United States Patent [19]

Peterson

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[45] **Oct. 7, 1975**

[54] **REVERSIBLE OVERBED TABLE AND MIRROR**

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[73] Assignee: **Joerns Furniture Company,** Stevens Point, Wis.

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[21] Appl. No.: **486,468**

[52] **U.S. Cl.** **312/226;** 312/291; 312/311

[51] **Int. Cl.²** **A47B 23/00;** A47B 88/00

[58] **Field of Search** 312/226, 227, 245, 250, 312/291, 311; 108/50, 102, 146; 5/332

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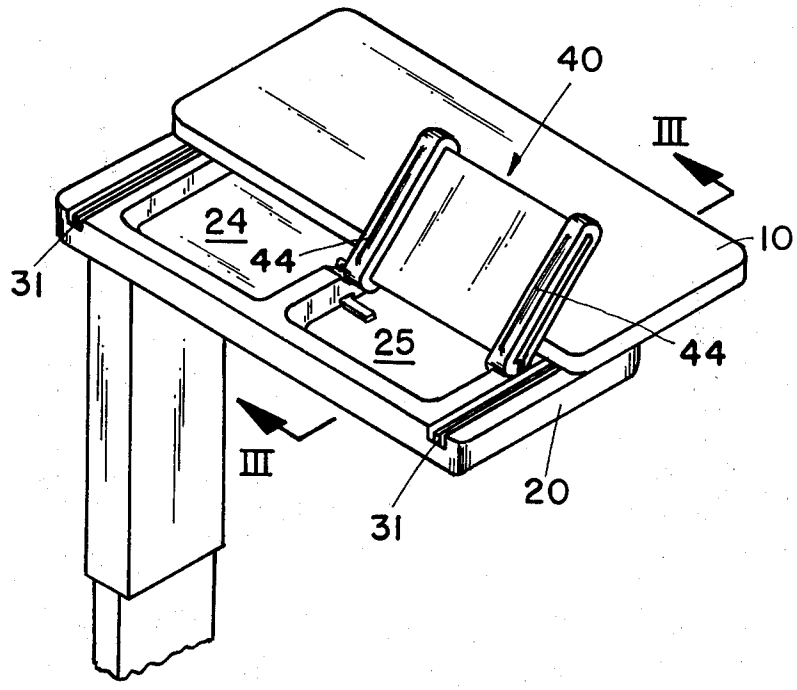
Primary Examiner—Casmir A. Nunberg

Attorney, Agent, or Firm—Price, Heneveld, Huizenga & Cooper

[57] **ABSTRACT**

An overbed table having a compartment with a table top slidable in either of two directions for providing access to the compartment. In one embodiment, locking clips on each end of channels pivot around the ends of corresponding tracks to lock the top onto the base. Raising the locking clips allows the table top to be slid open. The table further includes a novel mirror which may be oriented to lean against the table top regardless of what direction the top is slid open so as to selectively expose its mirrored surface to a user on either side of the table.

