

July 24, 1951

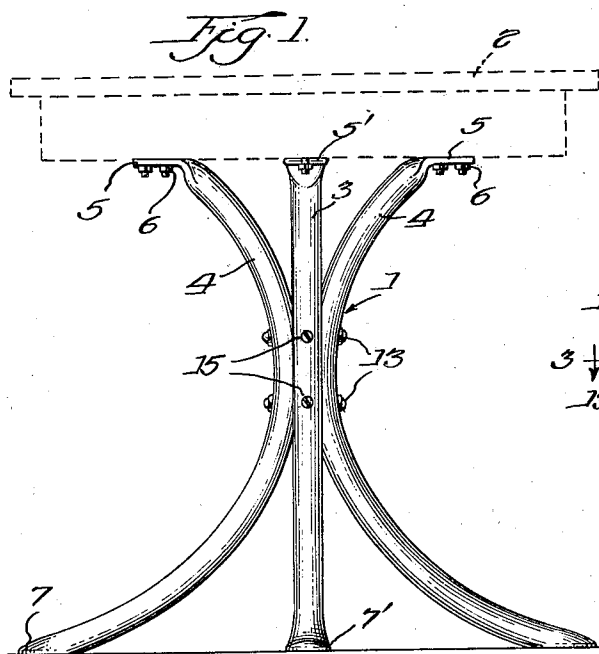
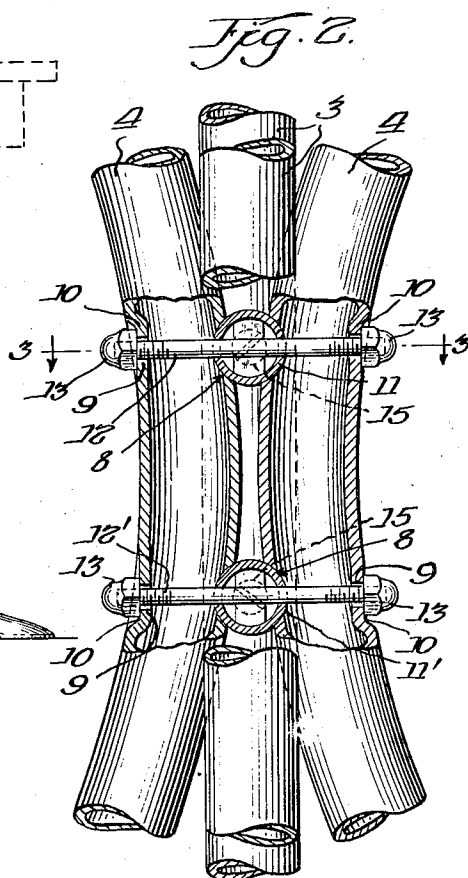
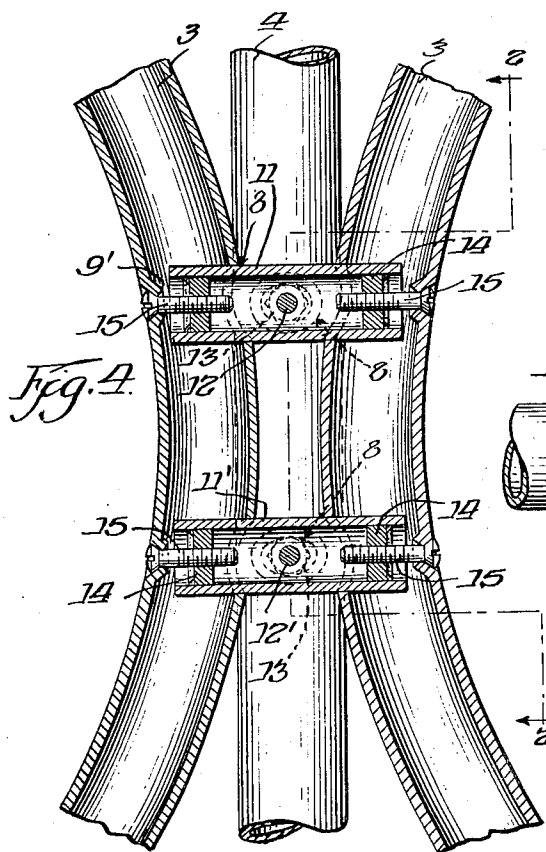
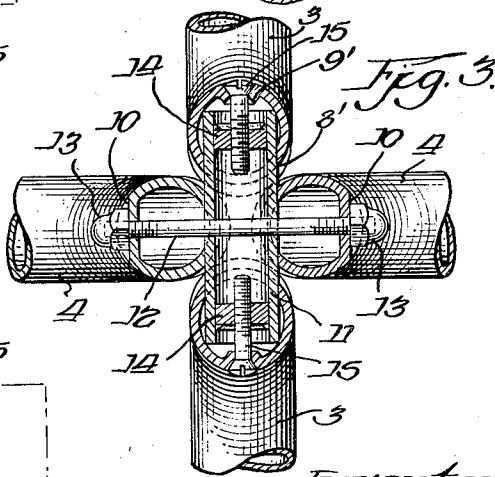
F. L. DUER

