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SEPARATOR MEANS FOR WEBBING

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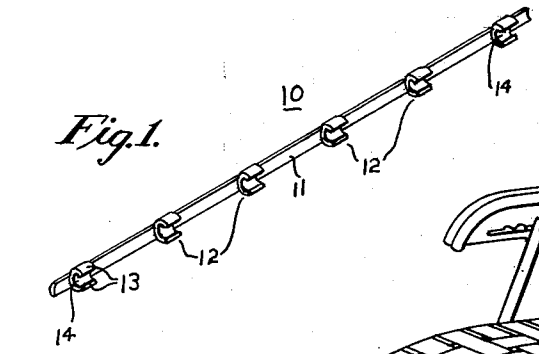


Fig. 1.

Fig. 2.

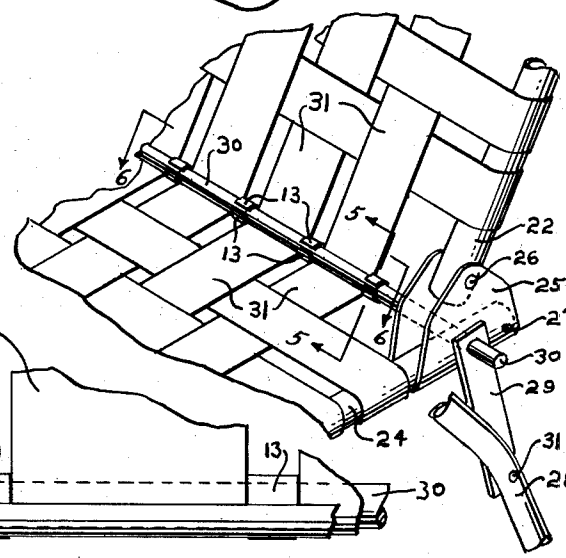


Fig. 3.

Fig. 4.

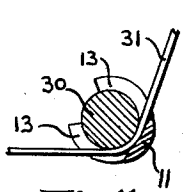


Fig. 5.

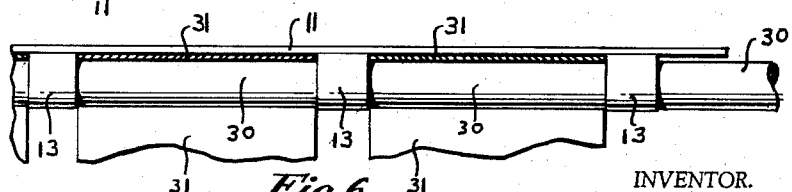


Fig. 6.

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SEPARATOR MEANS FOR WEBBING

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This invention relates to separaor means for webbings and more particularly relates to a separator means which also provides a clamping action to hold the webbing in a desired position relative to a supporting frame.

The webbing separator and clamp according to the present invention finds a wide range of application, but its operation will be described in connection with a folding chair of the type generally classified as outdoor summer furniture. In the past, webbing separator devices which have been employed in such chairs have suffered generally from the fact that when the chair is folded into a flat or storage condition, the webbing goes slack and becomes displaced from its normal position when the chair is in setup form. This slack condition invariably causes difficulties when it is attempted to reopen the chair for use, and generally requires that the user take some time to straighten the webbing and relocate it in its proper alignment relative to the supporting frame.

Moreover, separators of the types used heretofore cause certain difficulties in the fabrication of the chair during the manufacturing process by requiring for example that the chair webbing be secured to the frame in such a manner that it frequently occurs that the webbing of the finished chair is not as taut as is desired. In some cases no adjustment is possible, and in other cases where adjustment is possible there still is involved the additional work of tightening up the individual straps forming the webbing. This, of course, is time consuming and increases the cost of the chair by virtue of the increased labor associated with the manufacture of each particular unit. Additionally, many presently used types of webbing separators suffer from the serious disadvantage that once installed, they may not be removed from the assembled structure without at least partial disassembly. Such removal is occasionally necessitated by the fact that due to hard use or accident, the webbing separator may become broken or otherwise damaged and need to be replaced. The webbing separator according to my invention on the other hand, may be installed and removed very rapidly without disassembling any part of the webbed structure. Accordingly, it is a primary object of my invention to provide a novel webbing separator which not only provides the separation function normally associated with such a device, but also provides a clamping action which holds the webbing straps in the desired position regardless of whether or not the webbed structure is in an opened-out use position or in a folded storage condition.