11 Claims, 16 Drawing Figures



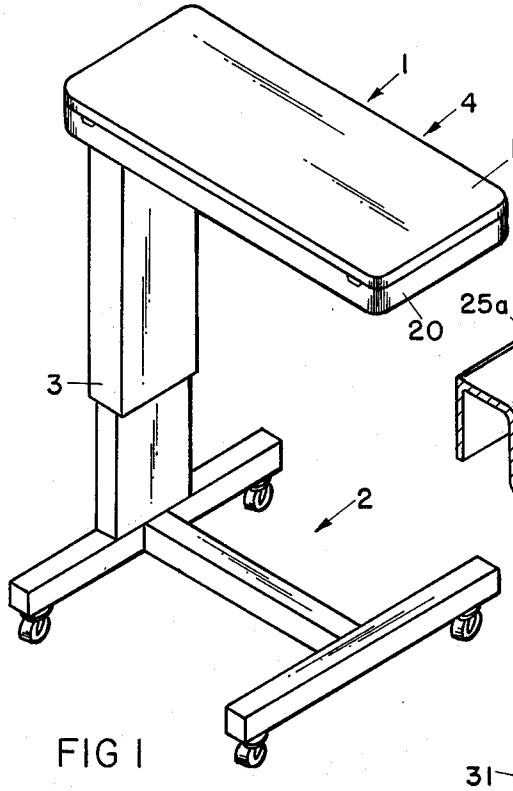


FIG 1

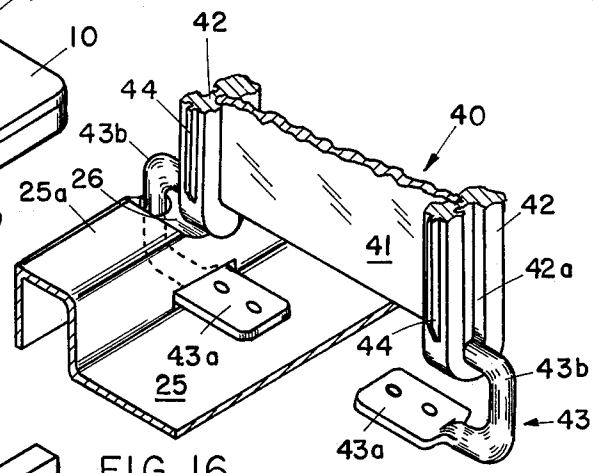


FIG 16

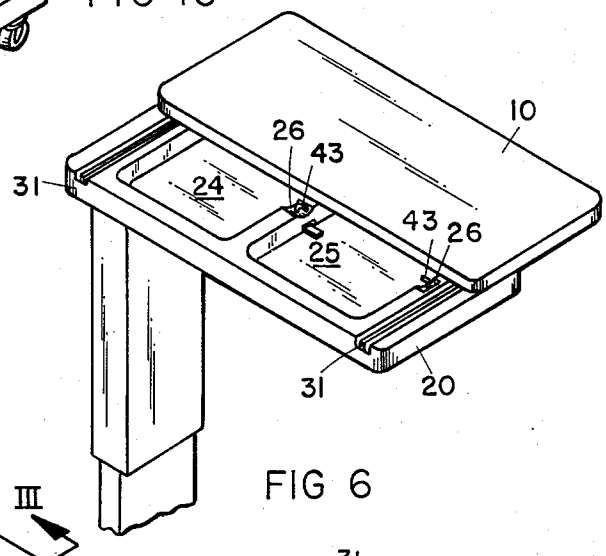


FIG 6

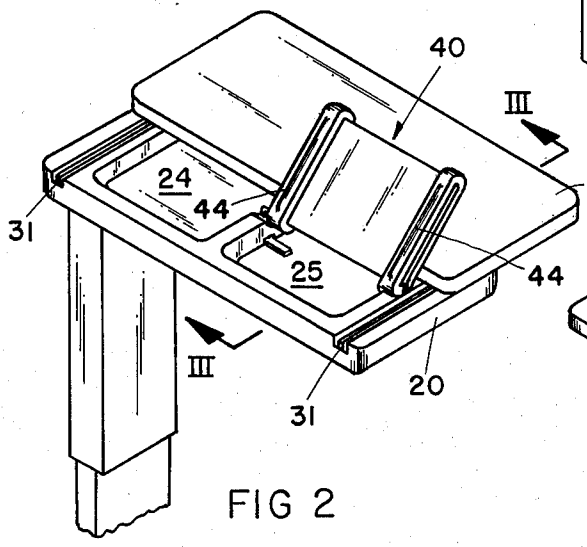


FIG 2

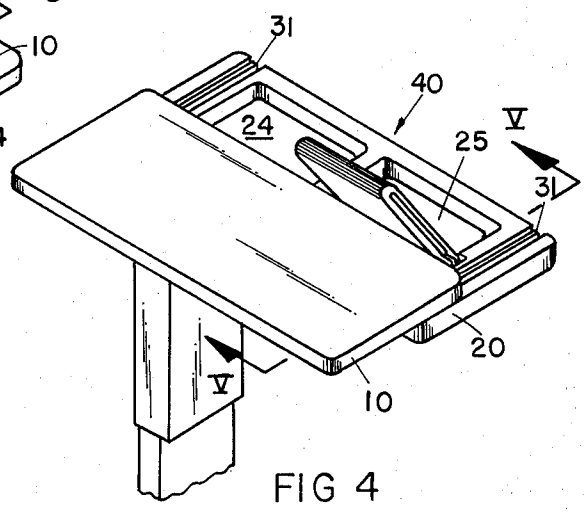


FIG 4

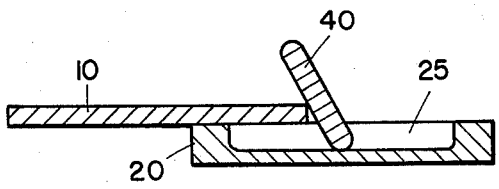


FIG 5

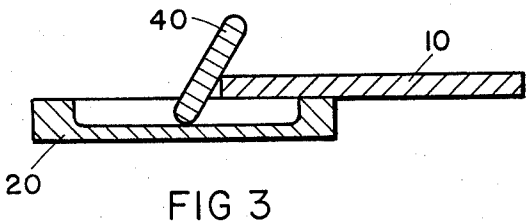


FIG 3

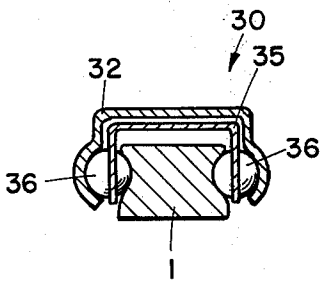


FIG 13

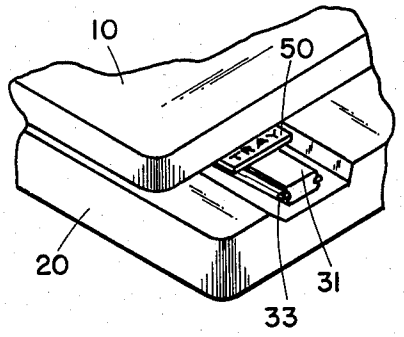


FIG 10

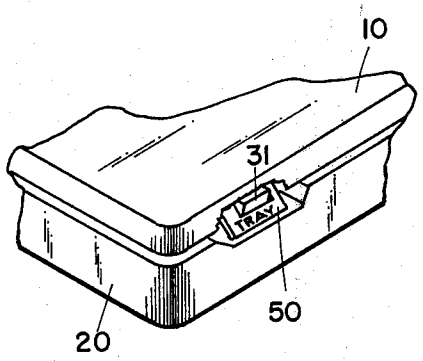


FIG 9

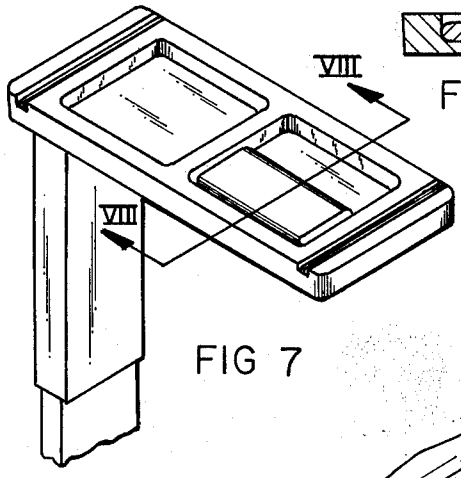


FIG 7