2,562,022

TUBULAR SUPPORTING BASE

Filed March 24, 1949

3 Sheets-Sheet 1



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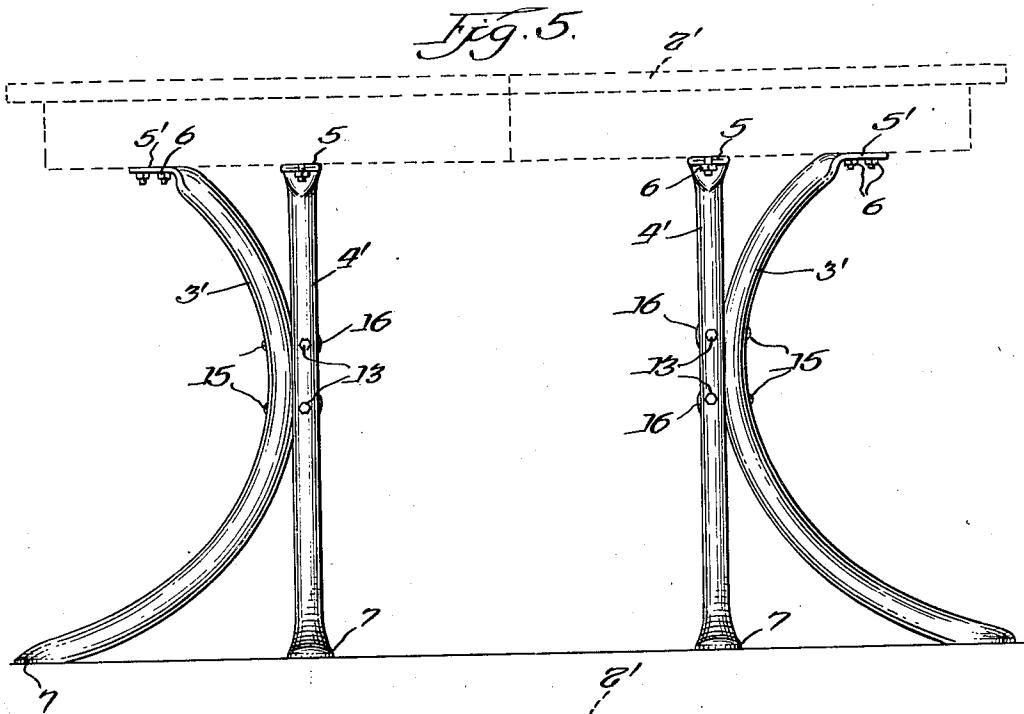
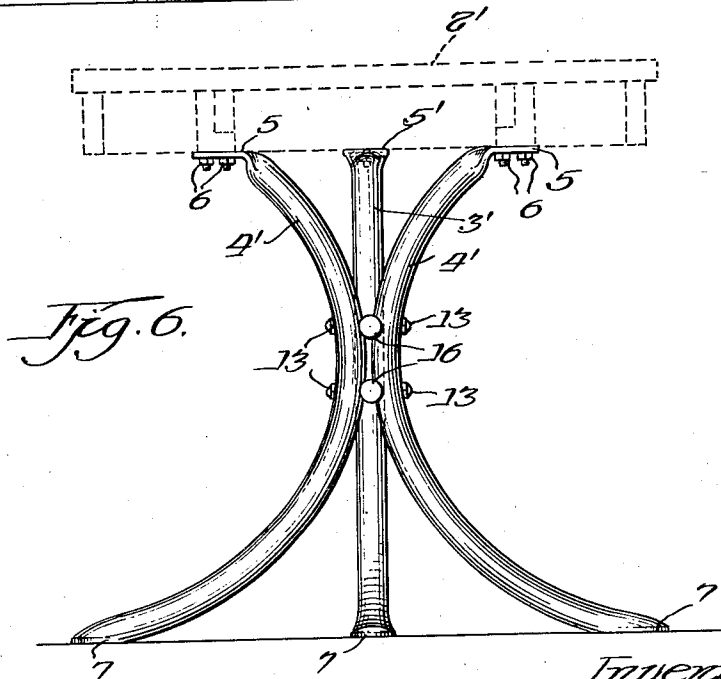
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3 Sheets-Sheet 2