Another object of my invention is to provide a novel webbing separator which reduces the cost associated with the manufacture of a webbed article by eliminating the need for adjustment operations during the manufacturing process.

Yet another object of my invention is to provide a novel webbing separator which is mechanically rugged, relatively inexpensive, and simple to install.

Still another object of my invention is to provide a novel webbing separator which if damaged may be readily removed from the webbed structure and replaced in a matter of seconds without requiring any disassembly of the webbed structure.

The foregoing and other objects of my invention will become apparent from a careful reading of the following

specification in conjunction with an examination of the appended drawings, wherein:

FIGURE 1 illustrates a perspective view of one possible form of the webbing separator according to the invention;

FIGURE 2 illustrates in perspective view a foldable chaise lounge of the outdoor summer furniture type and into which is incorporated the novel webbing separator according to the invention;

FIGURE 3 is a fragmented perspective view of an enlarged portion of the chaise lounge illustrated in FIGURE 2, and more clearly shows the installed novel webbing separator as used at the junction of the seat and back rest of the lounge;

FIGURE 4 is a rear elevational view of the fragmented chaise lounge section illustrated in FIGURE 3;

FIGURE 5 is a sectional view as seen when viewed along the lines 5—5 of FIGURE 3 and shows the relative organization of a webbing strap, the novel webbing separator, and the chaise rear leg supporting rod;

FIGURE 6 illustrates a sectional view taken along the lines 6—6 of FIGURE 3 and provides another view of the general organization amongst the novel webbing separator, the webbing straps, and the chaise rear leg supporting rod.

In the several figures like elements are denoted by like reference numerals.

Considering first FIGURES 2 and 3, there is seen a chaise lounge **20** generally consisting of a back-rest, a seat, a leg rest, a pair of arms and several supporting leg structures. The chaise frame may be constructed of hollow aluminum tubing and the back-rest, seat and leg rest proper are constructed by securing webbing straps thereto in the generally known manner. The back-rest frame includes a top portion **21** and a pair of downwardly extending side portions **22**, the latter being secured at their lower extremities to a channel clip **25** by a rivet **26** which permits the back-rest to be swung backwardly and forwardly in pivotal fashion about these rivets. Disposed within the channel clips **25** and secured thereto by rivets **27** are the seat frame side portions **24**. Extending transversely across the rear of the chaise is a rod **30** which passes through the channel clips **25** and the seat frame sides **24**. Pivotally fastened to the rod **30** and depending downward therefrom at either side of the chaise is a link **29**, the lower end of which is pivotally connected to the chaise rear leg **28** by the rivet **31**.

A plurality of interwoven webbing straps are seen to be secured to the various parts of the chaise frame to form the supporting webbing. These straps are secured in any convenient fashion to the frame members, as for example by clips or rivets or other conventional fastening devices. It will be observed that certain of the straps run longitudinally of the chair, beginning at the leg rest frame front portion **23** and running rearwardly under and behind the rod **30** and thence upwardly terminating at the back-rest frame top portion **21**. Since the chaise **20** is a foldable device it will be appreciated that upon folding of the chair the longitudinally extending webbing straps **31** will be placed in a slackened condition and hence will tend to separate and bunch up in the region where they pass under and behind the rod **30**, unless some auxiliary means is used to hold these webbing straps in proper place. The tendency toward slackening of these webbing straps progressively worsens as the chaise is used because the weight of a lounge occupant over a period of time causes the webbing straps to stretch, so that even should the straps be tight when the chaise lounge is new, in the course of time and natural use they will of necessity become elongated.

