KNOCK-DOWN CANOPY SUPPORT FOR BEDS

Kenneth H. Gutner, 591 Roger Williams, Highland Park, Ill. 60035

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This invention relates to a knock-down canopy support for beds, and, more particularly, to a canopy support which is uniquely adjustable to accommodate varying sized beds.

Heretofore, canopy supports or frames had to be engineered for the specific size bed to which they are applied. Canopy supports are well-known, having generally a centrally longitudinally upwardly arched portion. These are widely used on both single and double beds. Single beds are generally about 39” wide while double beds are generally 54”. However, manufacturers depart from these precise widths over a 2” range. For example, some single beds normally styled 39” wide beds may be 381/2” wide, while others may be 401/2” wide. A common range of sizes for a double bed includes widths from 531/2” to 551/2”—these dimensions being measured between the centers of the upstanding posts at the four corners of the bed frame.

An important object of the invention is to provide an adjustable canopy frame for support, i.e., one that accommodates itself to the varying widths within a given range. This provides substantial efficiency in the shipping and assembly of the canopy supports. No longer is it necessary to “tailor make” a canopy support for a particular bed, and, therefore, it is not necessary to ship the support with the bed frame. Hereinafter, the canopy supports are taped to the headboard, making an awkward package. Also, real economies can be achieved in the large scale manufacture of a basic, universal canopy support.

Other objects and advantages of the invention may be seen in the details of construction and operation of this specification.

The invention is explained in conjunction with an illustrative embodiment of the accompanying drawing, in which—

FIG. 1 is a perspective view of a frame installed on fragmentary bedposts;
FIG. 2 is an enlarged fragmentary perspective view of one end of the longitudinal side members of the canopy support;
FIG. 3 is an end view of one of the clips seen associated with the longitudinal side members of FIGS. 1 and 2;
FIG. 4 is a side elevational view of the clip of FIG. 3;
FIG. 5 is a sectional view along the line 5—5 of FIG. 4 and
FIG. 6 is a perspective view of a unique shipping container, partially broken away, to show the advantageous packaging of the invention for shipment between manufacturer and dealer, or dealer and consumer.

In the illustration given and with particular reference to FIG. 1, the numeral 10 designates generally the invention which is seen to be installed on upstanding bedposts as at 11. The bedposts 11 are provided at the four corners of the frame of the usual bed 11a. As indicated before, the beds uniformly come in two sizes—the 39” wide and the 54” wide bed. It would be appreciated, however, that the invention is equally well adapted to oversized beds (“Queen Size” about 60” wide x 79” long; “King Size” about 54” wide x 84” long and various combinations thereof). The frame 10 includes along each longitudinal side a pair of longitudinal side members as at 12 and 13.

Members 12 and 13 are coupled together by means of a sleeve 14 and at each end of the support, the members 12 and 13 are equipped with eyes as at 15. For this purpose, and this can be better appreciated from a consideration of FIG. 2, the metal rodding of which the member 12 is constructed is folded or bent on itself to form an elongated eye 15. The springiness of resilience of the arched members 12 and 13 accommodate these members to different length beds.

Secured at spaced distances along each member 12 and 13 are clips generally designated 16 which also can be seen in enlarged form in FIGS. 2 and 3. Reference to FIG. 3 reveals that the clip 16 has a generally U-shaped portion 17 consisting of an arched base part 18 and depending arm portions 19 and 20. Projecting laterally from the arm portion 20 is a bracket portion 21 which is weldably secured to the longitudinal side member 12. The arm portions 19 and 20 are apertured as at 19a and as at 20a for the positionable locking receipt of an associated transverse or lateral member 22.

Inasmuch as the clips 16 associated with the ends of each pair of longitudinally extending rods are positioned inwardly of the remaining clips (by virtue of being weldably secured to the eye forming portion 15), the lateral members 22a are slightly shorter than the remaining lateral members 22b.

The arm portions 19 and 20 of each clip 16 diverge slightly as can be appreciated from FIG. 4, so that the insertion of the transverse rod 22 requires slight springing or distortion of the arched base part 18. This results in a firm but releasable lock or clamp on each rod.

The bracket portion 21 has a length of the order of 1” so as to permit different degrees of insertion of the rod 22 into the U-shaped portion 17. This permits a variation of width of 1” at each end of each rod 22, thereby adapting the overall frame 10 to beds varying as much as 2” in width.

The apertures 19a and 20a are sized to receive the rod 22 and advantageously the aperture 20a is slightly oval or enlarged, so as to accommodate any burred end that may be on the transverse rod 22, and further facilitates sliding adjustment. Additionally, the arm portion 20 interconnecting the base portion 18 with the bracket portion 21 is advantageously ribbed as at 23 which is effective to prevent bending and further, the point of interconnection between the arm portion 20 and the base portion 17 is beaded as at 24 to prevent overbending or distortion during insertion of the lateral member 22 and which might result in loss of the clamping power of the clip 16.

As mentioned previously, the clips 16 are weldably secured to the longitudinal member 12 and for this purpose, upstanding projections as at 25 may be provided to facilitate this connection.

