June 6, 1944. A. E. JONES 2,350,399

CHAIR BASE

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Fig. 1.

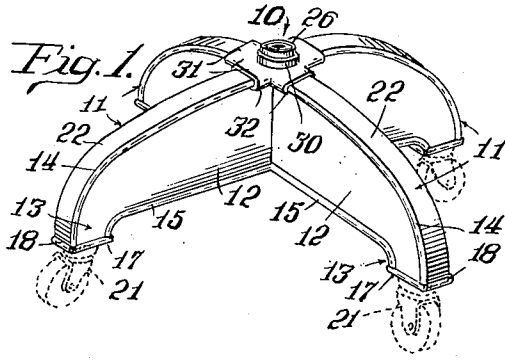


Fig. 2.

Fig. 3.

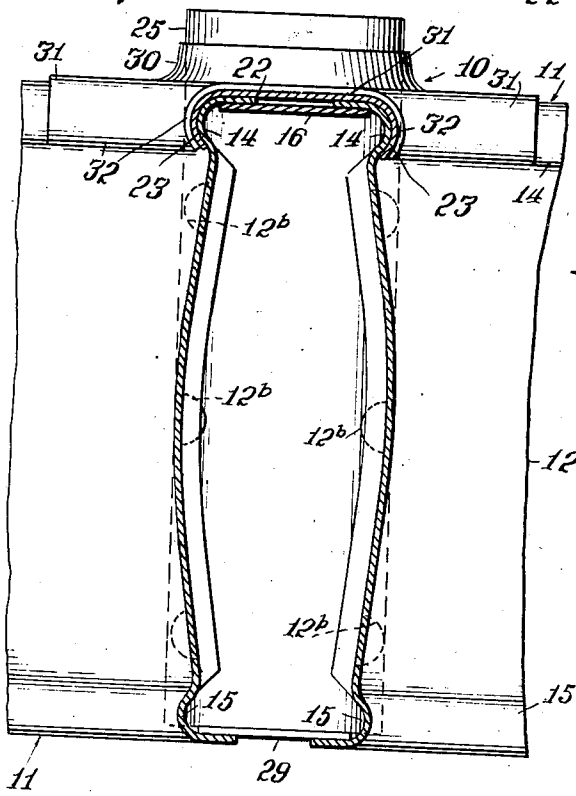
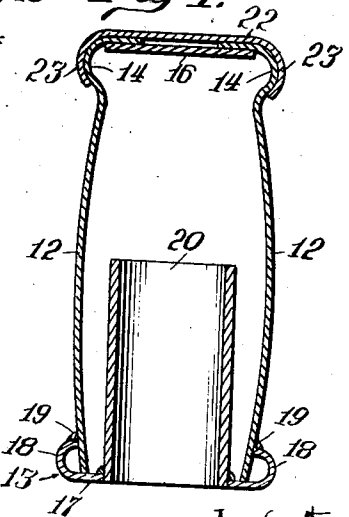


Fig. 4.



Inventor

Arthur E. Jones

By Arthur W. Wilcox

Attorney

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CHAIR BASE

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Fig. 5.

