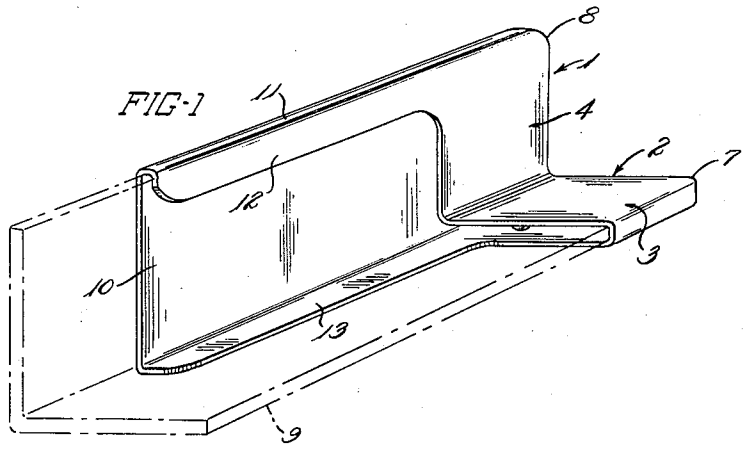
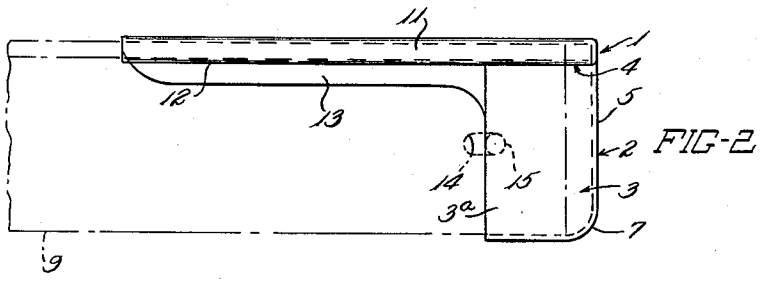
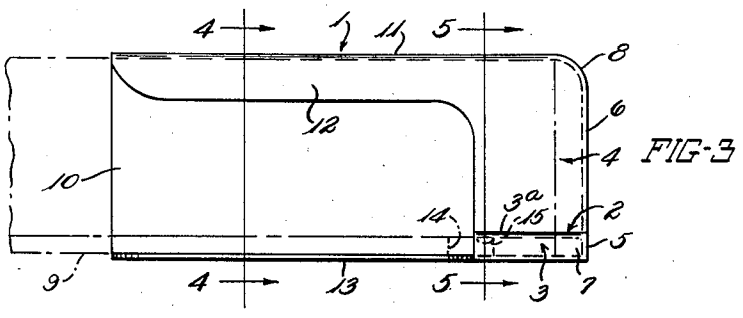
Sept. 6, 1960 M. E. ROCHE 2,951,252

BEDFRAME SIDE RAIL END CAP

Filed July 25, 1958



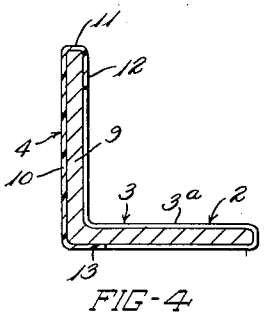




FIG-4

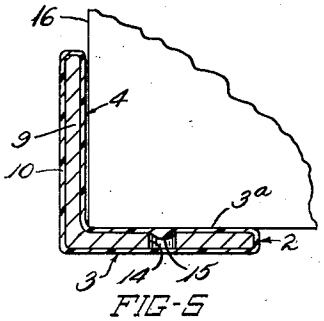



FIG-5

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# BEDFRAME SIDE RAIL END CAP

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1 Claim. (Cl. 5—279)

The present invention relates to end caps, and especially to a bedframe side rail end cap of attractive appearance and adapted to retain itself in engagement with the side rail through normal operating conditions.

At the present time there is a continuing acceptance of and demand for so-called "Hollywood" style of bedframes that have a headboard, and usually metal angle side rails. The mattress and/or springs are carried on these side rails and normally there is no footboard provided for the bedframe. These metal angle side rail ends frequently have caused tears in the box spring or mattress ticking or cover. Furthermore, in some instances, the ends of the side rails extending from the sides of the mattress present sharp edges that have snagged clothing, or the stockings of a person walking by the bedframe. Sometimes even the bed covers have been snagged and torn on the ends of the side rails.