The member of which the frame is composed may be 16 gauge metal of half hardness steel with the elements constructed of the materials just disclosed and packaged in the manner seen in FIG. 6. The overall weight of a 54” size canopy support is 10 lbs. while that of the 39” style support is 8½ lbs.

Reference to FIG. 6 reveals an outer container 26 partially broken away to reveal innermost longitudinal members 12, 12’, 13 and 13’. The members 12, 12’, 13 and 13’ are seen to be mirror images of the members 12 and 13 and, thus, have their clips 16 extending laterally in a direction opposite to the direction of the clips associated with the members 12 and 13. The generally S-shaped members 12, 12’, 13 and 13’ are advantageously taped to—
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together as at 27. Further, at least the uppermost clips on each member, i.e., those associated with eye portions 15, are inserted into corrugated tubes 28 and 28' which are seen to anchor the same against the sidewalls of the container 26 and thereby immobilize the S-shaped side members against displacement during shipment. The six transverse members 22 and 22a are assembled 29 and inserted into the packing container 26 and are also advantageously immobilized or stabilized by means of the above-mentioned corrugated tubes 28.

While in the foregoing specification, a detailed description of an embodiment of the invention has been set down for the purpose of explanation, many variations of the details herein given may be made by those skilled in the art without departing from the spirit and scope of the invention.

I claim:

1. A knock-down canopy support for beds comprising four longitudinal members and two end lateral members adapted to be interconnected adjacent the ends thereof to form a generally rectangular frame, said longitudinal members being arranged in pairs to form arched sides of said frame, said longitudinal members being equipped with clip means for securing said end lateral members in releasable, adjustable fashion, and a plurality of intermediate lateral members releasably, adjustably connected between said longitudinal members, said longitudinal members being equipped with additional clip means for securing said intermediate lateral members thereto, each of said clip means including a lateral member receiving portion and a bracket portion integral therewith, said bracket portion being fixed to its associated longitudinal member having a length to accommodate about a 1" range of clamping positions of its associated lateral member, each longitudinal member having one end portion folded on itself to form an elongated eye whereby said eye is adjustably connected to a bedpost, each longitudinal member being constructed of resilient metal rodding to accommodate flexure of said member for changing the length thereof.

2. The structure of claim 1 in which said member receiving portion includes a curved base portion and arm portions upstanding from said base portion, said arm portions being apertured for the clamping receipt of one end of a lateral member.

3. A knock-down canopy support for beds comprising four longitudinal members and two end lateral members adapted to be interconnected adjacent the ends thereof to form a generally rectangular frame, said longitudinal members being arranged in pairs to form arched sides of said frame, said longitudinal members being equipped with clip means for securing said end lateral members in releasable, adjustable fashion, and a plurality of intermediate lateral members releasably, adjustably connected between said longitudinal members, said clip means including a plurality of clips secured to said longitudinal members and projecting laterally therefrom, each clip means being generally U-shaped with a curved base portion and arm portions upstanding from said base portion, said arm portions being apertured for the clamping receipt of one end of the lateral members, each clip being equipped with an integral bracket portion extending laterally from the end of one of said arm portions, said bracket portion being fixed to its associated longitudinal member and having a length to accommodate about a 1" range of clamping positions of its associated lateral member.

4. The structure of claim 3 in which one arm portion of each clip is equipped with a rib on each side of the aperture thereof.

5. The structure of claim 3 in which each clip is equipped with a bead in the portion connecting said base and one arm portion.

6. The structure of claim 3 in which said bracket portion is equipped with a recess in the area fixed to said longitudinal member.

7. A knock-down canopy support for beds comprising four longitudinal members and two end lateral members adapted to be interconnected adjacent the ends thereof to form a generally rectangular frame, said longitudinal members being arranged in pairs to form arched sides of said frame, said longitudinal members being equipped with clip means for securing said end lateral members in releasable, adjustable fashion, and a plurality of intermediate lateral members releasably, adjustably connected between said longitudinal members, each longitudinal member having one end portion folded on itself to form an elongated eye whereby said eye is connected relative to a bedpost, each longitudinal member being constructed of resilient metal rodding to accommodate flexure of said member for changing the length thereof.

8. The structure of claim 7 in which said end lateral members are shorter than said intermediate lateral members, said clip means for said end lateral members being secured to the folded end portion of its associated longitudinal member.

9. A knock-down canopy support for beds comprising four generally S-shaped rods adapted to be secured together in pairs to form the longitudinal sides of a canopy support and providing therein a centrally arched portion, the ends of each secured pair of rods being folded to provide eyes for mounting said rods on the posts of a bed, a plurality of clips on each pair of rods, and a plurality of transverse members releasably clamped by said clips, each clip projecting from its associated pair of rods toward the other pair of rods and having a clamp portion from its associated pair of rods to permit about 1" axial movement between outermost clamping positions on its associated lateral member whereby said support is adjustable both longitudinally and laterally to accommodate different size beds.

References Cited by the Examiner

UNITED STATES PATENTS

326,437 9/1885 Marsh -------------- 135—5.1
840,652 1/1907 Owen -------------- 135—5.1

OTHER REFERENCES


HARRISON R. MOSELEY, Primary Examiner.

A. I. BREIER, Assistant Examiner.