opening onto the lower marginal edge of each of said plates, each of said side plates having an aperture formed therein and disposed toward the under surface of said support and in alignment with said slots, a pair of spaced bolts normally disposed in said slots and aperture, said leg being mounted rigid and non-folding with respect to said support when one of said bolts is disposed in said aperture and the other of said bolts is disposed in said open slot, said leg being foldable with respect to said support when said pair of spaced bolts is disposed in said aligned closed and open slots, said bolts when positioned in said slots passing through the upper central portion of said leg and being spaced apart such that when the upper bolt is at the upper end of the upper closed slot the lower bolt will be at the upper end of the lower open slot and when the upper bolt is at the lower end of the slot, the lower bolt will be disposed wholly beyond the open end of the

lower open slot, and the lower walls of each plate beginning with the outer open end of said open slots curving arcuately outwardly in opposite directions from each adjacent wall of said open end of said open slot and then extending substantially parallel to and directed away from said open slot toward the opposite end of said plate and forming on opposite marginal sides of said plate in equally spaced relation from the walls of said closed slots a pair of notches spaced laterally and equally from and in line with the upper end of said closed slots, said notches being open at their bottom portions and in position to receive the lower bolt therein.

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