Hence, efforts have been made to overcome this problem by smoothing or rounding off the ends of the side rails of the frame to avoid any tearing action thereby, but such efforts have not been too effective.

The general object of the present invention is to avoid and overcome the foregoing and other disadvantages of the side rails used in Hollywood style bedframes and to provide a novel end cap therefor characterized by the ability of the end cap to grasp the end of the side rail firmly and to retain itself in engagement therewith for effective service action.

Another object of the invention is to provide a plastic, molded end cap for the ends of the side rails of a bedframe, which end cap requires no weight thereon to hold it in engagement with the side raid end, and which end cap normally extends beyond the end of the side rail.

A further object of the invention is to provide an end cap for a bedframe side rail wherein a side extension portion is provided on the end cap to improve the appearance of the end cap and to carry identification and/or advertising data thereon, as well as to provide for better gripping action on the end cap with a side rail.

A further object of the invention is to provide an end cap for the end of a metal angle to avoid the necessity of rounding off, or deburring the end of the angle to form a non-snag type of end thereon as is required in prior types of structures.

Yet a further object of the invention is to provide a plastic molded end cap for a bedframe side rail, or the like wherein an inwardly extending dimple is provided on the end cap to seat in a slot or recess provided in the portion of the angle with which the end cap is engaged to aid in obtaining a mechanical engagement action therebetween.

The foregoing and other objects and advantages of the invention will be made more apparent as the specification proceeds.

For a better understanding of the present invention, reference now should be had to the accompanying drawings which illustrate one currently preferred embodiment of the invention, and wherein:



Fig. 1 is a perspective view of an end cap embodying the principles of the invention and with a metal angle or side rail being indicated in dotted lines engaged therewith;

Fig. 2 is a top plan of the end cap structure shown in Fig. 1;

Fig. 3 is a front elevation of the structure shown in Fig. 1; and

Figs. 4 and 5 are vertical sections taken on lines 4—4 and 5—5, respectively, of Fig. 3.

Corresponding numerals are used in the specification and drawings to facilitate reference between corresponding members shown in the drawings and described in the specification.

The present invention, generally speaking, relates to an end cap adapted to engage the end of a metal angle and wherein the end cap comprises a molded plastic body with an end portion thereon of generally hollow L-shape in vertical section and where such end portion has a horizontal leg and a vertical leg, the axial outer end of the end portion being closed and having arcuate corners at the closed axially outer edges of each of the legs, the vertical leg having an extension thereon with an overhanging top flange and a bottom wall thereon, which top flange includes an inner wall of a vertical height about twice the thickness of the vertical leg so that the extension and the inner and bottom walls thereon aid in holding the end cap in engagement with a metal angle or side rail at the end thereof.

Reference now is particularly directed to the details of the structure shown in the accompanying drawings, and an end cap of the invention is indicated as a whole by the numeral **1**. Such end cap preferably is of a molded, integral construction and is made from a suitable plastic material such as polyethylene, but other similar or equivalent substances may be used, as desired. This end cap **1** has an end portion **2** of generally hollow L-shape in vertical section and having a horizontal leg **3** and a vertical leg **4**.

The axially outer ends of the horizontal and vertical legs **3** and **4** are closed by means of walls **5** and **6**, respectively, provided thereon. Furthermore, preferably the axially outer corners of both of the legs **3** and **4** are rounded or radiused off to provide a smooth, attractive appearance on the end cap at corners **7** and **8**, respectively, provided thereon. The end cap **1** is snugly engaged with a metal rail **9** at the end thereof. Thus the metal side rail or angle **9**, the end of which normally is cut off at 90° to the longitudinal axis of the side rail **9** so that sharp, straight corners are provided thereon, necessarily will have such flat end edges on the side rail spaced axially slightly from the closed end portion **2** of the end cap **1**, as best indicated in Figs. 2 and 3 of the drawings. Because of such extension, the side rail **9** does not require any special finishing or trimming actions on its end and any conventional shear means or other cutting action can be used for cutting the side rail **9** to desired length.

