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PATIO FURNITURE WEBBING TENSIONER

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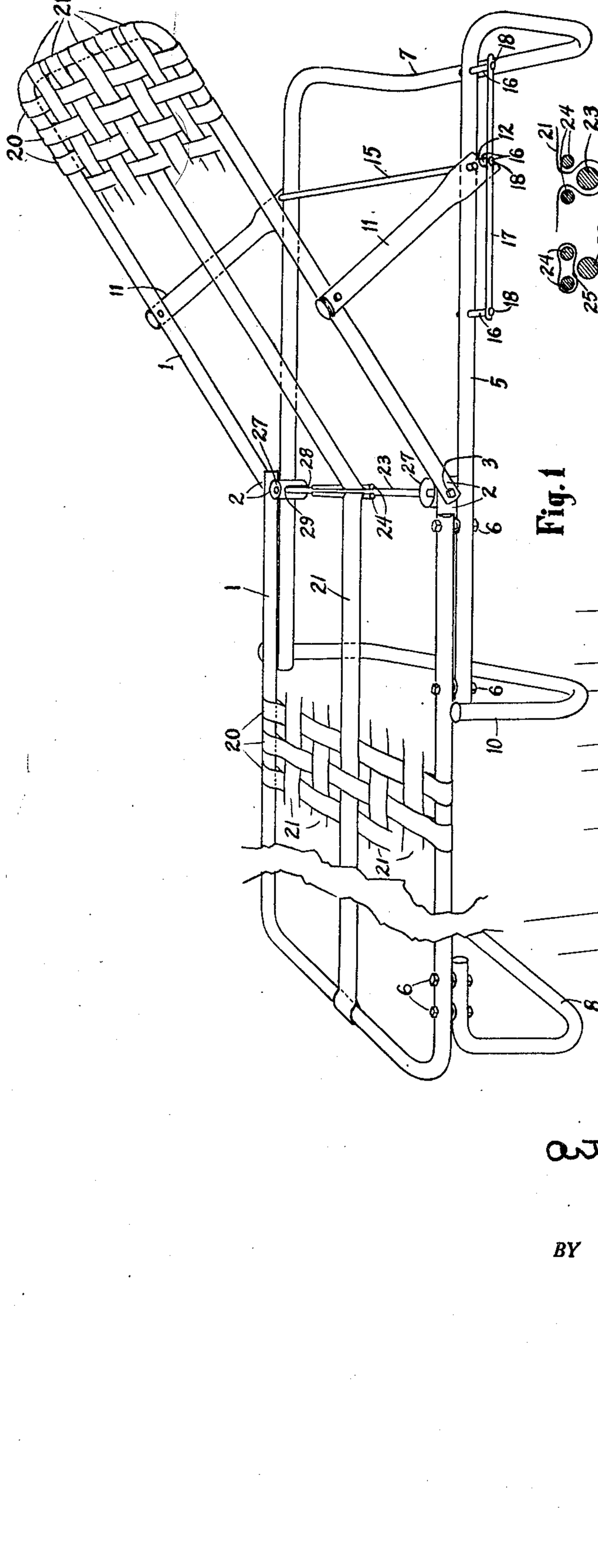

Fig. 1

Fig. 4

Fig. 3

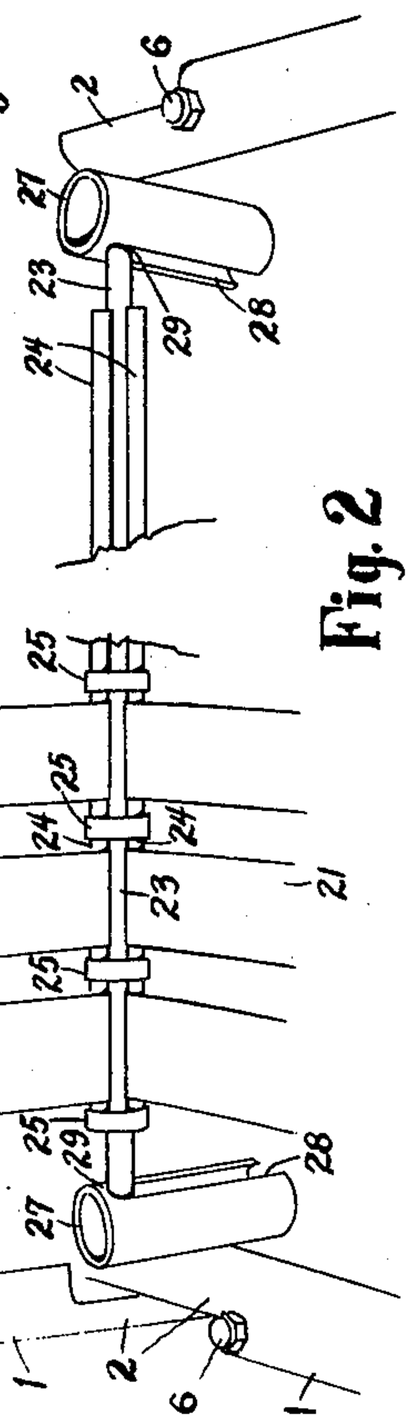

Fig. 2

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PATIO FURNITURE WEBBING TENSIONER