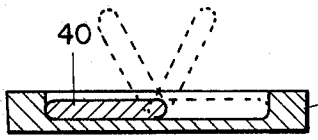


FIG 8

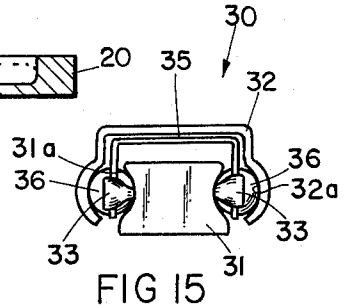


FIG 15

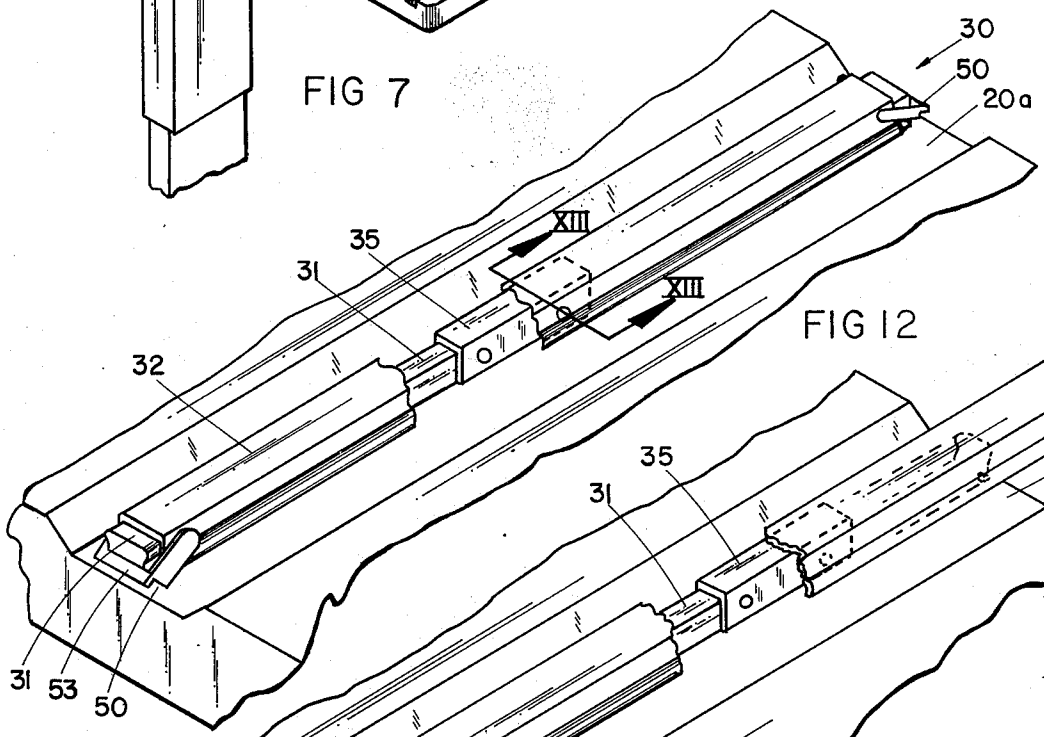


FIG 12

FIG 14

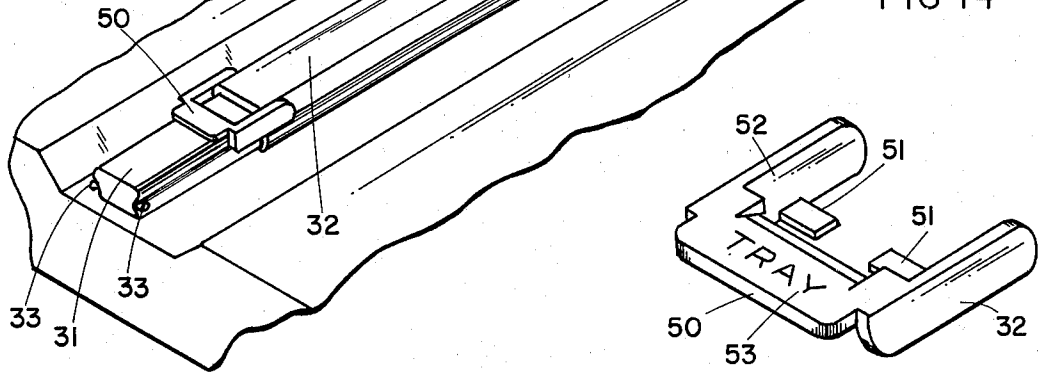


FIG 11

REVERSIBLE OVERBED TABLE AND MIRROR

BACKGROUND OF THE INVENTION

This invention relates to overbed tables and more particularly to a reversible overbed table with a sliding top and reversible mirror means mounted in the compartment of the table under the top.

Various overbed tables have been developed that consist of a table top cantilever suspended from a vertically adjustable support arm. The support arm is usually attached to a roller-mounted base structure that permits movement of the table away from the bed when not in use.

Overbed tables, particularly those used in hospitals, are conventionally designed so as to contain drawers, compartments, and mirrors which allow the tables to be used for a multiplicity of purposes, e.g., dining, grooming, writing, etc. In the design of such tables, it has been desired to have these drawers, compartments, and mirrors accessible from either side of the table. By such accessibility, the table can be suspended over the bed from either side of the bed.