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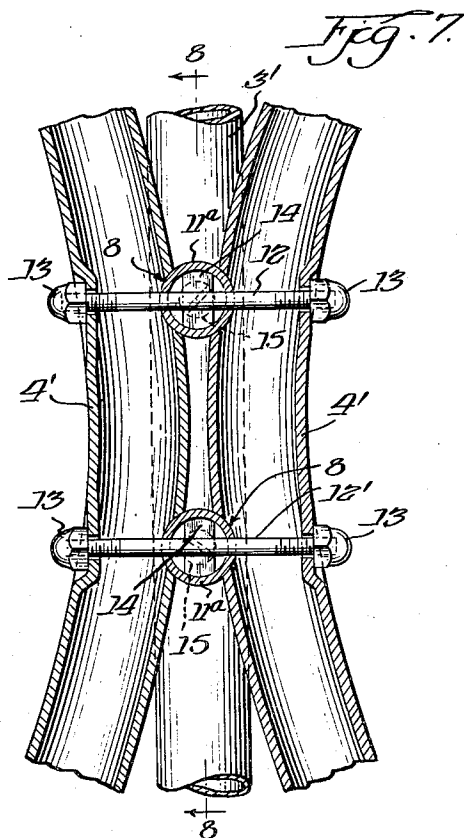
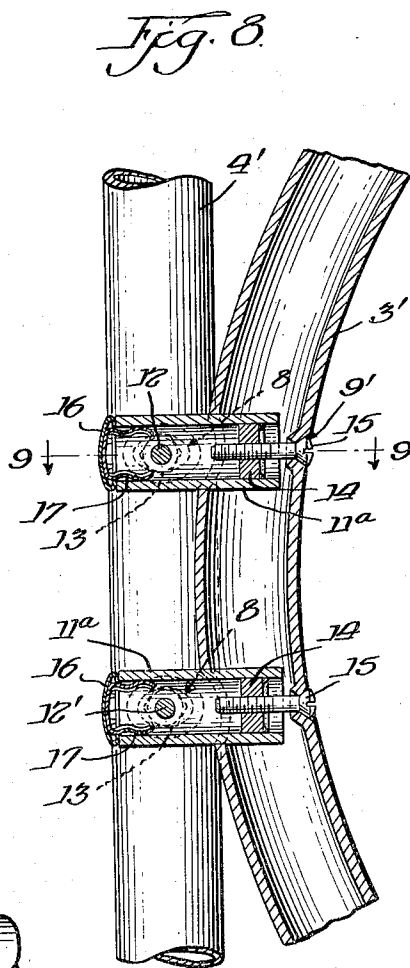
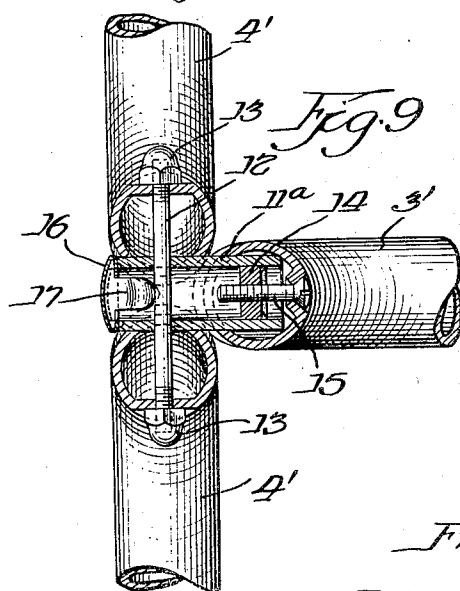
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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,562,022

