Feb. 16, 1954 C. T. DRAKE 2,668,963

BEDCLOTHES SUPPORT FOR BEDSTEADS

Filed Oct. 19, 1949

2 Sheets-Sheet 1

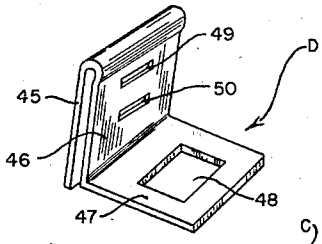


FIG.-4

FIG.-1

FIG.-3

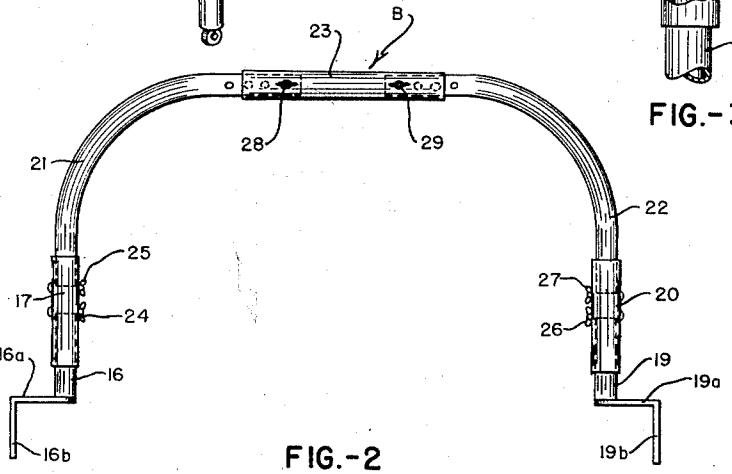


FIG.-2

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BEDCLOTHES SUPPORT FOR BEDSTEADS

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2 Sheets-Sheet 2

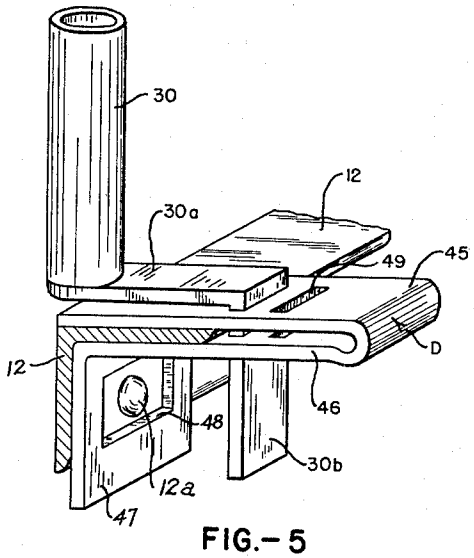


FIG.-5

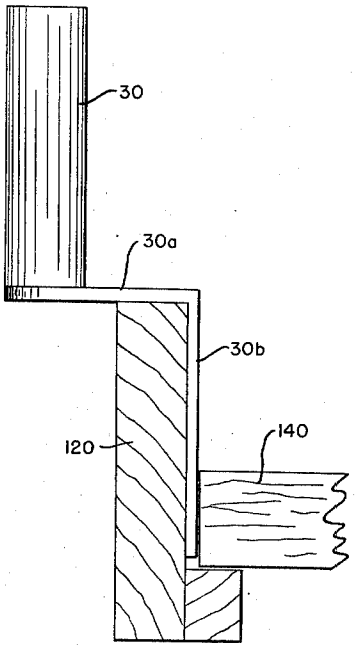


FIG.-8

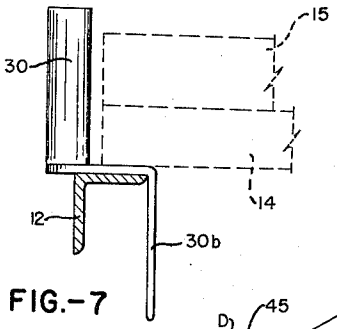


FIG.-7

FIG.-6

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BEDCLOTHES SUPPORT FOR BEDSTEADS

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Application October 19, 1949, Serial No. 122,291

6 Claims. (Cl. 5—319)

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The present invention relates to a bedclothes support for bedsteads. It has to do particularly, although not exclusively, with an attachment for bedsteads, or the like, and is especially useful on the beds of invalids in hospitals, in private homes, and elsewhere, for the purpose of sustaining the weight of the bedclothes or covers free from the limbs or other parts of the body of the patient occupying the bed, thereby permitting the unencumbered movements of the patient and also enabling the attending physician, surgeon, nurse, or other attendant to take care of the needs of the invalid occupying the bed without entirely removing the bedclothing or other covering.