In the past a commonly used webbing separator con-

sisted of an elongated slotted strip of plastic or wood or other similar type of material which was disposed in closely spaced parallel relationship to the rod 30. The slots in the strip extended lengthwise thereof and were of a length corresponding closely to the width of a webbing strap, each longitudinally extending slot in the strip being separated from the adjacent one by a barrier of solid material so that when the webbing straps were extended through the slots they would each be restricted with regard to sideways displacement. The foregoing described type of slotted webbing strap separator required assembly into the chair in one of two ways. One way required fastening all of the webbing straps to the various chaise frame elements before assembling the rod 30 into the chair structure, folding the longitudinally extending webbing straps to form a bight, passing the bight of each strap through the correspondingly placed slot in the webbing strap separator, then inserting the rod 30 through the bight and behind the separator strip, and then securing the rod 30 into the chair frame.

Another method of assembling such a structure would be to leave one or both ends of each of the longitudinally extending webbing straps 31 unsecured from the chaise frame members, assembling the webbing straps and webbing separator and rod 30 as just described, and then securing the longitudinally extending webbing straps 31 to the chaise frame at the top of the back-rest and the front of the leg rest. In any event, regardless of the particular method of assembly used, the resulting structure was characterized by the fact that the webbing strap separator could not thereafter be removed without either withdrawing the rod 30 from the chair frame or unsecuring the longitudinally extending webbing straps at one end and unweaving the webbing, as for example from the back-rest, to withdraw the webbing strap ends from the separator. In fact, in most cases, this latter method could not be employed because the clips which secure the webbing strap ends to the frame are generally too large to pass through the separator slots . Indeed, if the webbing strap ends are riveted to the frame during the assembly process, the straps may not be detached therefrom without destroying the webbing.

The webbing strap separator according to the present invention avoids all the foregoing described difficulties because it may be assembled into the finished chair as the final step of assembly. The manner of assembling the webbing strap separator according to the present invention into a finished chair will be subsequently described, but attention should first be directed to the showing of FIGURE 1 which illustrates one form of the webbing strap separator as adapted for use with the chaise lounge structure seen in FIGURE 2. The webbing separator of FIGURE 1 is generally designated as 10 and includes a backing strip 11 which runs the full length of the separator and to which are secured a plurality of spaced clips 12. The spacing between adjacent clips 12 corresponds to the width of a webbing strap 31, and the clips themselves constitute barriers which prevent the webbing straps from lateral displacement when the separator is placed in operative position. Each of the clips 12 is seen to be of generally C-shaped configuration having a pair of clip arms 13 which merge into a clip base wall 14, the latter being secured to the backing strip 11.

The webbing separator 10 may be fabricated from any convenient material so long as the clip arms 13 are in some measure resilient so that they may be spread apart during the course of installation of the separator and will thereafter spring back to their original positions. It has been found in practice that the webbing separator 10 may be conveniently unitarily formed from many of the well-known plastic substances, as for example polyethylene plastic. Webbing separators so formed have been found to be suitably rugged and relatively inexpensive, and highly resistant to the deleterious effects of weathering.

Returning now to the showing of FIGURE 3 it is seen that the longitudinally extending webbing straps 31 are separated one from the other by the arms 13 of the separator clips 12, the clip arms 13 being illustrated in embracing relationship about the horizontally extending rod 30, around which the webbing straps 31 have been passed as previously described. Recalling from FIGURE 1 that the clips 12 are secured to the backing strip 11, it will be understood that the backing strip 11, although not visible in the showing of FIGURE 3, passes behind each one of the longitudinally extending webbing strips 31 and thereby clamps the latter against the rod 30. This clamping action is clearly illustrated in the showings of FIGURES 4, 5 and 6.