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6 Claims. (Cl. 155—119)

This invention relates to patio furniture, and more particularly is directed to webbing tensioning means for lounges having pivotally mounted adjustable back rests.

Heretofore, adjustable lounges and chairs having webbing seat and back rests have been slack with respect to uneven pressure applied to the webbing when in use; and some such devices are unduly taut without the necessary resiliency for comfortable use.

Accordingly, an object of this invention is to provide in patio furniture having webbing body supporting elements means maintaining the webbing in taut condition.

Another object of this invention is to provide in patio furniture having pivotally mounted back rest and webbing body supporting elements means clamping said webbing and permitting exercise of elasticity thereof.

Another object of this invention is to provide a lounge having a frame and pivotally mounted back frame, interwoven transverse and longitudinal webbing elements secured to the frame, and means clamping said longitudinal webbing elements at line of pivot and permit vertical movement of said clamping means.

A further object of this invention is to provide in a device of the class described having one rod mounted for vertical motion and a pair of spaced rods mounted in a spaced relationship with said rod and webbing positioned between said pair of rods and around said other rod.

A still further object of this invention is to provide a device of the class described which will be simple and economical in construction and durable and efficient in use.

The foregoing and other objects and advantages of this invention will be more apparent from reading the following specification, in conjunction with the drawings forming a part thereof, wherein:

Fig. 1 is broken perspective of the lounge, parts removed for clarity in showing the clamping means and arrangement of elements thereof and the pair of rods cut to more clearly show relationship thereof with other rod;

Fig. 2 is a broken perspective view of the clamping elements showing the relationship thereof with frame elements, parts removed for clarity;

Fig. 3 is a cross-sectional view of the rods forming the webbing clamp and spacer element shown in elevation; and

Fig. 4 is a cross-sectional view of the rods forming the webbing clamp and webbing shown in elevation.

Referring to the drawings, wherein like members are given the same reference numeral, a substantially rectangular frame 1, preferably of tubular aluminum, is provided with overlapping half-section shoulders 2, through which pivot members 3 are inserted to provide pivotal relationship between these two parts forming the frame 1.

A sub-frame 5 is provided for the pivotally mounted frame 1 and is secured, preferably by nut, bolt and washer assemblies 6, to one section of lounge frame 1, known as the body section, making it stationary so that the other section of the frame 1 is pivotal with respect thereto and known as the back section. The sub-frame 5 is preferably formed to provide leg of support section 7, which

of course may be formed separately and secured to the outer extremity or section of the sub-frame 5.

Leg or support member 8 is secured to the outer section of the body section of the frame 1 to support the frame in conjunction with the leg 7. It is also preferred to provide another leg or support 10 intermediate the end leg supports 7 and 8. The leg or support members may be secured to the frame by any suitable means, such as brazing, welding and the like, but nut, bolt and washer assemblies 6 are preferred.

The back section of the frame 1 is provided with pivotally mounted arms 11 on the sides thereof, which arms 11 terminate in notches 12. The arms 11 are preferably connected by a rod 15 to add strength and rigidity. Secured to each side of the sub-frame 5 are a plurality of projections 16, preferably hollow, adapted to receive the notches 12 of the arms 11. These projections 16 are preferably secured to a plate 17 for strength and rigidity. Elongated bolts and nut assemblies 18 extending through the plate 17, projection 16 and sub-frame 5 is a preferred means of securing these elements in rigid relationship.

Transverse webbing strips 20 are provided across opposed sides of the frame 1 and secured thereto in any suitable manner, such as stitching to provide an eye around the frame or by sheet metal screws or bolts. Longitudinal webbing strips 21 are interwoven with the transverse strips 20 to provide a body supporting surface or element. These longitudinal webbing strips 21 are secured to the opposed ends of the frame 1 in suitable manner similar to the means of securing the transverse webbing strips 20.

