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PLASTIC ARM REST

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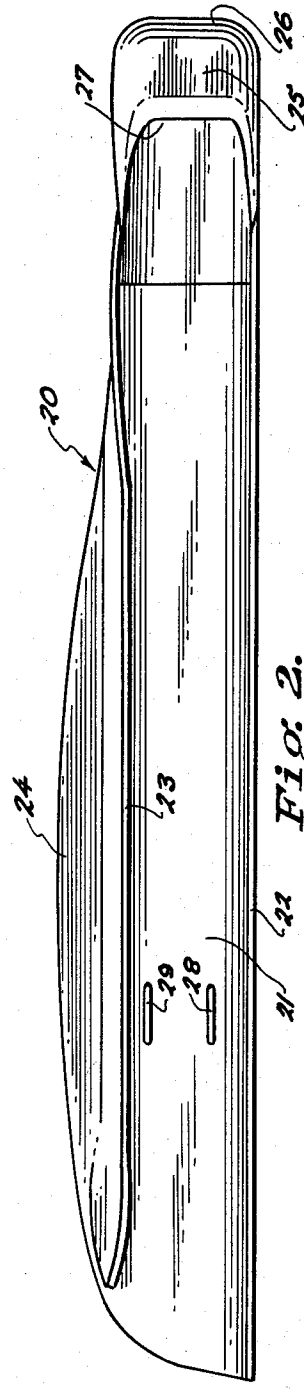


Fig. 2.

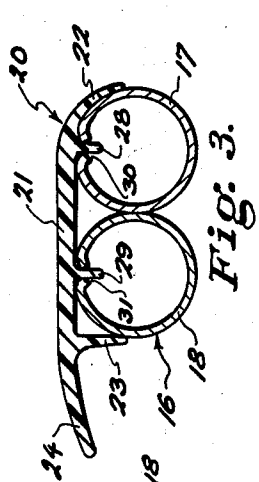


Fig. 3.

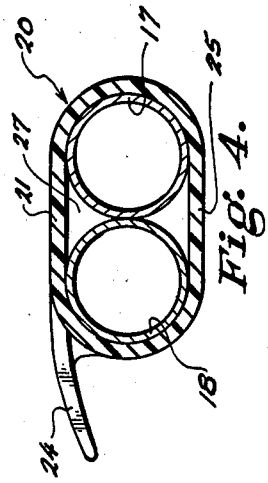


Fig. 4.

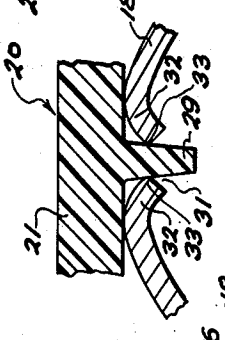


Fig. 5

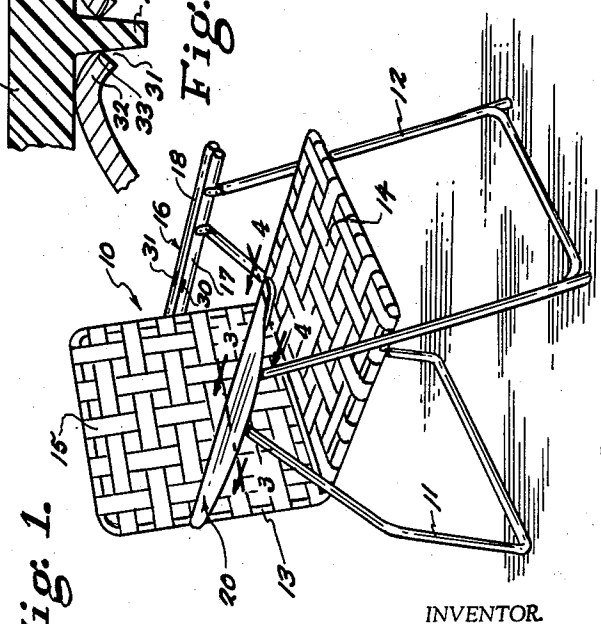


Fig. 1.

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PLASTIC ARM REST

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This invention relates to the arm of chairs, chaises and other similar items of furniture, particularly of the type having frames made of metal tubing. In this specification, the term "chair" is used to include both chairs and chaises.

