REMOOTELY CONTROLLED SICK BED CURTAINS
Mads P. Madsen, Brewster, Putnam County, N.Y.
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This invention relates, in general, to new and useful improvements which are used in connection with sick beds in private homes or in hospitals, and, more particularly, this invention relates to a remotely controlled sick bed curtain.

Hospital beds, particularly in hospitals, are generally surrounded or enclosed by curtains which may be drawn when privacy is wanted or examinations of the patient are to be performed by doctors. The curtains which are now used about sick beds in hospitals can only be drawn closed or opened by nurses or another person, not the patient, who can walk freely about the sick bed.

It is, therefore, an object of this invention to enable a patient who is confined to his sick bed to open or close a curtain adapted to surround his bed without the patient having to leave his bed or even move in his bed.

A further object of this invention is to provide a sick bed curtain which may be activated to be opened or closed by the patient’s manipulation of a switch or button situated upon his bed or an adjacent night table within easy reach.

Another object of this invention is to provide an apparatus which enables a bedridden patient to control his environment to the extent of opening and closing his sick bed curtain so that the patient’s morale is given a lift in that area, in which he was heretofore helpless, is now placed under his control.

Many other objects, advantages and features of invention reside in the particular construction, arrangement and combination of parts involved in the embodiment of this invention and its practice otherwise as will be understood from the following description and accompanying drawings wherein:

FIGURE 1 is a top view of the bed curtain of my invention shown attached to a hospital bed;

FIGURE 2 is an elevational view showing the foot of a hospital bed with the bed curtain of my invention attached to it with the bed curtain in the open position;

FIGURE 3 is a longitudinal vertical section through the center of the leading edge curtain drawing element;

FIGURE 4 is a vertical section looking inward through a fragment of the curtain track support frame showing a fragment of the curtain track with the drive cord moving the leading edge curtain drive element along the curtain track with a fragment of the leading edge of a curtain shown supported from the leading edge curtain drive element;

FIGURE 5 is a transverse vertical section through the curtain track support frame, the curtain track, and a drive cord showing a fragment of a curtain suspended from a curtain support element;

FIGURE 6 is a top view of a broken away corner of the curtain track support frame with a top portion of the curtain track support frame corner broken away to show the arrangement of the drive cord pulleys;

FIGURE 7 is a longitudinal vertical section through a fragment of the curtain track support frame showing a fragment of the curtain track and a curtain support element mounted on the curtain track with a fragment of the curtain supported by the curtain support element; and

FIGURE 8 is a transverse vertical section through a fragment of the corner of the curtain track support frame.

Referring to the drawing in detail, FIGURES 1 and 2 show a conventional hospital type bed 10 having a metal headboard 11 and a footboard 12. By means of suitable clamps 13 two vertical support elements 14 are fixed to extend vertically upward from the footboard 12.

Similar vertical support elements 15 are fixed to extend upward from the headboard 11.

A generally rectangular curtain track support frame 20 is supported above and about the bed 10 by the brackets 21 and 22 which extend outward from the tops of the vertical support elements 14 and by the vertical support elements 15 which are directly attached to the curtain track support frame 20.

Since the head of the bed is generally against a wall, the rectangular curtain track support frame 20 extends only slightly behind the headboard 11 while it extends for a considerable distance past the footboard 12. This allows an examining physician or other visitor to move about the sick bed 10 with complete privacy within the curtain when it is closed.

Between the corners 24, 25, 26 and 27 of the support frame 20, there extends the straight channel shaped members 28. As shown in FIGURE 5, curtain track support brackets 29 are fixed to the top wall of the channel members 28 and secure the top flange 31 of the curtain track 30.

Curtain support elements 32 each have two upwardly extending side portions 33 which carry the nylon rollers 34 that ride on the lower flange 35 of curtain track 30. A suitable hook 36 hangs from each curtain support element. The bed curtain 40 is supported by its upper edge at short regular intervals by a number of the curtain support elements 32.

The corners 25 and 26 have rounded cover plates 42 and 43 fixed over them. The cover plates 44 and 45 are fixed over the corners 24 and 27 and they may be square for aesthetic reasons if the headboard 11 is placed adjacent to a wall.

The curtain track 30 is formed from one piece of extruded material which starts at corner 27 and is bent about corners 24 and 25 and corner 26 in a smooth curve. Curved outer walls 50, as shown in FIGURE 6, are fixed below the cover plates 42, 43, 44 and 45 between the ends of the channel members 28.

The leading edge 51 of the curtain 30 as shown in FIGURE 2, is secured to the track 30 by means of a leading edge curtain drive element. As shown in FIGURES 3 and 4, this leading edge curtain drive element 52 consists of two curtain support elements 32 which are pivotally joined to a solid link 53. A single clamping member 54 containing a central aperture urged upward toward link 53 when the screws 55 are tightened.