TUBULAR SUPPORTING BASE

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Application March 24, 1949, Serial No. 83,125

3 Claims. (Cl. 311-109)

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This invention relates to improvements in bases for tables of the bent tubular metal type, and particularly, is an improvement upon the table base construction described and claimed in my co-pending application for Letters Patent, Serial No. 55,673, filed October 21, 1948, now Patent No. 2,467,080, issued April 12, 1949.

It is an object of the invention to provide a supporting base whose grouped legs are securely interengaged through the medium of a common, simple and practical anchoring means, and in such interengaged relationship, can be conveniently and positively interconnected whereby to assure a firm, solid and highly dependable support.

Another object of the invention is to provide a supporting base in which the leg interengaging and interconnecting means therefor are individual to the legs of a base assembly, and whereby the number of legs of an assembly may be varied without in any manner detracting from its solidity, security of interconnection, or esthetic appearance.

An equally important object of the invention is to provide a supporting base of the multiple leg assembly type, capable of compact and economical packaging when in knocked-down form, and moreover, of being equally and readily assembled into set-up or operative form by substantially unskilled labor.

Other objects of the invention will be in part obvious and in part pointed out hereinafter.

In order that the invention and its mode of operation may be readily understood by those skilled in the art to which it appertains, I have in the accompanying drawings and in the following detailed description based thereupon, set out several embodiments of my invention.

In certain forms of supporting bases or legs, it is required that the same shall comprise single and independent devices or assemblies, as distinguished from bases or legs which consist of paired assemblies fixedly interconnected in spaced relation, and in some instances, interbraced, by means of elongated tie and/or bracing bars, rods, tubes, etc., disposed longitudinally therebetween. This is particularly true where supporting bases or legs are directly fastened to the transversely divided top or top frame of an extension table in which, when the top is extended or made longer, the bases or legs must be capable of movement away from each other, and with return of the extensible top to non-extended position, movement toward each other. To this end, my invention comprehends a novel, sim-

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ple and extremely strong unitary base, wherein a plurality of grouped and supportingly interrelated preformed legs are substantially clampingly interconnected in such a manner as to become interdependent and relatively immovable. Such a base can, alone, be advantageously and practically employed to support a table top and/or frame, as in that type of article characterized as a pedestal table, or a pair or more of the bases, each independent of the other, can be used to support a table top frame or table top, particularly, an extension top table.

In the drawings:

Figure 1 is a side elevation of the improved supporting base advantageous for use in pedestal types of tables, i. e., where a table top and/or frame is supported by a single base.

Figure 2 is an enlarged fragmentary detail, partly in vertical section, through the intermediate, interengaged and interconnected portions of the tubular legs of the base, taken on the line 2-2 of Figure 4, looking in the direction in which the arrows point.

Figure 3 is a horizontal section taken on the line 3-3 of Figure 2, looking in the direction in which the arrows point.

Figure 4 is an enlarged fragmentary detail, partly in vertical section, showing the arrangement and connection of the short tubular members which function to interconnect the juxtapositioned intermediate portions of the supporting base legs.

Figure 5 is a side elevation of a slightly modified form of the improved supporting base, in which a pair of grouped and interconnected leg constituted bases support a table top and frame; each thereof including three instead of four legs, as shown in the preceding views.

Figure 6 is an end elevation of the form of invention shown in Figure 5.

Figure 7 is an enlarged fragmentary detail, partly in vertical section, through the interengaged and interconnected legs of a supporting base such as shown in Figure 5.

Figure 8 is a similar detail, partly in section, taken on the line 8-8 of Figure 7, looking in the direction in which the arrows point, and

Figure 9 is a fragmentary detail in horizontal section, taken on the line 9-9 of Figure 8, looking in the direction in which the arrows point.