Recognizing this problem, several prior art tables have been developed to provide accessibility from either side of the table. Most devices use mirrors, drawers, and/or compartments that are only accessible upon opening and/or removal of part of the top of the table. These devices, though often allowing for a reversibility of the table, all require clearing of the table top before the door, compartment, or mirror can be used.

In order to allow use of the table top and still provide accessibility to these elements, one device employs a mirror mounted under the table top on a rotatable support frame. Because of the frame, it is not possible for the table to comprise compartments or drawers for storage without a considerable reduction in its compact size. Also, this table requires a fairly complicated rotatable mirror support assembly which causes the table to be relatively complicated and expensive to manufacture. Further, because of the complicated mirror support structure, if it is desired to remove or replace the mirror, great effort must be expended.

Other prior art overbed tables have a storage tray or drawer that slides out from under both sides of the table top. In use, the drawer or tray will slide toward the patient. The disadvantage of this arrangement is the necessity that the entire table be first moved away from the patient to allow space for the tray or drawer to be moved toward the patient.

Recognizing that in addition to its obvious and intended function, overbed tables must also serve as a "crutch" and a "walker" for infirm patients, some prior art tables with tops that slide relative to the table base do not provide a positive lock to prevent the top from sliding and may be hazardous when used for this purpose. There is a need for an improved overbed table having a positive lock, and which is convenient for both patient and the nurse to release, and which still allows the table to be used from either side without prior adjustment or selection.

OBJECTS AND SUMMARY OF THE INVENTION

Accordingly, it is an object of the present invention to provide a reversible overbed table which allows access to compartments in the table without opening or removing parts of the table top.

It is further an object of the present invention to provide a reversible overbed table which allows accessibility to such compartments without clearing the table top of material placed thereon.

Another object of the present invention is to provide a reversible overbed table with a compartment therein in which access to storage and a mirror within the compartment is provided without first repositioning the entire table in relation to the patient.

It is a still further object of the present invention to provide a mirror that is accessible from either side of the table and which may also be easily stored from either side of the table when so desired.

These and other objects are accomplished by the reversible overbed table of the present invention which utilizes a top member slidably mounted on a housing. The means for slidably mounting the top member over the housing allows sliding of the top member back and forth over the housing and further allows the top member to extend outward from the housing. A locking means attached to the slidable mounting means secures the table top in locked position over the housing to form the overbed table. The locking means is self engaging to prevent sliding of the top member along the housing. The locking means is selective when released to allow the top to move away from the patient thus exposing the storage space.

In the preferred embodiment, means for slidably mounting the top member on the housing includes a pair of channel members mounted on the top member and a corresponding pair of track members mounted on the housing. The channel members when slidably engaging the track members allow sliding of the top member back and forth over the housing.

The locking means in the preferred embodiment includes U-shaped locking clips that are pivotally mounted on and extend from both ends of a channel member. The locking clips downwardly pivot around and over the ends of the corresponding track member when the channel member and corresponding track member are generally aligned with each other to prevent slidable displacement of the top member along the housing. When it is desired to slide the top member along the housing, the locking clip on the top member is upwardly pivoted and the top member is free to slide in the direction opposite the side of the table at which the locking clip was disengaged.

The preferred embodiment of the overbed table further includes a mirror accessible from either side of the table which is placed in an upwardly open compartment in the housing. Support members aligned on an axis are mounted on opposite side edges of the mirror to provide sliding movement of the mirror in a direction along the edges. Means are associated with the mirror and support members for providing pivotal movement about the axis when the mirror is slid on the members, to positions where the members are adjacent either axis of the ends of said edges. When the top member is slid along the mounting means to expose the compartment in the housing, the mirror is slid forward away from the table top and rotated upwardly along the axis to expose the mirror face.