Means are provided to maintain the longitudinal strips 21 in taut condition, particularly when the frame members are in pivoted angular relationship. This means comprises a rod 23 positioned over the longitudinal webbing strips 21 and a pair of spaced rods 24 positioned in front of and overlapping the rod 23 on opposed sides thereof, and under the longitudinal webbing strips 21, thus deforming the longitudinal webbing strips 21 into a substantial loop around the rod 23. This clamping means thus frictionally binds the longitudinal webbing strips 21 against the rods 23 and 24. Rod spacers 25 are positioned between the longitudinal webbing strips 21 around the pair of rods 24. These rod spacers 25 are crimped around the rods 24 to hold them in spaced relationship, but the spacers 25 are slidably mounted on these rods 24. It is preferred to position one of these rod spacers at each end of the pair of rods 24 and secure them to each of the pair of rods 24 by spot welding or set screws.

Guide means are provided for the clamping means to permit vertical movement of the clamping means when heavy loads are placed on the body supporting elements, and maintain the webbing strips taut. The guide means is illustrated as a pair of tube elements 27 secured perpendicular to inside of the frame 1 at the pivot point thereof, having elongated longitudinal slots 28 adapted to receive the ends of the rod 23 and assure vertical motion only. These longitudinal slots 28 terminate short of the upper end of the tube section to provide a stop 29 at the upper end of the frame pivot elements 3 to position the rod 23 in alignment with the pivot elements 3. Thus, the rods 23 and 24 turn as a unit when the back is pivoted, eliminating any friction on the webbing clamped therewith.

The nut, bolt and washer assemblies 6 used to secure the tubular members together are preferably employed with spot-faced portions of the tubing to provide flat abutting surfaces with the bolt head, nut, and washer positioned between superimposed tubes.

The invention has been illustrated and described with respect to its preferred embodiment; however, the invention is not so limited, but is to be construed in the spirit and scope of the appended claims.

Having thus described the invention, what is claimed is:

1. In patio furniture having a frame and interwoven transverse and longitudinal webbing body supporting elements, vertically movable means clamping said longitudinal webbing intermediate the ends thereof, said clamping means comprising a vertically freely movable rod positioned over said longitudinal webbing, a pair of vertically freely movable spaced rods positioned above said first mentioned rod and under said webbing, said pair of rods maintained in constant relationship with said first mentioned rod, and the space between the said pair of rods is less than the diameter of said first mentioned rod.

2. In patio furniture having a frame and interwoven transverse and longitudinal webbing body supporting elements, vertically freely movable and rotatable means clamping said longitudinal webbing intermediate the ends thereof, and vertical guideways perpendicular to said frame permitting vertical movement and rotation of said clamping means.

3. In patio furniture having a frame and longitudinal webbing strips, means maintaining said strips taut comprising a rod positioned over said strips, a pair of rods positioned above said rod and under said strips, spacer members positioned on said pair of rods maintaining said pair of rods in constant relationship at a spacing less than the diameter of said first mentioned rod, and vertical guideway members adapted to receive the ends of said first mentioned rod and permit free vertical movement and rotation of said rods.

4. In patio furniture having a frame and pivotally mounted back section, longitudinal webbing strips, vertically freely movable and rotatable clamp means for said webbing strips, said clamp means comprising a rod positioned over said webbing strips substantially aligned with the pivot point of said pivotally mounted back, and a pair of spaced rods maintained in constant spaced relationship with said first mentioned rod and at spacing less than the diameter of said first mentioned rod, and said spaced rods positioned above the first mentioned rod and under said webbing strips.

5. In patio furniture having a frame, pivotally mounted back section, and longitudinal webbing strips, a rod positioned over said webbing strips in substantial alignment with the pivot points of said back section, a pair of spaced rods positioned above said first mentioned rod and maintained in constant relationship at a spacing less than the diameter of said first mentioned rod, said pair of rods being positioned under said webbing strips, a plurality of rod spacers slidably mounted on said pair of rods and positioned between said webbing strips and crimped around said rods, at least two of said rod spacers secured to said pair of rods, and vertical guideways perpendicular to said frame to permit vertical movement and rotation of said rods.

6. In patio furniture having a frame, pivotally mounted back section, and longitudinal webbing strips, a rod positioned over said webbing strips in substantial alignment with the pivot points of said back section, a pair of spaced rods positioned above said first mentioned rod and maintained in constant relationship therewith at a spacing less than the diameter of said first mentioned rod, said pair of rods being positioned under said webbing strips, a pair of members positioned on opposed sides of said frame at the pivot points of said back section, and vertical guideways in said members adapted to receive the ends of said first mentioned rod and permit free vertical movement and rotation of said rods.

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