One form of popular chairs have each arm thereof formed by two metal tubular members of circular cross-section arranged in side-by-side relation. The top surface of such arm construction being formed of two tubular members in side-by-side relation is not smooth, and therefore does not afford a comfortable arm rest. Further, the forward ends of the tubular members, unless shaped to provide curved ends, which involves the expense of such shaping, do not present a finished appearance and are apt to catch on the clothes of a person assuming a seated position in the chair or passing the chair.

It is an object of this invention to provide a plastic arm rest or covering for a chair arm made of two or more tubular members in side-by-side relation, which arm rest is easily positioned on the tubular members to impart a pleasing appearance to the chair arm and further to present a smooth, contoured upper surface for comfortably supporting the arm of a seated person and also to envelop the forward ends of the tubular members to impart a smooth, finished attractive appearance thereto.

In accordance with this invention, the plastic arm rest, molded of one-piece longitudinally elongated construction, has a rearwardly opening pocket at the underside of its forward end to envelop the front end portions of the tubular members constituting the chair arm, while the remainder of the arm rest is generally of downwardly opening, channel-shaped configuration to embrace the tubular members and provide a substantially flat supporting surface, having adjacent its back end, laterally spaced apart, depending lugs or locking members, one for each tubular member. These lugs are in locking enagement with slots formed in the tops of the tubular members of the chair arm near the rear thereof.

Preferably, the lugs or locking members of the arm rest are of downwardly tapering transverse cross-section, and the slots of the tubular members are each struck downwardly or into the interiors of the tubular members to form downwardly and inwardly extending walls defining the opposite sides of the slots. These walls exert a wedging action on the lugs or locking members when the latter are pressed into the slots, thereby to strongly resist withdrawal of the lugs from the slots.

The above, and other objects, features and advantages of the invention, will be apparent from the following detailed description of an illustrative embodiment thereof which is to be read in connection with the accompanying drawing forming a part hereof, and wherein:

FIGURE 1 is a perspective view of a chair having a plastic arm rest embodying the invention, applied to one of the arms thereof, the other arm of the chair being shown without the arm rest to show the construction thereof;

FIGURE 2 is a bottom plan view, enlarged relative to FIGURE 1, of the plastic arm rest;

FIGURE 3 is an enlarged transverse sectional view taken along the line 3—3 on FIGURE 1;

FIGURE 4 is an enlarged transverse sectional view taken along the line 4—4 on FIGURE 1; and

FIGURE 5 is a fragmentary view of a portion of the structure shown on FIGURE 3, but on a further enlarged scale.

Referring to the drawing and initially to FIGURE 1 thereof, a chair 10 is shown having opposed generally U-shaped supporting legs 11 and 12 and an L-shaped frame 13 connected thereto, as conventional, to permit the chair to be folded or collapsed. The frame 13 includes the usual seat 14 and back 15 which may be of any known material, for example, webbing of natural or synthetic fabrics or plastics. A pair of arms 16 are connected to the frame 13 and the supporting legs 11 and 12, for example, by conventional pivotal connections. As shown on FIGURES 1, 3 and 4, each of the arms 16 includes two hollow tubular members 17 and 18 positioned in side-by-side relation and held together by any desired means, such as by rivets or the like. It will be appreciated that the chair thus far described is of conventional construction, and the arm rest of this invention can be applied to all types of chairs and chaises having arms involving two side-by-side tubular members corresponding to 17 and 18 of the drawing.

In accordance with this invention, each of the arms 16 is provided with a plastic arm rest generally identified by the reference numeral 20. As shown on FIGURE 2, the plastic arm rest 20 is longitudinally elongated so as to extend along the length of the arm 16 and includes a top wall 21 which is bent downwardly along its inner edge portion, as at 22. Arm rest 20 is further formed with a depending longitudinal rib or flange 23 spaced laterally from the downwardly bent inner edge 22 (FIGURE 2) so that, when flat top wall 21 of arm rest 20 is placed on chair arm 16, tubular members 17 and 18 of the latter are engaged, at their upper portions as shown in FIGURE 3, by downwardly bent edge 22 and rib or flange 23. Arm rest 20 preferably has an outwardly directed fin 24 extending along the length thereof in back of the front end portion of the arm rest and formed as an extension of top wall 21 so that top wall 21 and fin 24 combine to present a smooth contoured upper surface for comfortably supporting the arm of a person seated in the chair 10.