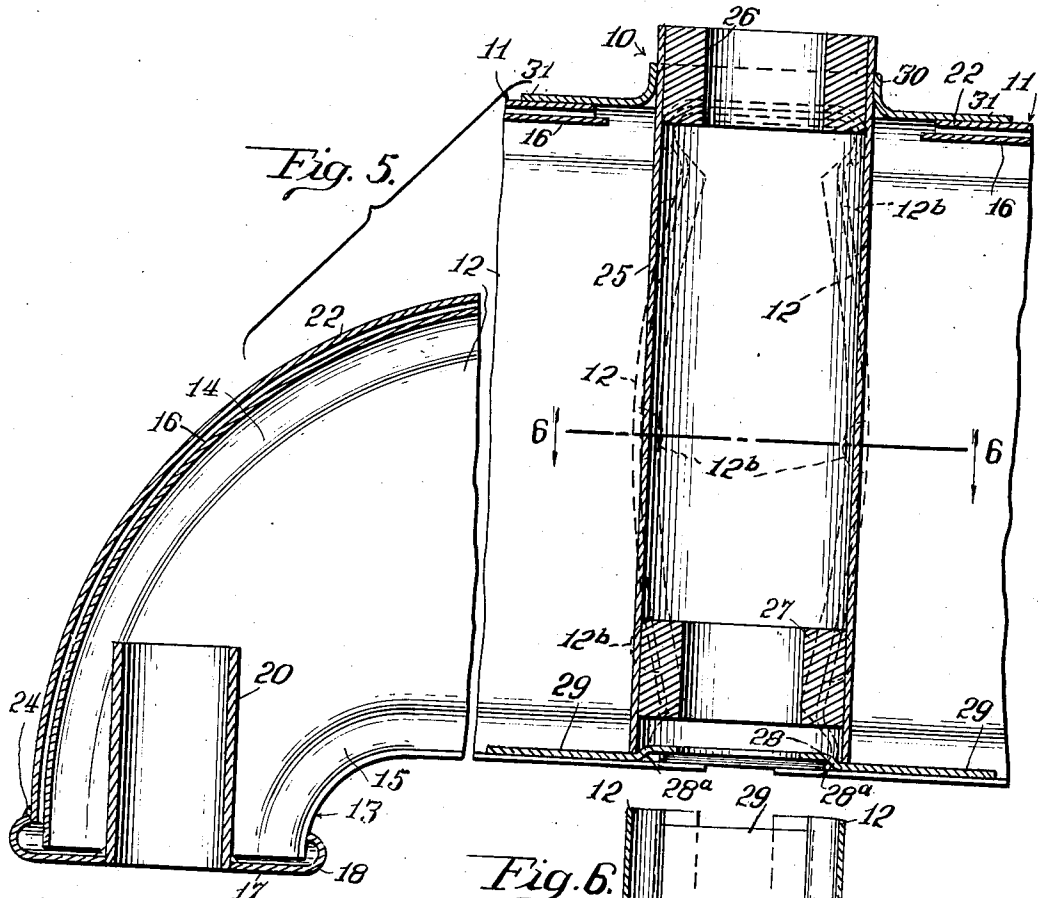


Fig. 6.

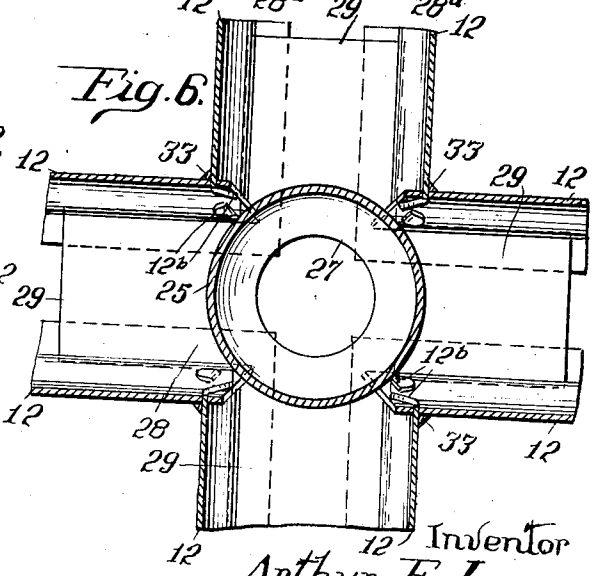


Fig. 7.

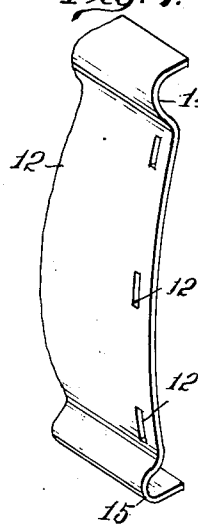
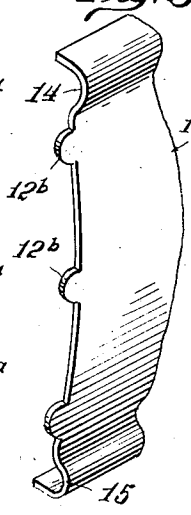


Fig. 8.



Inventor
Arthur E. Jones
By Arthur Mc Allen
Attorney

Patented June 6, 1944 2,350,399

UNITED STATES PATENT OFFICE

2,350,399

CHAIR BASE

Arthur E. Jones, Elkhart, Ind., assignor to Posture Research Corporation, Elkhart, Ind., a corporation of Indiana

Application July 31, 1941, Serial No. 404,751

3 Claims. (Cl. 155—138)

This invention relates to improvements in chair bases and its consists of the matters hereinafter described and more particularly pointed out in the appended claims.