It has been found further that the attachment in accordance with the present invention is also extremely useful in connection with patients suffering from arthritis, burns, or the like, wherein any weight or pressure whatsoever upon the afflicted parts of the body is most undesirable and uncomfortable. The attachment also serves the purpose of supporting, in a convenient position, irrigation equipment for treatment of the patient, and likewise serves as convenient supporting means for equipment used in blood transfusions, intravenous injections, and the like.

One of the objects of the invention is to provide a bedstead, or the like, with a quickly applied and readily detachable transversely extending cover-supporting attachment or frame structure which has the characteristics of being removably mounted, vertically and horizontally adjustable so as to permit it to fit bedsteads of varying widths, and adjustable lengthwise of the bed to permit it to be located on the bed as desired and in accordance with the requirements and comfort of the bed occupant.

Another object of the present invention is to provide an improved attachment consisting of a sectioned telescopic frame having means for maintaining the sections in their relatively adjusted positions, in which the means are so arranged with relation to the frame itself as to provide no obstructions for the bedclothing placed over the frame and supported thereby.

A further object of the present invention is to provide an improved bedclothes supporting attachment or unit as aforesaid, in which the base or supporting portions of the attachment are so arranged and proportioned as to permit the attachment to be applied to or mounted upon beds of different types wherein the bed rails are also of different types.

Another and important object of the present

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invention is to provide spring-like friction clip means or clamps for removably yet securely connecting the bedclothes supporting attachment to portions of the bed frame; another object being to provide such spring-like friction clip means or clamps capable of fitting bed rails of various kinds.

A further object of the present invention is to provide an improved attachment for bedsteads which is capable of providing supporting means not only for the bedclothes but also for irrigating devices and other equipment for use in treating a patient occupying the bed upon which the attachment is mounted.

A further object of the present invention is to provide an improved attachment of the foregoing nature which is of relatively sturdy construction, yet relatively lightweight, and one whose parts permit the use of the attachment with bedsteads of various types; it being another and important object of the invention to provide an attachment which is relatively inexpensive to manufacture and which can, therefore, be sold at a reasonable price.

The foregoing and other objects and advantages of the present invention will appear from the following description and appended claims when considered in connection with the accompanying drawings forming a part of this specification, wherein like reference characters designate corresponding parts in the several views.

In said drawings:

Fig. 1 is a perspective view, partly broken away, showing a conventional bedstead having, by way of illustration, two of the supports or attachments embodying the present invention applied thereto and illustrating thereby two different modes of application to the bedstead;

Fig. 2 is a front elevational view of the attachment shown adjacent the head of the bed in Fig. 1;

Fig. 3 is an enlarged detail sectional view of portions of cooperating telescoping sections at the right of the attachment unit located adjacent the headboard of the bed in Fig. 1;

Fig. 4 is a perspective view of one of the spring-like friction clip member or clamps embodying the present invention;

Fig. 5 is a fragmentary detail perspective view, partly in section, and on an enlarged scale, illustrating one manner of attaching one end of one of the supporting frames of Fig. 1 to an angle iron type of bed side rail;

Fig. 6 is a view similar to Fig. 5 but illustrating

a somewhat different mode of application of the frame to a bed side rail;

Fig. 7 is a fragmentary end elevational view, partly in section, showing another application of the bedclothes supporting attachment of Fig. 5 to a bed; and

Fig. 8 is an end elevational view illustrating the use of an attachment or support of the present invention in connection with a bed having wood side rails.

Before explaining in detail the present invention it is to be understood that the invention is not limited in its application to the details of construction and arrangement of parts illustrated in the accompanying drawings, since the invention is capable of other embodiments and of being practiced or carried out in various ways. It is to be understood also that the phraseology or terminology employed herein is for the purpose of description and not of limitation, and it is not intended to limit the invention herein claimed beyond the requirements of the prior art.

Referring now particularly to the drawings, A represents as a whole, a conventional type of bedstead upon which an attachment according to the present invention may be mounted. The bedstead comprises a head portion 10, a foot portion 11, a left side rail 12 and a right side rail 13, these side rails being preferably of angle iron cross section, as seen in Figs. 5, 6 and 7. In Fig. 7, a conventional bed springs 14 and a conventional mattress 15 are illustrated.