Having detailed reference to the accompanying drawings and to the form of invention shown in Figures 1, 2, 3 and 4 thereof, said invention, generally, consists of vertical and relatively juxtaposed bent tubular metal legs, constituting a

base 1. Each of the legs of the base have their upper ends in a common horizontal plane and are adapted to be engaged with and support thereon a table top, shown in dotted lines in Figure 1, indicated by the numeral 2. The form of table top thus indicated may be circular or square and is non-extendable, all of which is well known in the art.

The legs constituting the base 1 are four in number. They are preferably, but not necessarily, made of metal tubing, the surfaces of which can be finished in any desired and known manner. Moreover, these legs are complementary in their respective constructions, shapes and sizes, being curved or bowed throughout their lengths, as well shown in Figure 1 of the drawings.

They are arranged in opposed pairs, the legs of which pairs are, respectively, designated by the numerals 3 and 4. The upper ends of each of said legs, as above inferred, are flattened, as at 5 and 5', arranged in a common horizontal plane, and formed to receive bolts 6 therethrough, the latter engaging in or through appropriate portions of the frame of the table top 2. The lower ends of each of the legs 3 and 4 are formed by closing and/or flattening the tubular bodies, to constitute feet 7 and 7'.

The relatively facing inner side portions of the opposed and spaced legs 4 have horizontally aligned openings 8 or seats 8 formed therein. Smaller and co-axially disposed openings 9 are formed in the respective outer sides of the intermediate portions of said legs.

Openings 8', similar to the openings 8 in the legs 4, are formed in the relatively facing or inner sides of the intermediate portions of the pair of legs 3, and as clearly shown in the drawings, these latter openings are arranged in a horizontal plane corresponding to that of the openings 8. Also, the outer sides of said intermediate portions of the legs 3 have smaller and co-axially disposed openings 9' formed therein, the purpose of which will be hereinafter more fully described.

It will be noted that the openings 8—8' and 9—9' are equi-spaced in their respective legs 4 and 3; also, that those portions of the outer sides of the intermediate portions of the legs 4 are preferably flattened, as indicated at 10.

Relatively vertically spaced horizontal tubular members 11 and 11' are horizontally positioned between the inwardly bowed and relatively opposed intermediate portions of the legs 4. Said members have their opposite sides nestingly engaged in the horizontally aligned seats 8 in the inner sides of the intermediate portions of the legs 4, and in consequence, serve to retain said legs in opposed and spaced relation, in the manner shown in Figures 2 and 3.

The lengths of each of the tubular members 11 and 11' are somewhat greater than the horizontal cross-sectional sizes of each of the intermediate portions of the legs 4 and extend therebeyond. The cross-sectional sizes of the tubular members correspond and, as above inferred, are entirely sufficient to retain and/or maintain the inwardly bowed intermediate portions of the legs 4 in the aforesaid spaced relation.

Connecting means in the form of bolts 12 and 12' are transversely engaged through the intermediate portions of the legs 4, via the seats 8 and openings 9 therein, and the intermediate portions of said bolts also transversely engage through appropriate portions of the particularly adjacent tubular members 11 and 11'. Nuts or other secur-

ing means 13 are engaged with the screw-threaded extremities of each of the bolts 12 and 12' and have bearing or binding engagement with the adjacent flattened portions 10 on the outer sides of each of the legs 4. Thus, it will be seen that the relatively opposed legs 4 will be securely interconnected; moreover, that when interconnected, their respective intermediate portions, receiving the tubular members 11 and 11', will be maintained in relative spaced relation. Consequently, a much more effectual clamping interconnection between said legs 4 and tubular members 11 and 11' will be effected when the bolts 12 and 12' are engaged therethrough and connected thereto, as above described.

The second pair of leg 3, as above described, have openings 8' formed in the facing or inner sides of their inwardly bowed intermediate portions. These openings 8' are of a size to permit snug reception of the extended opposite ends of the tubular members 11 and 11' therethrough and into the legs, as shown in Figures 3 and 4 of the accompanying drawings. With the relatively opposed legs 3 engaging the adjacent and opposite ends of the tubular members 11 and 11', the inner sides of the intermediate portions of each of said legs have direct bearing engagement upon or contact with adjacent inner side portions of the legs 4 (see Figure 3), and so, are materially steadied through such contact.

Plates or anchors 14, each having screw-threaded co-axially disposed openings therethrough, are fixedly arranged within the open opposite end portions of the short tubular members 11 and 11'. They are preferably fixedly connected to adjacent portions of their respective tubular members, as by welding or other suitable means.