The invention is more especially concerned with a base for a so-called office or executive's chair which usually includes a central hub-like portion and a plurality of legs radiating therefrom of a length giving the desired stability for the chair. The hub portion is made to receive a seat supporting spindle and each leg is provided at its outer end with a caster whereby the chair may be moved about upon a floor. Heretofore the hub portion in some instances was made of cast metal and the solid legs were made of wood and secured at one end to the hub portion. Such a structure was relatively expensive to make and often the legs would become loosened from the hub portion. In other instances, the hub portion and the legs are cast as a hollow integral unit. While the cast unitary type of base has some structural advantages over the wooden leg type above mentioned, it is also relatively expensive to make.

One of the objects of the present invention is to provide a base for a chair of the kind mentioned, which though simple in construction for low cost production, is relatively light in weight, but strong, rigid and stable.

Another object of the invention is to provide a chair base made substantially of sheet metal parts so formed and so connected together as to preclude their loosening or coming apart.

The above mentioned objects of the invention, as well as others, together with the advantages thereof, will more fully appear as the specification proceeds.

In the drawings:

Fig. 1 is a perspective view of a chair base embodying the preferred form of the invention.

Fig. 2 is a top plan view of the chair base on a scale enlarged over that of Fig. 1.

Fig. 3 is a detail transverse vertical sectional view through a mid portion of one of the legs of the base, on a further enlarged scale as taken on the line 3—3 of Fig. 2.

Fig. 4 is a detail transverse vertical sectional view through the outer or caster end of one of the legs of the base as taken on the line 4—4 of Fig. 2.

Fig. 5 is a fragmentary longitudinal vertical sectional view through the caster end and the hub portion of the base as taken on the line 5—5 of Fig. 2.

Fig. 6 is a horizontal detail sectional view through the hub portion of the base as taken on the line 6—6 of Fig. 5.

Fig. 7 is a fragmentary perspective view of the inner or hub end portion of one form of side plate employed in the improved base and which will be more fully referred to later.

Fig. 8 is a fragmentary perspective view of the inner or hub end portion of another form of side plate employed in the improved base.

Referring now in detail to that embodiment of the invention illustrated in the drawings, the improved base includes a generally hollow hub portion indicated as a whole at 10 and a plurality of substantially hollow horizontally disposed legs 11—11 extending outwardly from said hub. In this instance there are two pairs of oppositely disposed legs arranged at a right angle to each other and radially of the hub portion. As the legs are all structurally alike, a detailed description of one will suffice for all.

Each leg includes a pair of laterally spaced, substantially upright, outwardly bowed, sheet metal side plates 12—12 which taper in height from the inner end toward the outer end, where the same are turned downwardly to form the sides of a caster tube receiving foot 13 as will later appear. The longitudinal margins of both plates of each leg are formed as inwardly extending rounded beads 14 and 15 respectively. A metal strip 16 is disposed inside of each leg and is suitably secured at its margins as by spot welding to the margins of the beads 14 of both plates 12—12 so as to space them apart. This spacing strip extends along the top of the horizontal portion of the leg and down around the outer end of the foot 13 thereof.

The bottom end of the foot is formed by a horizontal generally rectangular foot plate 17, having an upturned rounded bead 18 about the four sides thereof. The extremities of those parts of the side plates 12—12 forming the sides of the foot, extend into said foot plate from the top and are welded therein as at 19 as best shown in Fig. 4. An upright tube 20 is welded at its bottom end in a central hole in the foot plate to form a receiver for the pintle or stem of a caster 21 shown in dotted lines in Fig. 1.

The upper marginal portion of each leg thus far made is covered by a cap or finishing strip 22 having lateral margins formed as downturned beads 23 that enclose the beads 14 of both side plates 12—12. This cap strip extends from the inner end of the leg to the outer end where it passes down around the foot portion to substan-

tially meet a part of the bead 18 of the foot plate and to which it is welded as at 24 in Fig. 5.

At the axis of the hub portion 10 is located an upright spacing tube 25 that is provided at its top and bottom ends with bearing bushings 26 and 27 respectively. Said two bushings receive the seat supporting spindle, not shown, of the chair of which the base forms a part. The bottom end of the tube 25 is engaged upon and secured to the apertured central portion of a spider plate 28 about an upwardly offset part 28a thereon. Said plate has four radial arms 29, one for each leg. Each arm 29 engages at its lateral margins upon the inturned margins of the beads 15 of the associated leg and is suitably spot welded thereto.