In Fig. 1 I have shown, for the purpose of illustration, two different applications of one embodiment of a bedclothes supporting attachment of the present invention, the application located nearest the bed headboard 10 being indicated as a whole at B, and the other application of the attachment as a whole at C, somewhat remote from said headboard. In this figure and also in Fig. 4, the spring-like clip means or clamp which may be desirable for use in connecting the attachment to the bed frame, is indicated as a whole at D.

With reference now particularly to frame unit B, it will be seen in Figs. 1, 2, 3 and 6 that the attachment is in the form of a sectioned or sectional frame which consists of upright preferably tubular lower members 16 and 19, the member 16 having a right angularly disposed base or connecting member consisting of a horizontal portion 16*a* and a depending or vertical portion 16*b*. Member 19 is provided with a similarly disposed base or connecting member which comprises horizontal portion 19*a* and a depending or vertical portion 19*b*.

Tubular portion 16 carries a tubular connecting section or female member 17 which slips over portion 16, whereas portion 19 carries a similar female tubular connecting section 20 which slips over member or portion 19. The tubular member 17 receives and supports with a free sliding fit, the lower upright end portion of a curved section or member 21. Tubular section 20 receives a similarly shaped section 22. When the parts are mounted as shown in Figs. 1 and 2, it will be seen that the upper ends of sections 21 and 22 extend in horizontal planes and are in opposed spaced relationship to one another. These opposed end portions of members 21 and 22 are telescoped within and supported by the tubular section or sleeve-like female member 23 to complete the whole frame unit or attachment.

All of the frame sections 16 through 23 are detachably connected together, as seen in Fig. 2, to

provide the complete unit B. Combined bolts and wing nuts 24 and 25 extend through openings in the midsection of connecting sleeve 17 as shown, to maintain these several parts in their desired assembled positions. Bolt 24 rests upon the top end of member 16 and the bottom end of member 21 rests upon bolt 25. Similar combined bolts and wing nuts 26 and 27 serve to removably connect together in similar manner, the sections 19, 20 and 22. The inner or upper end portions of curved sections 21 and 22 are adjustably telescoped with and maintained in proper adjusted position with relation to sleeve-like section 23, by combined bolts and wing nuts 28 and 29.

It is to be seen with particular reference to Figs. 2 and 3 that the heads of the several bolts above described are rounded so as to present no obstruction which might snag the bedclothing. Moreover, the wing nuts carried by the upright connecting members are preferably disposed at the inner surface of the sections of frame B so that the bedclothing can be moved over the unit or supporting attachment without interference. The bolts and wing nuts in the upper or horizontal tubular connecting member are preferably disposed in horizontal planes for the same reason. It is to be understood that the number of holes formed in the cooperating telescoping parts, and their spacing, will vary in accordance with the diameter and/or length of the frame sections employed and the amount of adjustment of which the attachment is capable.

In the form of Fig. 2, the horizontal portions 16*a* and 19*a* of the base members of the attachment extend horizontally and outward, with the vertical portions 16*b* and 19*b* depending from the outer ends of said horizontal portions. Thus, if desired, the portions 16*a* may be brought into engagement with to overlie the top flange of a side rail, such as side rail 12 with the depending portion 16*b* resting against the vertical flange of the side rail. The corresponding portions 19*a* and 19*b* would have the same relationship with the opposite side rail, such as side rail 13 of Fig. 1.

When employing the attachment illustrated at B upon a bed having angle iron type of side rails, it probably would be desirable to employ clip members or clamps, such as illustrated at D in the drawings, one such being shown in detached relationship in Fig. 4. As shown by way of illustration, clip D comprises preferably an upper plate portion 45 and a lower plate portion 46 which are connected together to form a substantially U-shaped spring-like clip or clamp member engageable with the top flange of an angle iron bed rail, such as rail 12. The bottom or under portion 46 is extended to provide a depending or right angularly disposed plate-like portion 47 having a portion of its body removed or cut out, as at 48. The U-shaped part of the clip including the upper and lower portions 46 and 47, respectively, has a pair of substantially parallel cutout portions or slots 49 and 50, with the slot 49 being located nearer the closed portion of the U-member 45, 46 than is slot 50. When employing attachment B as seen in Figs. 1 and 2, clips D are slipped over the top flanges of the left and right side rails 12 and 13, respectively, whereupon the depending portions 16*b* and 19*b* of the frame base are inserted in either of the slots 49 or 50 formed in the clip member D. As seen in Fig. 6, member 16*b* has been inserted in slot 50 of the clip. As also seen in Fig. 6, the purpose of the cutout portion 48 will be apparent. By virtue of it, the depending plate 47 will lie flat

against the vertical flange of rail 12, surrounding the head of rivet 12a.