Connecting screws 15 are engaged inwardly through the openings 9 in the outer sides of the bowed intermediate portions of the legs 3 and are threadedly engaged with the screw-threaded openings therein until the heads of such screws are firmly engaged or seated in the more or less counter-sunk portions of said openings 9, as shown in Figure 3. In this manner, the bowed intermediate portions of the legs 3, and hence, said legs, are securely and fixedly connected to the opposite ends of the horizontal tubular members 11 and 11'. In consequence, they become firm and stable component members of the supporting base assembly, i. e., the interconnected legs 3 and 4.

By means of the above described construction, it will be seen that the invention provides a quadri-leg table base. The grouped or assembled legs of the base will be arranged at substantially right angles to each other. Being thus disposed, they will afford a firm, stable and positive support for a table top such as indicated by the numeral 2, resisting tipping or toppling thereof, even under heavy loads or stresses.

Whereas, I have, in the preceding description, described the use of a single base 1 for supporting a table top and/or frame 2, it will, of course, be clearly understood and appreciated that a pair or more of such bases 1 may be employed to support substantially any desired form of table top, whether that top be of the extension or non-extension type. And where the type of supporting base such as herein generally indicated by the numeral 1 is employed in multiples for supporting an extension top type of table, it will be seen that inasmuch as said bases are entirely free from one another or unconnected, relative adjustment be-

tween them, as by being moved toward or from each other during an extension of an equipped table top, or its return to normal position, will be permitted.

Certain types of tables, for various reasons, such as shape, size, design, etc., are not well adaptable to the form of multi-legged table base assembly shown in the hereinbefore described construction, illustrated by Figures 1 to 4 of the accompanying drawings. Therefore, to satisfactorily serve the stated shortcomings, my improved base may be constructed according to the modified construction shown in the drawing Figures 5 to 9, inclusive. This modified form of the invention employs three instead of four grouped and interconnected legs to constitute a supporting base. That is, a pair of opposed and relatively spaced legs 4' and a single leg 3' generally make the base. The legs 3' and 4' are constructed in the same form and manner as are the legs 3 and 4. The legs 4', with the tubular members 11a (substantially corresponding to the tubular members 11—11') therebetween, interengaged with and interconnected to the same through bolts 12—12', likewise correspond.

The thus described leg assemblies or supporting bases, as will be well appreciated, are usable in pairs and are arranged in relatively opposed and spaced relation with respect to a table top and frame 2', which may be of an extendable type or non-extendable type. The upper ends 5 and 5' of such legs are connected through bolts 6 to the table top frame or to other appropriate portions of said top. The intermediately and relatively right angularly arranged legs 3' face outwardly from the spaced bases, as shown in Figure 5, being engaged with the adjacent and outwardly extended end portions of the tubular members 11a and securely connected thereto through screws 15.

The tubular members 11a, preferably, are somewhat shorter than are the aforesaid tubular members 11—11'. In consequence, the inner ends of the former, opening outwardly and laterally of the adjacent sides of the legs 4', permit of their closing by the engagement of suitable and preferably ornamental caps 16 thereover. Each of said caps is equipped with curved and inwardly disposed spring legs 17 so spaced as to have snug spring bearing engagement in the said open ends of the tubular members 11a.

Supporting bases constructed in accordance with the above described modified form of my invention are completely free of one another. Therefore, relative movement between the same, i. e., movement away from or toward each other can be effected, and this is particularly desirable when such bases are employed to support a table top of longitudinally extendable character.

By and through the usage of the two tubular interengaging and interconnected members 11—11' and 11a, a firm, positive and durable interconnection between the legs of a supporting base assembly group is afforded, entirely capable of withstanding such stresses as may or shall be imparted thereto when connected to and supporting a table top. Furthermore, assembly of the legs constituting the herein described and illustrated forms of supporting bases can be easily and readily effected without the use of special tools or similar equipment, of equal importance, by substantially unskilled labor.

The detachable assembly of the supporting base legs permits them to be readily disconnected, and because of their individual shapes and

sizes, they, plus the accessories or members employed to interconnect the same, can be economically packaged for shipping.