As shown particularly on FIGURES 2 and 4, the downwardly bent inner edge 22 and rib or flange 23 are extended further downwardly and curved inwardly toward each other, at the front end portion of arm 20, and there formed integrally with a partial bottom wall 25 and a rounded front end wall 26 to cooperate therewith in defining a rearwardly opening pocket 27 at the underside of the front end portion of top wall 21. This pocket is dimensioned to snugly receive the front ends of tubular members 17 and 18 of chair arm 16.

The back end portion of arm rest 20 has a pair of laterally spaced apart elongated lugs or locking members 28 and 29 depending from the underside of top wall 21 between downwardly bent inner edge 22 and flange 23, and preferably having downwardly tapering cross-sectional shapes, as shown on FIGURE 5. The lugs 28 and 29 are laterally located so as to be substantially centered with respect to tubular members 17 and 18 when the latter are embraced between downwardly bent inner edge 22 and flange 23. Further, tubular members 17 and 18 have centered slots 30 and 31 longitudinally located in the top portions thereof to register with, and receive the lugs or locking members 28 and 29 when arm rest 20 is placed on top of chair arm 16 with the forward ends of tubular members 17 and 18 received in pocket 27.

As shown on FIGURE 5 with respect to the slot 31, each of the slots 30 and 31 is preferably struck downwardly in the related tubular member 17 or 18 so that the material of the latter, at the opposite sides of the slot is curved or bent downwardly, as at 32, and the side

edges of the slot are downwardly divergent, thereby to present sharp corners 33 which are normally spaced apart by a distance less than the maximum width of the downwardly tapering lug 28 or 29.

The described arm rest can be molded in one-piece from any suitable plastic such as polypropylene. Pigmented plastics can be used to produce arm rests in any desired color or combinations of colors. Since plastics such as polypropylene are noted for their resistance to weathering, the arm rests besides their decorative and functional properties actually improve the weathering properties of the chair arms.

In installing the arm rest 20 on a chair arm 16, the forward ends of tubular members 17 and 18 are initially inserted in pocket 27 at the underside of the front end of arm rest 20 and the back end portion of the latter is then pressed downwardly against the chair arm so as to force lugs 28 and 29 downwardly into slots 30 and 31 of the tubular members. By reason of the downwardly tapering configuration of lugs 28 and 29, the downward pressing of the latter into slots 30 and 31 causes the sharp corners 33 at the opposite sides of each slot to bite into the lug therein for gripping or firm retention of the lug in the slot. When an upward force is thereafter applied to the arm rest 20 tending to lift the latter from chair arm 16, any upward movement of the lugs 28 and 29 tends to straighten out the downwardly bent or curved wall 32 defining the opposite sides of the slots 30 and 31 and thereby tends to reduce the lateral distance between the sharp corners or edges 33 for further increasing the tightness or security of the gripping or wedging action on the lugs or locking members 28 and 29.

Forward movement of arm rest 20 relative to chair arm 16, which movement might cause release of the forward ends of tubular members 17 and 18 from pocket 27, is prevented by the engagement of the side walls of slots 30 and 31 and the lugs 28 and 29, respectively. Upward movement of the arm rest relative to the chair arm is prevented, at its forward and back end portions, by the engagement of tubular members 17 and 18 in pocket 27 and by the secure gripping engagement of the side walls of slots 30 and 31 on the lugs 28 and 29, respectively. Hence the arm rest 20, upon application to the chair arm, is firmly secured thereto. Further, the thus applied plastic arm rest 20 improves the appearance of arm 16 and provides a more comfortable arm rest or support for the user of the chair than would be provided by the tubular members 17 and 18. The envelopment of the front ends of tubular members 17 and 18 in pocket 27 ensures that the front end portion of the chair arm has a smooth rounded contour of pleasing appearance and which avoids snagging or catching the clothes of a person seated or about to be seated in the chair or of a passerby.