Frame B is employed in the position in which it is shown in Fig. 1 when it is desired to support the bedclothes (not shown) out of contact with the patient but without having the spread as wide from side to side as when the frame is employed as illustrated at C in Fig. 1. The spring clip member D provides means for rigidly supporting the attachment B and may be snapped into position over the bed rails and removed therefrom with ease and facility.

Another manner in which one of the frames of the present invention may be employed in connection with a bed having angle iron side rails, is also shown in Fig. 1 by the frame represented at C.

Frame C is substantially the same as frame B and comprises base members 30 and 32 having depending bed frame-engaging horizontal portions 30a and 32a, respectively, and depending vertical extensions 30b and 32b, respectively, these parts being adapted for association with the left side rail 12 of the bedstead and being shown in detail in Fig. 5. In accordance with the use of frame C, the depending portions 30b and 32b, respectively (part 32b not being shown but corresponding to part 19b of Fig. 2), are passed through slots 50 of the clips D, whereupon the horizontal portions 30a and 32a are disposed inwardly and rest flatwise upon and overlie the upper portions or parts 45 of the clips or clamps D.

As seen in Fig. 1, the base members 30 and 32 of unit C are telescoped into tubular members 31 and 33, respectively, with lower combined wing nuts and bolts 37 and 39 resting upon the upper ends of members 30 and 32. The tubular connecting members 31 and 33 receive the lower upright end portions of curved frame sections 34 and 35, respectively, and support these members by upper bolts 38 and 40, see Fig. 1, which have wing nuts like members 37 and 39. The upper end portions of sections 34 and 35 extend toward one another in opposed relationship and generally in a common horizontal plane. As shown, they are telescoped within and also adjustable with respect to a tubular connecting section or female member 36, similar to tube 23 of unit B. The inturned and opposed upper ends of frame members 34 and 35 are held in adjustable telescoped relationship with horizontal frame section or connecting sleeve member 36, by means of registering horizontally disposed holes in the parts which receive the combined bolts and wing nuts 41 and 42. These latter are similar to members 28 and 29 of unit B. In most respects, the structure of frame or unit C corresponds to the structure of frame or unit B. Frame C is adjustable in width as is frame B, and as shown applied to bed A in Fig. 1, the frame C extends from side to side of the bed frame and thus is capable of maintaining the bedclothing out of contact throughout the entire width of the bed springs and mattress.

Both of the sectional frames or attachments B or C may be shifted or adjusted lengthwise of the bed rails. Moreover, two or more complete units or sectioned frames may be applied to the same bed if and when desirable, in which case the units may be shifted or adjusted longitudinally relative to one another and with relation to the bedstead.

It is not necessary when employing either frame B or frame C to use the clip members D, although it is desirable and preferable to use these clip members when a frame is installed upon a bedstead having the usual angle iron side rails, as do hospital beds, for example.

Fig. 7 serves to illustrate one use of the adjustable frame C without employing the clips D. In this instance, the base member portions 30a and 30b directly engage the left bed rail 12, the horizontal portion 30a being held flatwise upon the horizontal flange of said rail by the bed springs 14 and mattress 15, the weight of these members being ample to hold the frame C in place properly. Thus, it will be seen that the adjustable frame or attachment can be employed in connection with bedsteads or cots having angle iron side rails without requiring the use of the clips D.

In installations where the clips D are employed, their size may be varied and the number of slots, such as the slots 49 and 50 may also be varied, as desirable.

In Fig. 8 there is illustrated a further use of the present invention. In this figure, a portion of the frame or attachment C is illustrated in connection with a bed having wood side rails, one being shown. In this instance, it will be seen that the base member 30 at the left of the frame has its angularly disposed members or portions 30a and 30b resting upon the upper edge of the wood bed rail 120 and the inner face of said wood bed rail, respectively, the lower end of depending or vertical portion 30b being shown disposed between the inner face of wood bed rail 120 and bed slat 140. The frame or attachment when installed in accordance with Fig. 8, will thus be held in the desired upright position. It will be capable of being adjusted lengthwise of the bed along the bed rail 120 and a corresponding bed rail at the other side (not shown).