DESCRIPTION OF THE DRAWINGS

FIG. 1 shows a top and side elevation, perspective view of the overbed table with the top in closed position;

FIG. 2 is a partial top and side elevational perspective view of the table showing the top opened away from the viewer with the mirror up;

FIG. 3 is a simplified cross-sectional view of the table in FIG. 2 along line III—III;

FIG. 4 is a partial top and side elevation, perspective view similar to FIG. 2 showing the table opened toward the viewer with the mirror up;

FIG. 5 is a simplified cross-sectional view of the table in FIG. 4 along line V—V;

FIG. 6 is a partial top and side elevational, perspective view of the overbed table similar to FIG. 2 with the mirror removed;

FIG. 7 is a partial top and side elevational, perspective view of the overbed table with the table top removed;

FIG. 8 is a simplified cross-sectional view of the table in FIG. 7 along line VIII—VIII;

FIG. 9 is an enlarged, fragmentary, top and side elevational, perspective view of a portion of the table top showing the locking clip of the overbed table in the locked position;

FIG. 10 is an enlarged fragmentary top and side elevational, perspective view of a portion of the table showing the locking clip in the unlocked position when the table is being opened;

FIG. 11 is an enlarged perspective view of the locking clip;

FIG. 12 is an enlarged, top perspective view of the table top channel members in the closed position over the corresponding base mounted track;

FIG. 13 is an enlarged cross-sectional view of the channel members and track in FIG. 12 along reference line XIII—XIII;

FIG. 14 is an enlarged, top perspective view of the table top channel member and track of FIG. 12 after the locking clip has been disengaged from the track and the channel is displaced along the track;

FIG. 15 is an end, elevation view of the channel and track of FIG. 14 with the locking clip removed; and

FIG. 16 is an enlarged partial, elevational, perspective view of the tracked mirror and its supporting studs.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings, and in particular FIGS. 1–7, overbed table 1 comprises a base 2 on which is mounted an upright support member or standard 3 which in turn supports table top assembly 4. Table top assembly 4 includes a housing 20 over which is slidably mounted top 10 (FIGS. 2 and 4) by means of rail assemblies 30 (FIGS. 12 and 14). The present invention relates to a table top assembly 4, it being understood that base 2 and standard 3 can be of any conventional construction. The housing 20 also includes therein a mirror assembly 40 hereinafter described.

The housing 20 is generally rectangular in shape and includes therein two rectangular shallow depressions 24 and 25 (FIGS. 2, 4, 6, and 7). Slide channels 20a as seen in FIGS. 12 and 14, extend generally along and are spaced from the short sides of the rectangular-shaped housing 20. Housing 20 may be comprised of plastic or the like to facilitate cleaning thereof.

Table top 10 generally conforms with the rectangular plan shape of housing 20. Top 10 is a panel structure which can be constructed of any number of suitable materials.

Rail assemblies 30 which slidably mount top 10 onto housing 20, each include a track 31 and a channel 32 (FIGS. 12 and 14). Channels 32 which are elongated and U-shaped in cross section are downwardly directed and mounted on and slidable along corresponding tracks 31. As seen in FIGS. 2, 4, 6 and 7, tracks 31 are rigidly mounted in depression 20*a* on housing 20, and extend generally parallel to each other therealong.

As seen in FIG. 13, track 31 is rectangular in cross section with concave rounded grooves 31a on each side which receive bearings 36 contained by slide bar 35. Channel 11 includes a similarly shaped concave bearing surface 32*a* receiving bearings 36. Thus, groove 31*a* and concave surfaces 32*a* form a race for the bearings which are supported by or caged in the bar 35. Stops 33 at the end of each of tracks 31 provide a means for blocking the sliding movement of slide bar 35.

As seen in FIGS. 9, 10, 12 and 14, the rail assembly 30 includes at each end of its channels 32 U-shaped locking clips 50 which include bite portions 53 at the bottom of the U-shaped clip and legs 52. U-shaped locking clips 50 are pivotally mounted to channels 32 by means of pivot tabs 51 extending inwardly from legs 52 which are attached to the upper portion of channel 31 as shown in FIGS. 12 and 14. As seen therein, locking clips 50 are rotatable downward along pivot tabs 51 so that bite portion 53 extends into the horizontal plane of tracks 32. As also seen therein, clips 50 are rotatable upwardly to be above the plane of track 32 and may be rested on the top of track 32.