The webbing separator 10 is readily installed around the rod 30 with the several clips intervening the webbing straps 31 by merely pressing the entire webbing separator 10 in a forward direction from the rear of the chaise so that the resilient clip arms 13 are forced apart as they ride forward around the rod 30. As the clip arms pass forward around the rod 30 they are spread apart to a maximum separation corresponding to the diameter of the rod 30 and thereafter ride inward toward each other into closely embracing relation about the rod 30. Should it become necessary or desirable at some future time to remove or replace the webbing separator 10, such removal is readily effected by a backward directed pull on the separator causing the clip arms 13 to again be cammed open as they traverse the diametral dimension of the rod 30 when being withdrawn therefrom. Thus, it may be seen that the webbing separator according to the present invention may be readily installed and detached without requiring disassembly of the rod 30 or the straps 31 from the chair frame structures.

While my invention has been described in connection with a particularly illustrated embodiment thereof, it is to be understood that its application is not limited to the shown and described use but is in fact of general utility and applicable to other structures and uses. Moreover, it is not intended that the present invention be considered in any way as limited to the particular form of backing strip 11 or clip shape 12 as illustrated herein, these particular forms being shown only by way of illustration as applied to the solution of the problem described in some detail in the foregoing specification. Accordingly, it is to be understood that various modifications will occur from time to time to those persons normally skilled in the art without departing from the essential spirit or scope of my invention, and it is therefore intended to claim the same broadly as well as specifically as indicated by the appended claims.

What is claimed as new and useful is:

1. In webbed sitting furniture having back and seat frames coupled to one another proximate the lower back frame and rear seat frame ends respectively, the combination comprising, a horizontal rod extending transversely to and coupled to the said back and seat frames proximate their coupled ends, a plurality of horizontally spaced parallel webbing straps each extending longitudinally of and secured to said back and seat frames and passing under and behind said rod between the points of securement to said frames, and a webbing strap separator including a backing strip disposed behind said webbing straps in parallel relationship to said rod and spaced from the latter by spacer means equal to substantially the intervening strap thickness so that the webbing straps may shift longitudinally without binding to the said rod, said backing strip being quick detachably secured to said rod by clip means formed integrally with said backing strip and projecting therefrom between said webbing straps into clipping engagement with said rod, said clip means also separating adjacent webbing straps from one another.

2. The combination according to claim 1 wherein said backing strip is of a length in excess of the width of a webbing strap, and wherein said clip means are plural

and are spaced along said backing strip at intervals corresponding substantially to the width of a webbing strap to be included therebetween.

3. The combination according to claim 1 wherein said last named means comprises at least one C-shaped clip having a pair of arcuate resilient arms extending from said backing strip with said arms oriented in spaced apart facing relationship and having their ends extending toward one another, whereby said arms may be cammed apart and snapped back toward each other about said rod as said backing strip is shifted toward said rod to project said spacer means between said webbing straps.

4. A device for maintaining uniform spacing between the coplanar straps of a webbing stretched over a rod extending transversely of the straps intermediate the opposite ends thereof and for securing said straps to said rod at their points of engagement with said rod comprising, a unitary member having at least one clip element of generally C-shape adapted to be pressed upon said rod between a pair of adjoining straps of the webbing and a backing strip integral with said clip element having oppositely projecting portions respectively adapted to overlie and engage the straps disposed at opposite sides of said

clip element, the rod-engaging surface of said clip element being inwardly offset from the inner surfaces of said oppositely projecting portions of the backing strip by means substantially equal to the webbing strap thickness so that the webbing straps may shift longitudinally without binding to the said rod, whereby the clip element is of greater thickness throughout than the backing strip and is adapted to fully engage the rod with the webbing straps disposed between the rod and the backing strip.

5. A device according to claim 4 wherein said unitary member includes a plurality of said clip elements spaced equidistantly along said backing strip at intervals corresponding substantially to the width of a webbing strap.

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