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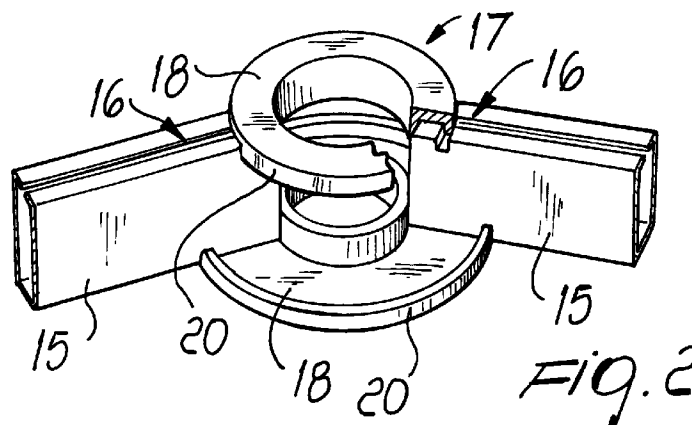
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(54) **Base for chairs, armchairs or the like**

(57) A base for chairs, armchairs or the like, comprising tubular or open-profile metal spokes (15) which are radially joined, at their ends (16), to a likewise metallic central structure (17) on which a post for a seat is fitted. The central structure (17) comprises at least two flat portions (18) which are perimetrically provided with a folded rim (20), between which the ends (16) of the

spokes (15) are interposed. The flat portions are welded to the spokes by electric pressure welding which produces the melting and at least partial penetration of the folded rims in the softened ends of the metal spoke and the folded rims are thicker than the metal spokes.



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Description

The present invention relates to a base for chairs, armchairs or the like.

Various bases for office chairs or armchairs are currently commercially available and are mostly composed of a metal structure externally covered with plastics.

These bases for chairs are formed by tubular metal spokes which are radially welded at their end to a central bush in which the post of the chair is coupled.

Typically, the welds that associate the spokes with the bush are of the continuous-bead deposition type and are formed according to, and by means of, conventional methods and equipment.

The metal spokes must be welded one at a time, accordingly requiring long assembly and manufacturing times.

Moreover, it is well-known that the spokes usually have castors at their free ends.

Plug elements are usually fitted on the free ends of the spokes in order to rotatably associate the castors with the metal spokes.

Castor supporting pivots can be mounted transversely in the plug elements through suitable holes formed in said spokes.

The spoke covers are usually arranged correctly with respect to the bush by means of a plastic ring arranged on the bush and provided with suitable resting seats for the spoke covers.

The aim of the present invention is to provide a base for chairs, armchairs or the like which can be manufactured according to a simple and practical assembly process.

Within the scope of this aim, an object of the present invention is to provide a base for chairs and armchairs which can be obtained at costs which are highly competitive and reduced with respect to those required to produce currently commercially available chair bases.

An important object of the present invention is to provide a base for chairs and armchairs which ensures excellent support stability.

Another important object of the present invention is to provide a base for chairs and armchairs which can be conveniently covered with plastic coverings which are customized according to the requirements of clients.

Another object of the present invention is to provide a base for chairs and armchairs which can be manufactured with assembly operations which are practical, simple and effective and do not require particular skills.

Another object of the present invention is to provide a base for chairs and armchairs which can be produced in practice with a limited number of components.

Another important object of the present invention is to provide a base for chairs which can be obtained in a significantly shorter time than required for conventional bases.

This aim, these objects and others which will

become apparent hereinafter are achieved by a base for chairs and armchairs or the like, comprising tubular or open-profile metal spokes which are radially joined, at their ends, to a likewise metallic central structure on which a post for a seat is fitted, characterized in that said central structure comprises at least two flat portions which are perimetrically provided with a folded rim, between which the ends of said spokes are interposed, said flat portions being welded to said spokes by electric pressure welding which produces the melting and at least partial penetration of said folded rims in the softened ends of said metal spokes, said folded rims being thicker than said metal spokes.

Further characteristics and advantages of the present invention will become apparent from the following detailed description of an embodiment thereof, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

figure 1 is a perspective view of an office chair;
figure 2 is a perspective view of a detail of a base for chairs according to the present invention;
figure 3 is a sectional view of a detail of a base for chairs according to the present invention;
figure 4 is a sectional view of a detail of a base for chairs according to the present invention.

With reference to the above figures, an office chair is generally designated by the reference numeral 10 and comprises a seat 11 with a back 12, which are supported by a central post 13.

The central post 13 is inserted, for stable support, on a base for chairs, according to the invention, which is generally designated by the reference numeral 14.

The base for chairs 14 is made of metallic material covered by a plastic covering and comprises, in this particular constructive configuration, five metal spokes 15 arranged radially so as to be fixed, by means of an end 16 thereof, to a central structure 17.