As stated above, the improved attachments comprising the sectioned bedclothes supporting frame of the present invention, serve also as means for supporting irrigating equipment, and other equipment, which heretofore had to be fastened in some manner or other to either the footboard or headboard or frame of the bed, or else supported by a separate standard or supporting means.

The attachment, or sectioned frame in accordance with the present invention is preferably formed from metal. Aluminum or aluminum alloy may be desirable for this purpose because of its characteristic of light weight. The sections of the frame may be polished, chrome plated, nickel plated, or the like, if desirable. Moreover, it is entirely possible that in view of the various kinds and types of plastics now available, the entire frame, or at least a major portion of the parts thereof, may be formed from plastic.

I claim:

1. An attachment for bedsteads for maintaining the bedclothes out of contact with the occupant of the bed, comprising a substantially U-shaped sectional support formed from tubular stock and adapted to be arranged transversely of the bedstead, said support including upright leg members having angularly disposed portions at their lower ends, means for receiving and connecting together the sections of said support, releasable means for holding the sections and connecting means together in adjusted positions whereby to permit the support to be expanded and contracted to fit beds of different sizes, and spring-like clamping members for removably and frictionally engaging the bed side rails and for removably receiving and supporting the angularly

disposed portions of the leg members to maintain the sectional support in upright position transversely of the bedstead.

2. An adjustable bedclothes supporting attachment for bedsteads, comprising a sectional substantially U-shaped frame formed from tubular stock adapted to be arranged transversely of the bedstead, said sectional frame comprising relatively adjustable cooperating telescoping sections arranged in horizontal and in upright planes, removable means engaging said cooperating telescoping sections for holding the sections together in adjusted relationship, a base member carried by the lower end of each of the upright portions of the frame sections engageable with spaced portions of the bedstead for removably supporting the frame upon said spaced portions, and friction spring-like clip members disposed between the base members and the spaced portions of the bedstead and frictionally gripping the said spaced portions for removably supporting the frame in operative position.

3. Structure according to claim 2, mounted upon and removably attached to a bedstead.

4. The combination with a bedstead, of a pair of adjustable bed clothes supporting attachments removably and adjustably mounted thereon, each attachment comprising a sectional substantially U-shaped frame adapted to be arranged transversely of the bedstead, each of said sectional frames comprising relatively adjustable cooperating telescoping sections arranged in horizontal and in upright planes, each of said supporting attachments being capable of lengthwise movement with relation to the bedstead and with relation to the other attachment, base members for the lower ends of the upright portions of the frame sections engaging spaced portions of the bedstead for removably supporting the frame upon said spaced portions, and spring-like friction clips disposed between the base members of each of the bedclothes supporting attachments and the bedstead and frictionally gripping said bedstead for removably supporting the bedclothes supporting attachments in operative relationship upon the bedstead and permitting their adjustment lengthwise of the bedstead.

5. An attachment for bedsteads for maintaining the bedclothes out of contact with the occupant of the bed, comprising a substantially U-shaped sectional support formed from tubular stock and adapted to be arranged transversely of the bedstead, said support including upright leg members having horizontal and vertical angularly disposed portions at their lower ends, means for receiving and connecting together the sections of said support, and releasable means for holding the sections and connecting means together in adjusted positions whereby to permit the support to be expanded and contracted to fit beds of different sizes, said angularly disposed horizontal portions being engageable with the upper edges of the bed side rails and with the vertical portions lying flatwise against upright surfaces of the side rails between said rails and the slats of a bedstead for maintaining the sectional support in upright position transversely of the bedstead.

6. A removable clip member for interposition between a bed frame member of a bedstead and a bedclothes supporting attachment for the bedstead, comprising a substantially U-shaped portion for frictional engagement with and embracing a part of the bed frame member, and a brace portion extending at substantially a right angle from one end of said U-shaped portion and engaging another part of the same bed frame member in abutting relationship to support the clip member in operative position, said U-shaped portion having alined sockets for receiving a portion of the bedclothes supporting attachment and removably supporting said attachment, and said brace portion having a relieved area to clear an obstruction on the bed frame member.

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