June 30, 1964 P. L. DODDS 3,139,256

CROW-FOOT BASE FOR CHAIRS, TABLES AND THE LIKE

Filed March 12, 1962

FIG. 1.

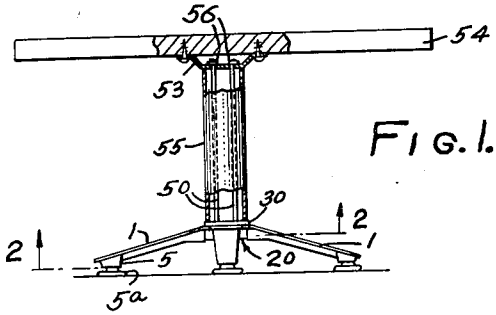


FIG. 4.

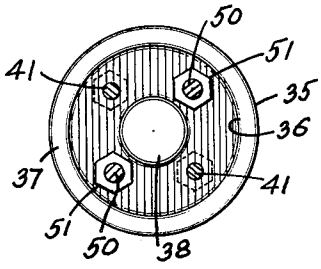


FIG. 2.

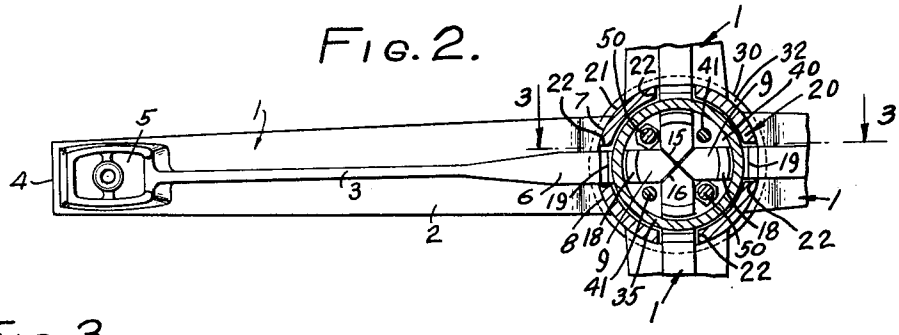


FIG. 3.

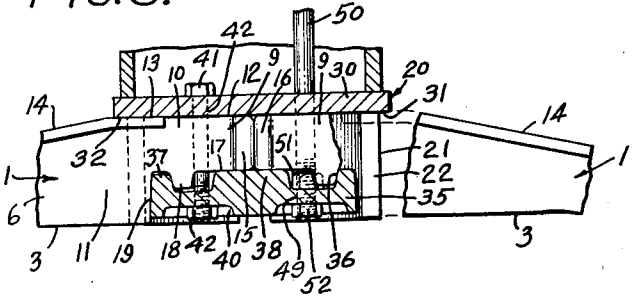


FIG. 5.

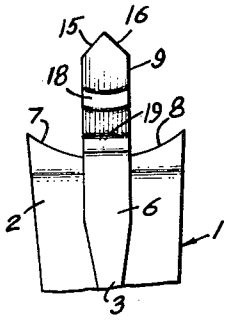
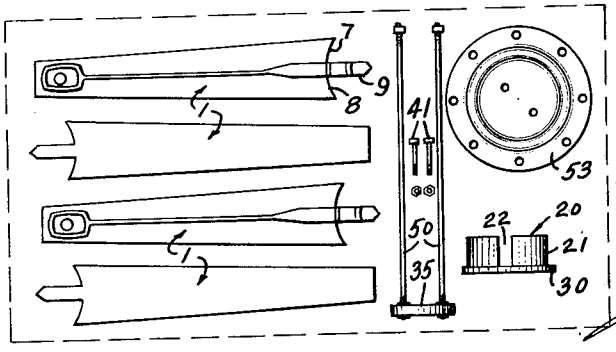


FIG. 6.



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3,139,256
CROW-FOOT BASE FOR CHAIRS, TABLES AND THE LIKE

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3 Claims. (Cl. 248—194)

The present invention relates to improvements in crow-foot bases for pedestal type tables and chairs with particular emphasis on a construction that permits ready assemblage of this type of structure. The average crow-foot base entails a problem so far as the shipping and the storage thereof is concerned. I propose by the present invention to provide a knock-down structure which permits the parts of such a structure to be stored in a small space. For instance, I am enabled by the present invention to store the parts of my base and pedestal in cartons which contain one thousand complete assemblies where only one hundred of said assemblies could be stored if the base was made in one piece.