Although an illustrative embodiment of the invention has been described in detail herein with reference to the accompanying drawing, it is to be understood that the invention is not limited to that preceise embodiment, and that various changes and modifications can be made therein by one skilled in the art without departing from the scope or spirit of the invention. For example, while the drawing shows and the specification discloses preferred commercial construction of chair arms each having two side-by-side tubular members 17 and 18, this invention is not limited to such construction but includes arms having a plurality of such tubular members. As a practical matter more than three such tubular members will seldom be used. Hence the invention is not to be limited to the above description or the showing of the drawing, except as defined in the appended claims.

What is claimed is:

1. In combination with a chair arm including two tubular members disposed in side-by-side relation and each having a slot at the top of the back end portion of the tubular member; a longitudinally elongated plastic arm rest providing a substantially flat supporting surface bearing on said tubular members and having a rearwardly opening pocket at the underside of the front end portion of said arm rest for snugly receiving the front end portions of said tubular members within said pocket with the wall defining the lowermost portion of the pocket positioned just below the bottoms of said tubular members, and a pair of laterally spaced lugs depending from said flat supporting surface toward the rear end thereof in tight engagement with the walls of said slots in the tubular members.

2. In combination with a chair arm including two tubular members disposed in side-by-side relation and each having a downwardly struck slot at the top of the back end portion of the tubular member with downwardly bent margins along the opposite sides of the slot; a longitudinally elongated plastic arm rest bearing on said tubular members and having a rearwardly opening pocket at the underside of the front end portion of said arm rest for snugly receiving the front end portions of said tubular members within said pocket with the wall defining the lowermost portion of the pocket positioned just below the bottoms of said tubular members, and a pair of laterally spaced lugs depending from said arm rest and having downwardly tapering transverse cross-sections for tight wedging engagement in said slots between said downwardly bent margins of the tubular members.

3. In combination with a chair arm including two tubular members of circular cross-section disposed in side-by-side relation and each having a slot at the top of the back end portion of the tubular member; an elongated plastic arm rest including a top wall bearing on said tubular members, means defining a rearwardly opening pocket at the underside of the front end portion of said top wall for snugly receiving the front end portions of said tubular members within said pocket with the wall defining the lowermost portion of the pocket positioned just below the bottoms of said tubular members, a downwardly bent inner edge portion extending along said top wall from said pocket at the front end of said top wall to the rear end of said top wall, a flange depending from said top wall and spaced laterally from said bent inner edge portion to embrace said tubular members therebetween, and pair of laterally spaced lugs depending from the back end portion of said top wall between said bent inner edge and said flange and having transverse cross-sections tapering downwardly for tight engagement in said slots of the tubular members.

4. The combination as in claim 3; wherein each slot is downwardly struck and confined between downwardly bent margins so that upward withdrawal of said lugs from said slots tends to narrow the latter and thereby increase the clamping action of the side walls of said slots onto the lugs positioned therein.

5. In combination with a chair arm including a plurality of tubular members disposed in side-by-side relation and each having a slot at the top of the back end portion of the tubular member; a longitudinally elongated plastic arm rest providing a substantially flat supporting surface bearing on said tubular members and having a rearwardly opening pocket at the underside of the front end portion of said arm rest for snugly receiving the front end portions of said tubular members within said pocket with the wall defining the lowermost portion of the pocket positioned just below the bottoms of said tubular members, and a laterally spaced lug, one for each tubular member, depending from said flat supporting surface toward the rear end thereof in tight engagement with the walls of said slots in the tubular members.

6. In combination with a chair arm including two tubular members of circular cross-section disposed in side-by-side relation and each having a slot at the top of the back end portion of the tubular member; an elongated plastic arm rest including a top wall bearing on said tubular members, means defining a rearwardly opening

pocket at the underside of the front end portion of said top wall receiving the front end portion of said tubular members, a downwardly bent inner edge portion extending along said top wall from said pocket, a flange depending from said top wall and spaced laterally from said bent inner edge portion to embrace said tubular members therebetween, a laterally directed fin formed as an extension of said top wall and projecting outwardly beyond said flange to cooperate with said top wall in defining a broad resting surface, and a pair of laterally spaced lugs depending from the back end portion of said top wall between said bent inner edge and said flange and having

transverse cross-sections tapering downwardly for tight engagement in said slots of the tubular members.

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