Referring again to FIGURE 1, the dotted line 57 indicates the path of a length of drive cord 58 which extends completely about the curtain track support frame. The ends of the cord 58 pass under the links 53 and through the aperture in member 54. Thus the screws 55 may be tightened to clamp the ends of cord 58 to the leading edge curtain drive element 52.

The element 52 negotiates the curved portion of track 30 with the elements 32 pivoting as do the trucks of a railway carriage.

Referring further to FIGURE 1, three or more pulleys 60 are rotatably mounted within the corners 24, 25 and 26. As shown in FIGURE 6 and 8, the pulleys 60 support the drive cord 58 at about the level of the curtain support elements 32 and the drive element 52 which slide along the curtain track 30.

Referring further to FIGURE 1, corner 27 has two idler pulleys 61 and a centrally located drive pulley 62. Pulley 62 is mounted on a vertical shaft 63 which extends downward to a suitable gearhead electric motor 64 which is mounted below corner 45. As shown in FIGURE 1, an electric wire 65 leads from motor 64 to a control box 66.

This invention operates in the following manner. The
curtain 40 is gathered beneath the channel member 67 above the headboard 11 of the bed 10 in the open position. The curtain in this open position is shown in FIGURE 2. The leading edge 51 of the curtain 40 is supported by a leading edge curtain drive element 52 which is fixed to the drive cord 58 in the manner which has been described. The gearhead motor 64, which drives pulley 62, may be activated to rotate in either direction by the control box 66. The box 66 may have two buttons, one to open and one to close the curtain 40, or it may have a double throw reversing switch. Thus the manipulation of control box 66 activates motor 64 to drive the drive cord 58 in either direction. If pulley 62 moves the drive cord 58 counter clockwise as shown in FIGURE 1, the drive cord will draw the leading edge of the curtain 40 about the curtain track support frame 20 along the track 30. In this manner, the bed 10 may be completely enclosed giving the bedridden patient privacy. By reversing the motor 64, the curtain 40 may be opened.

In order to have the curtain 40 negotiate the corners 24, 25 and 26 without binding, the curtain support elements 32 must be disposed along the top of curtain 40 so that, preferably, at least three curtain support members 32 are disposed on each curved portion of track 30. This particular construction enables the curtain to be smoothly drawn completely about the curtain support frame 20.

However, in drawing the curtain closed, the curtain support members 32 negotiating the curved portions of track 30 will tend to bow inward toward the center of the curve. Any binding motion which might then result may be mitigated if, as shown in FIGURE 8, the pulleys 60 are placed so that the drive cord 58 is in close proximity to the inner sides of the elements 32. In such a case, should the bottom of the curtain support elements 32 cock inward to any extent, the drive cord 58 will assist them about the curved portions of the track 30.

While I have disclosed my invention in the best form known to me, it will nevertheless be understood that this is purely exemplary and that modifications may be made without departing from the spirit of the invention except as it may be more limited in the appended claims wherein I claim:

1. A remotely controlled bed curtain for sick beds comprising, in combination, a generally rectangular curtain track support frame having rounded corners, means supporting said curtain track support frame above a sick bed, a curtain track having a lower flange disposed completely about and hanging from said curtain track sup-

port frame, a curtain having a top portion and a leading edge, curtain support elements fixed at regular intervals along the top portion of said curtain, said curtain support elements having members extend upward on either side of the lower flange of said curtain track, and having rollers rotatably mounted inside the upward extending members riding on the lower flange of said curtain track, a leading edge curtain drive element slidably mounted on said track and attached to the upper portion of the leading edge of said curtain, outwardly facing pulleys disposed at the corners of said curtain track support frame, an endless drive cord, said pulleys supporting said drive cord at about the height of said curtain support elements and said leading edge curtain drive element, said endless drive cord being fixed to said leading edge curtain drive element, a drive pulley engaging said endless drive cord, a reversing electric motor driving said drive pulley, and a remotely situated switch activating said reversing electric motor in either direction, said drive pulley moving said endless drive cord about said curtain track support frame drawing said leading edge curtain drive element about said track opening and closing said curtain.

2. The combination according to claim 1 wherein said leading edge curtain drive element comprises two of said curtain support elements, a solid member pivotally secured between said two curtain support elements, a clamping member disposed below said solid member, said clamping member containing an aperture, and screw means drawing said clamping member toward said solid member, the ends of said drive cord being joined and secured by being passed between said solid member and said clamping member with the ends of said drive cord extending through the aperture in said clamping member, said screw means clamping the ends of said cord between said solid member and said clamping member.

3. The combination according to claim 2 wherein said pulleys support said endless drive cord close to the inner surfaces of said curtain support elements.

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