An object of the invention is to provide a knock-down construction for a crow-foot type base which occupies a small space when disassembled, rigid when assembled, inexpensive in cost of manufacture and generally superior to crow-foot bases now known to me.

With the above mentioned and other objects in view the invention consists in the novel and useful provision, formation, construction, association and relative arrangement of parts, members and features, all as shown in one embodiment in the accompanying drawing, described generally and more particularly pointed out in the claims.

In the drawing:

FIGURE 1 is a fragmentary, partially sectional side elevation of the invention shown supporting a table top;

FIGURE 2 is a fragmentary, partially sectional view, on an enlarged scale, on the line 2—2 of FIGURE 1;

FIGURE 3 is a fragmentary sectional view, on an enlarged scale, on the line 3—3 of FIGURE 2;

FIGURE 4 is a top plan view of a wedging disk and associated parts used in the practice of the invention;

FIGURE 5 is a fragmentary, bottom plan view of one of the legs of the crow-foot base; and,

FIGURE 6 is a plan view illustrating the invention in knock-down form for placement in a carton or package.

Referring now to the drawing, the crow-foot base for the table shown in FIGURE 1 includes three or more legs **1** and in the present instance four legs. Each leg is identically formed and has the appearance in bottom plan of the full leg **1** shown in FIGURE 2. In FIGURE 2 the leg **1** has a top flange **2** of elongated form and a central web **3** on the bottom surface of the flange. Hence, a cross section of the leg would be of T form. The web **3** may vary as to depth or height and likewise width. The outer end **4** of the leg **1** has its web cast to provide a socket member **5** for a glider **5***a*. Inward from the opposite end of the leg both the height and the width of the web is increased as shown at **6**. The flange at the inner end thereof has arcuate edges **7** and **8** which lie on the same radius and the web extends beyond said arcuate edges to provide a tongue **9**. The tongue **9** is reduced in height relative to the web at its inner end being substantially one-half the web height as shown in FIGURE 3 at **10** for the tongue and at **11** for the flange. The top of the tongue **9** at **12** and the top **13** of the flange lie in the same plane and are flat. The top of the flange **14** is substantially at a ten degree angle relative to the tops **12** and **13**. The inner end of the tongue is vertically pointed by providing equal area side walls **15** and **16** at said end in 90° relationship thus merging in an apex equal to the depth or height of the tongue. The bottom surface **17** of the tongue has a transverse arcuate flange **18** depending therefrom which flange is spaced from the inner end wall **19** of the web.

This construction leaves flat surfaces on either side of the flange **18**.

To assemble the legs I provide a hub designated generally as **20** and which includes an interrupted hub member **21** of annular form and provided with vertical slots **22** arranged in 90° spaced relationship. See FIGURE 2. The slots are of a size which will accommodate the tongues of the legs therein. As shown, the curvature of the periphery of the annular hub sectors is the same as the curvature of the inner arcuate ends **7** and **8** of a leg. The vertical apex line, being the pointed end of the tongue for each leg, lies on the hub center or axis, as shown in FIGURE 2. Thus, when four legs are utilized, each tongue passing through one of the slots, the angular side walls on the ends of the tongues cooperate to provide a stress resistant relationship. The hub is provided with a top plate **30** which overlaps the periphery of the hub, as shown at **31**. This construction provides a shoulder **32**. The plate **30** may be cast integral with the hub **21**.