The upper end of the tube projects above the top surface of the legs and has secured thereto the collar 30 of the finishing spider that includes four radial arms 31, one for each leg. The lateral margins of each leg of the finishing spider are formed as downturned beads 32 to receive the inner end of the cap or finishing strip 22 of the associated leg.

The inner end edges of the side plates 12—12 of certain of the legs are cut on a curve to engage the end portion of the side plates 12—12 of adjacent legs. The inner margin of one side plate of one leg has slots 12a therein to receive tongues 12b on the inner end edge of a side plate on an adjacent leg as is obvious from Figs. 7 and 8 respectively. The side plates of adjacent legs are welded together at their inner or hub portion ends as best appears at 33 in Fig. 6.

It is apparent from the above that with the side plates of certain of the legs welded at their ends to the side plates of others of said legs, and with the welding of the arms 29 of the spider plate 28 to the flanges of the beads 15 of said legs, along with the finishing spider before mentioned, a strong and rigid structure is provided wherein the parts will not become loosened from one another. As the side plates of the legs are bowed outwardly as described, this not only adds to the appearance of the legs but also adds to the strength thereof so that such plates cannot become easily dented or warped in use.

Also, the built up structure described, while being hollow so as to be light in weight, is indeed rigid and amply resists the stresses and strains imposed on the base in use. Again, as no looseness can occur between the parts, squeaks are not apt to develop in the base.

While in describing the invention, I have referred in detail to the form, construction and arrangement of the parts involved, the same is to be considered only in the illustrative sense so that I do not wish to be limited thereto except as may be specifically pointed out in the appended claims.

I claim as my invention:

1. A built up metal base for a chair embodying therein a hub assembly and leg members connected at their inner ends to and extending outwardly from said hub assembly, which includes a center tube and top and bottom plates secured thereto, each with outwardly extending arms, one for each leg member, each leg embodying therein a pair of laterally spaced side plates with downturned outer ends and with inwardly facing flanges at the bottom thereof, a foot plate to which the downturned outer ends of the side plates of each leg are secured, means for holding the side plates of each leg in spaced relation, each leg also including a finishing strip secured to and covering the top marginal portions of the side plates thereof and extending from the associated arm of the top plate to the associated foot plate, the bottom plate abutting the lower end of said center tube and having an offset annular portion projecting into the end of said tube each arm of the bottom plate being engaged with and fixed to said inwardly facing flanges of said side plates at the inner end of the associated leg, the side plates of each leg being fixed at their inner ends to the like ends of side plates of two adjacent legs.

2. A built up metal base for a chair embodying therein a hub assembly and leg members connected at their inner ends to and extending outwardly from said hub assembly, which includes a center tube and top and bottom plates secured thereto, each with outwardly extending arms, one for each leg member, each leg embodying therein a pair of laterally spaced side plates with downturned outer ends, a foot plate having an upturned bead embracing the downturned outer ends of each leg member and secured thereto to impart rigidity to the ends and provided with a circular opening therein for mounting an upwardly extending cylindrical tube to receive a caster device therein, means for holding the side plates of each leg in spaced relation, each leg also including a finishing strip secured to and covering the top marginal portions of the side plates thereof and extending from the associated arm of the top plate to the associated foot plate, each arm of the bottom plate being engaged with and fixed to the bottom marginal portion of the inner end of the associated leg, and means including a tongue and slot connection for securing the inner end of the side plates of one leg to the like ends of side plates of adjacent legs.

3. A built up metal base for a chair embodying therein a hub assembly and leg members connected at their inner ends to and extending outwardly from said hub assembly which includes a center tube and top and bottom plates secured thereto, each with outwardly extending arms one for each leg, each leg embodying therein a pair of laterally spaced side plates with downturned outer ends, and top and bottom longitudinal marginal beads, a foot plate associated with each leg and having upturned marginal portions to receive the extremities of the downturned ends of the side plates of the associated leg, means extending between the side plates of each leg for holding them in spaced relation, each leg also including a finishing strip covering said top marginal beads thereof and arranged with its inner end under the associated arm of the top plate and with its outer end secured in the upturned marginal portion of the associated foot plate, each arm of the bottom plate engaging with and being fixed to the inner end parts of the bottom marginal bead of the side plates of the associated leg.

ARTHUR E. JONES.