Should the lower ends of the base legs 3—3' and 4—4' be not in true horizontal alignment, i. e., their lower faces arranged in the same horizontal plane, the base will unevenly engage its supporting surface, and so, wobble. Correction of such condition can be readily effected merely by loosening the screws 15, fulcruming the legs 3—3' on their respective points of bearing contact with the legs 4—4', as hereinbefore described, whereby to bring the feet of said legs into horizontal alignment between themselves and the feet of the legs 4—4'. Thereupon, the screws 15 are tightened, to secure the feet of the legs 3—3' in such adjusted horizontally aligned relationship and a firm non-wobbling support is accorded the base.

I claim:

1. A supporting base, comprising a pair of tubular legs, corresponding intermediate portions of which are arranged in opposed spaced relation, the inner sides of the intermediate portions of said legs having complemental and relatively longitudinally equi-spaced seats therein, the seats in one of said intermediate portions being horizontally aligned with the seats in the opposite intermediate portion, relatively vertically spaced horizontal tubular members between the intermediate portions of the legs having their opposite sides nestingly engaged in the horizontally aligned seats in said intermediate portions and retaining said portions in said opposed and spaced relation, the lengths of each of said tubular members being greater than the horizontal cross-sectional sizes of each of said leg intermediate portions and extended beyond the sides thereof, connecting means engaged through said leg intermediate portions and the inner side seats therein and adjacent portions of said tubular members, a second pair of relatively opposed tubular legs substantially complemental to the first mentioned tubular legs juxtapositioned between and in substantially right angular relation thereto, the intermediate portions of the last mentioned legs having longitudinally equi-spaced openings in the inner sides of their intermediate portions snugly receiving the opposite extended ends of the tubular members therein, and means engaged through each of said last mentioned legs connecting the same to said tubular members.

2. A supporting base, comprising a pair of tubular legs, corresponding intermediate portions of which are disposed toward each other and arranged in opposed and spaced relation, the inner sides of the intermediate portions of said legs having complemental and relatively longitudinally equi-spaced seats therein, the seats in one of said intermediate portions being horizontally aligned with the seats in the opposite intermediate portion, relatively vertically spaced horizontal tubular members between the intermediate portions of the legs having their opposite sides nestingly engaged in the horizontally aligned seats in said intermediate portions and retaining said portions in said opposed and spaced relation, the lengths of each of said tubular members being greater than the horizontal cross-sectional sizes of each of said leg intermediate portions and extended beyond the sides thereof, connecting means engaged through said intermediate portions and the inner side seats therein and adjacent portions of said tubular

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members, a second pair of relatively opposed tubular legs substantially complementary to the first mentioned tubular legs juxtapositioned between the same in substantially right angular relation thereto, the intermediate portions of the last mentioned legs having longitudinally equispaced openings in the inner sides of their intermediate portions snugly receiving the opposite extended ends of the tubular members therein and the inner sides of the intermediate portions of each of said last mentioned legs having direct bearing engagement with and on adjacent portions of the intermediate portions of said first mentioned legs, and means engaged through each of said last mentioned legs connecting the same to said tubular members.

3. A supporting base, comprising a pair of tubular legs, corresponding intermediate portions of which are arranged in opposed and spaced relation, the inner sides of the intermediate portions of said legs having complementary and relatively longitudinally equispaced seats therein, the seats in one of said intermediate portions being horizontally aligned with the seats in the opposite intermediate portion, relatively vertically spaced horizontal tubular members between the intermediate portions of the legs having their opposite sides nestingly engaged in the horizontally aligned seats in said intermediate portions and retaining said portions in said opposed and spaced relation, the lengths of each of said tubular members being slightly greater than the horizontal cross-sectional sizes of each of said leg

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intermediate portions and extended beyond the sides thereof, connecting means engaged through said leg intermediate portions and the inner side seats therein and adjacent portions of said tubular members, another tubular leg substantially complementary to the first mentioned tubular legs juxtapositioned between and in substantially right angular relation thereto, the intermediate portion of the last mentioned leg having longitudinally spaced openings in the inner side of its intermediate portion snugly receiving certain of the extended ends of the tubular members therein, and means engaged through said last mentioned leg connecting the same to said tubular members,

FREDERICK L. DUEB.

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