Adapted to be received within the hub **21** is a locking washer or wedging disk **35**. The wedging disk has a top surface formed with an annular groove **36** thereby providing a rim flange portion **37** and a central stud portion **38** on the same level as the rim flange. The bottom surface of the wedging disk is provided with an annular groove **40**. The wedging disk is provided with bores interconnecting the annular groove portions at the top and bottom of the disk. In the present instance there are four bores arranged 90° apart and two diametrically arranged bolts **41** are passed through two diametric bores, the bolts carrying nuts **42** positioned in groove **40**. Quite obviously, a tightening of the nuts **42** will bring the wedging disk into tight engagement with the bottom surfaces of the tongues of each leg and move the flat upper surfaces of the tongues and flanges against the under surface of the plate **20**. The flanges **18** for each leg are received within the upper annular groove **36**. If desired, the inner wall of the flange **37** and the cooperating wall flange **18** may be in angular relationship to assure a tight working engagement therebetween. As the top surface of the wedging disk is plane or flat, it cooperates with the flat bottom surface of the tongue of each leg. Thus when the nuts **42** are tightened, the legs are held rigidly between plate **30** and the wedging disk and within the hub. As shown, the wedging disk is provided with two diametric bores **49** which bores communicate with the top and bottom annular grooves and these bores have passed therethrough long bolts **50**. The bolts are secured to the wedging disk by means of top and bottom nuts positioned on both sides of the wedging disk and within the annular grooves, as shown in FIGURE 3 at **51** and **52**. These long bolts extend upwardly and are secured to a bracket **53** which bracket in turn is secured to the bottom surface of the table top **54**. Surrounding the bolts, is a tubular column **55** the upper end of which engages the bracket and the lower end of which engages the plate **30**. Tightening the nuts **56** secured to the long bolts **50** will, of course, bring the parts into tight engagement and secure stability.

The operation, uses and advantages of the invention just described are as follows.

I may assume that the parts are disassembled, as shown for instance, in FIGURE 6. This figure shows four legs, the long bolts and the short bolts, the hub, wedging disk and the bracket. To assemble, the tongues for the four legs are passed through the slots **22** of the hub so that each leg radiates outwardly at an angle, as shown in FIGURE 1. The wedging disk is then brought into position so as to engage the flanges **18** to bring the tongue ends into cooperative engagement as shown in FIGURE 2. The nuts **42** are tightened upon bolts **41** after the long bolts **50** have been passed through the wedging disk and through

holes provided therefor in the plate **30**. The long bolts are connected to the bracket **53** by nuts **56** after positioning the tubular column between the bracket and the plate **30**. Thereafter the bracket is connected by means of screws or otherwise to the bottom of the table top. Disassembly is, of course, as simple as the assembly. In the case of a chair, the legs are assembled to the hub and the wedging disk, as previously recited, and the chair mechanism is then secured to the top plate **30**. Other variations are, of course, possible.

The assembly of the parts for the base is very sturdy and stress resistant.

I claim:

1. A knock-down crow-foot type base for tables, chairs and the like, including: an annular hub provided with vertical equidistantly spaced slots and a top plate for one end of the hub, a series of legs radiating from the hub and of identical construction, each leg provided at one end with a tongue adapted to be passed through a slot of the hub for reception within the hub, the end of each tongue provided with angular related equal area side walls merging in an apex which jointly cooperate with other tongues to hold the tongues in working relationship the apices lying on the axis of the hub, a wedging disk within the hub for engagement with the tongues to move the tongues against the top plate secured to the hub, and means for securing the wedging disk to the top plate secured to the hub for holding the tongues therebetween.

2. The device as set forth in claim 1, each tongue provided with a flange and the wedging disk provided with an annular groove for receiving each flange.

3. A knock-down crow-foot type base for tables, chairs and the like, including: an annular hub provided with vertical equidistantly spaced slots and a top plate for one end of the hub and of greater diameter than the hub to provide a shoulder between the top plate and the periphery of the hub, a series of legs radiating from the hub and of identical construction, each leg provided at one end with a tongue adapted to be passed through a slot of the hub for reception within the hub, the end of each tongue provided with angular related side walls which jointly cooperate with other tongues to hold the tongues in working relationship, a wedging disk within the hub for engagement with the tongues to move the tongues against the top plate secured to the hub, and means for securing the wedging disk to the top plate secured to the hub for holding the tongues therebetween, each leg being T-shaped in cross section to provide a flange and a web, one end of the flange being arcuate for cooperation with the periphery of the hub and in engagement with the shoulder between the top plate and the hub.

References Cited in the file of this patent

UNITED STATES PATENTS

1,052,799	Collinsworth	Feb. 11, 1913
2,923,513	Johnson	Feb. 2, 1960
3,062,494	French	Nov. 6, 1962

FOREIGN PATENTS

613,299	Great Britain	Nov. 24, 1948