The drawings also bring out the fact that the vertical leg **4** has an extension, or section **10** provided thereon that normally extends axially approximately two or three times the length of the closed end portion **2** of the end cap **1** so that a vertically extending wall of appreciable length is provided in the end cap **1**. Thus any desired identification data or advertising means, such as trademarks, or trade names, or the like, could be molded into or applied to this extension section **10** of the end cap to both improve the appearance of the end cap and to advertise the manufacturer's name to the purchaser of a bedframe having the side rail **9** included therein. Such

extension 10 has a second and important function in the end cap 1 in that it is provided with an overhanging top flange 11 thereon. This top flange 11 terminates in an inner wall 12 thereon that extends vertically of the end cap 1 a distance usually about twice the thickness of the top flange 11 when considered as the distance that the wall 12 thereof is spaced from the remainder of the extension 10. The engagement of the extension 10 with the side rail 9 is likewise improved by the provision of a bottom wall or flange 13 thereon that is of about twice the lateral width as the thickness of one leg of the side rail 9 whereby a very effective, long retaining member is provided to hold the end cap 1 in engagement with the side rail at the end thereof.

In some instances, it may be desirable to eliminate the extension 10 as a mechanical engagement action, hereinafter described, will serve satisfactorily to retain the end cap 1 on the side rail 9 in a modified structure for such end cap.

It should be realized that the construction and design of the end cap 1 is such that it will retain itself in engagement with the side rail 1 even with no load applied thereon because of the relatively long extension 10 provided for the end portion 2. However, should any weight or load be placed on the side rail 9 normally it will extend over and beyond the upper surface of the horizontal leg 3 and hold the end cap in place.

Yet another feature of the end cap of the invention is that it has means thereon to positively engage the side rail 9, or equivalent member. Thus, the side rail 9 has a hole or slot 14 provided therein that may have bolt or screw means received therein in some instances and only partially filling such hole for securing a support leg to the side rail, or the holes may be provided in the side rails for other uses. In all events, the hole 14 is present in the side rail 9 and a small protuberance or boss 15 is formed on the top wall 3*a* of the horizontal leg in the end cap on the inner surface thereof. Thus the protuberance 15 is designed to seat in the hole 14 and aid in obtaining an effective mechanical engagement between the side rail and the end cap.

A typical bed support member comprising a box spring 16 is shown only in Fig. 5 to illustrate how a load unit is carried on the side rail 9. Such spring 16 effectively retains the end cap 1 on the side rail 9 and forces the protuberance 15 into the hole or slot 14.

From the foregoing, it will be seen that the end cap 1 can be made by molding a standard design end cap from a suitable plastic material and that large quantities of end caps can be made at relatively low cost. Use of these end caps will reduce the cost of finishing or cutting the side rails and at the same time will provide an attractive, ornamental end cap that will avoid any problems arising from snagging bed clothes or other articles on jagged, or rough ends of bedframe side rails. Thus it is believed that the objects of the invention have been achieved.

While one complete embodiment of the invention has been disclosed herein, it will be appreciated that modification of this particular embodiment of the invention may be resorted to without departing from the scope of the invention as defined in the appended claim.

What I claim is:

In combination, an angle member having a vertical leg and a horizontal leg forming a side rail for a bedframe; an end cap for said angle member, which end cap comprises a plastic body with an end portion of generally hollow L-shape in vertical section and having a horizontal leg and a vertical leg, said end portion being of a size for snug engagement with said angle member at the end thereof, the axial outer end of said end portion being closed and having arcuate corners at the closed axially outer edges of each of said legs, said arcuate corners protruding axially beyond the end of said angle member, the said vertical leg having an extension thereon with an overhanging top flange and a bottom wall thereon, said extension and bottom wall aiding in holding the end cap in engagement with said angle member, said angle member having an aperture in the horizontal leg thereof adjacent the end of such angle member, the horizontal leg of said end portion having an inwardly extending protuberance thereon seating in said aperture to aid in securing said end cap to said angle member, said protuberance being adapted to be pressed into said aperture by load applied to said horizontal leg of said end cap.

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