The central structure 17 is substantially cylindrical and comprises at least two flat portions or elements 18, each whereof has a bush-shaped contour 19 on which a folded rim 20 is provided along the outside perimeter of one end.

Each one of the metal spokes 15 has, in this particular embodiment, a semitubular structure, i.e., a structure having an open profile so as to be substantially U-shaped, thus forming a slot along its entire length.

All the spokes 15 have, at their free ends 21 which are opposite to the ends 16 associated with the central structure 17, two coaxial holes 22 which constitute the seat for the insertion of a substantially cylindrical castor supporting pivot 23.

Each one of the castor supporting pivots 23 constitutes a supporting element for a castor 24.

The metal spokes 25 are conveniently thinner than the folded rim 20 of each one of the two elements 18.

The metal spokes 15 are radially associated, by

means of their ends 16, with the two elements 18 by means of welds 25.

The welds 25, formed with electric machines by passing current through the compressed and mated rims, consist of an at least partial penetration of the folded rim 20 of each one of the two elements 18 in the corresponding ends 16 of each metal spoke 15.

Each one of the penetration welds 25 is therefore provided by means of a localized melting of the metals, which is obtained by electric power according to a per se known method, and by means of simultaneous pressure.

By locally melting the ends 16 of the metal spokes 15 and the two folded rims 20, and in view of the greater thickness of the rims with respect to the spokes, each end 16 locally yields and lets itself be penetrated by the two folded rims 20, forming a monolithic unit from the two elements 18 and the metal spokes 15.

The welds 25, provided according to per se known methods, suitable to assemble the metal spokes 15 to the central structure 17, ensure satisfactory results in a far shorter time than conventional welds.

In a second embodiment, the metal spokes 15 can have a tubular structure.

In a third embodiment, the central structure 17 can include elements 18 provided with through holes for engagement, for example by means of bolts, with a hood which is suitable to support said central post 13 by insertion coupling in a per se known manner.

The present invention fully achieves the aim and all the intended objects, as observed in practice.

A particular advantage is ensured by the present invention by virtue of the fact that a base for chairs, armchairs or the like has been provided which ensures excellent stability and effectiveness in support.

An important advantage is achieved by the present invention by virtue of the fact that a base has been provided which can be obtained by means of a projection welding process according to per se known methods.

An important advantage is achieved by the present invention in relation to the fact that a base for chairs and armchairs has been provided in which the production costs related to the assembly welds are competitive and significantly lower than those for conventional bases.

Another advantage is achieved by the present invention by virtue of the fact that a base for chairs and armchairs has been provided whose assembly by welding occurs in a much shorter time than required for conventional bases and according to known technologies, since all the spokes are welded simultaneously.

A considerable advantage is ensured by the present invention by virtue of the fact that the base for chairs and armchairs according to the invention can be assembled without requiring the intervention of particularly specialized and skilled personnel.

Another advantage is ensured by the present invention by virtue of the fact that the base for chairs and armchairs can be covered with plastic coverings according

to the taste and requirements of clients.

Another advantage is achieved by the present invention by virtue of the fact that a base for chairs has been provided which can be manufactured in practice without requiring particularly precise and accurate operations and with a simple and practical process.

The present invention is subjected to numerous modifications and variations, all of which are within the scope of the same inventive concept.

The materials employed, as well as the dimensions, may be any according to requirements.

Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A base for chairs, armchairs or the like, comprising tubular or open-profile metal spokes which are radially joined, at their ends, to a likewise metallic central structure on which a post for a seat is fitted, characterized in that said central structure comprises at least two flat portions which are perimetricaly provided with a folded rim, between which the ends of said spokes are interposed, said flat portions being welded to said spokes by electric pressure welding which produces the melting and at least partial penetration of said folded rims in the softened ends of said metal spokes, said folded rims being thicker than said metal spokes.
2. A base for chairs, armchairs or the like, according to claim 1, characterized in that each one of said two flat portions has a substantially disk-like shape provided with said folded rim along its perimetric extension.
3. A base for chairs, armchairs or the like, according to claim 1, characterized in that each one of said two flat portions has a substantially annular contour which has said folded rim along its outer perimetric extension.
4. A base for chairs, armchairs or the like, according to claim 1, characterized in that each one of said flat portions comprises a substantially tubular abutment element which lies coaxially to said folded rim, said abutment element being constituted by the resting of an end of each one of said metal spokes welded to said flat portions.
5. A base for chairs, armchairs or the like, according to claims 3 and 4, characterized in that each one of said two flat portions is substantially bush-shaped

so as to form a flange and a tubular body, said flange having said folded rim along its outer perimetric extension, said tubular body constituting the abutment element for the resting of the end of each one of said metal spokes.

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