When channel 31 is over tracks 32 as seen in FIG. 12, both locking clips 50 may be downwardly rotated so that bite portions 53 extend into the plane of track 31. When so rotated, bite portion 53 of locking clips 50 abuts the ends of tracks 32. As shown in these embodiments, bite portions 53 securely rest against the ends of tracks 32 and are engaged therewith so that no sliding of channels 31 along track 32 is allowed. To provide close abutting contact between the ends of track 32 and bite portion 53 of locking clip 50, locking clip 50 is limited in downward pivotal rotation so as to not allow contact of bite portion with recess portion 20a of housing 20.

Channels 11 are rigidly mounted to table top 10 by conventional means (not shown) so that top 10 is slidably mounted over housing 20.

As seen in FIGS. 9 and 10, when it is desired to displace table top 10 along housing 20, bite portion 53 of clip 50 is rotated upward above the plane of track 31 and table top 10 is displaced in a direction opposite clip 50 along housing 20. As is apparent, the locking clip 50 on the side opposite to the one in which the clip was upwardly rotated will not hinder displacement of table top 10 along housing 20 in that direction.

When table top 10 is slid back over housing 20 into its original position, locking clip 50 is downwardly rotated because of its own weight and top 10 is locked over housing 20 again.

As best shown in FIG. 16, the mirror assembly 40 of the present invention includes a mirror with generally rectangular planar mirror surface 41 with support members including peripheral channel tracks 42 along two of its ends thereof. Each channel track 42 has therein an indent or depression 42*a* suitable for acting as a sliding track for pivot means including studs 43 which are inserted therein. Each stud 43 comprises a flat base mounting portion 43*a* and two inwardly di-

rected C-shaped portions 43*b*. The C-shaped sections 43*b* are inserted into indents 42*a* in channel 42 and act as a means for supporting mirror 41. When so mounted, mirror 41 can be displaced along studs 43 by sliding track members 42 along the upper end of C-shaped portion 43*b* of studs 43.

As seen in FIG. 6, studs 43 are mounted in housing 20 along the side walls of recess 25. Studs 43 are mounted generally directly opposite to each other along the middle and at each edge of the recess 25. Mirror 41 is mounted on studs 43, as shown in FIG. 16, for downward rotation so as to lay in recess 25 as shown in FIG. 7. When so positioned, mirror 41 may be slid along studs 43 as shown in FIG. 8 from side to side in the compartment. In so sliding, the guide strips 44 on the frame 42 slide along the edges 25*a* of the tray to guide the mirror as it slides to thus prevent cocking of the mirror. As is further shown, the mirror can be upwardly and pivotally rotated so as to expose the surface of mirror 41. To accomplish pivotal rotation of mirror assembly 40, it is first slid along studs 43 until the C-shaped portion 43*b* of studs 43 is located in one of the furthermost ends of channel 42*a*. The mirror is then rotated upwardly.

As seen in FIGS. 2–5, mirror assembly 40 permits slidable displacement and upward rotation of mirror 41 no matter which direction table top 10 is slid along housing 20. As is also apparent in these figures, the mirror assembly 40 must be slid along studs 43 in the direction opposite that which table top 10 is displaced along housing 20 so as to enable upward rotation of mirror 41. After so sliding, mirror 41 may be rotated upwardly until the frame or tracks 42 contact the edge of table top 10. The mirror assembly is then dropped downward so that the frame is seated in the support pockets 26 located in the edges 25*a* of the tray. The pockets stabilize the mirror preventing it from sliding out of the upright position while the edge of table top 10 acts as a brace to support mirror 41 in its upright position. When it is desired to close overbed table 1, mirror 41 is rotated downwardly until it is in the position as shown in FIG. 7. Thereafter, table top 10 is displaced back along housing 20 to conceal mirror assembly 40.

As is readily apparent in the figures and in the above description, mirror assembly 40 allows accessibility to mirror surface 41 no matter which direction table top 10 is displaced along housing 20. As is further apparent, table top 10 must be sufficiently displaced along housing 20 so as to allow upward rotation of mirror 41 along studs 43 or the mirrored surface of mirror 41 will not be exposed.

OPERATION

After positioning overbed table 1 over a conventional hospital bed or the like, if it is desired to displace table top 10 along housing 20 so as to allow the table top user access to compartments 24 and 25 in housing 20, locking clip 50 nearest the table user is upwardly rotated so that the bite portion 53 of the locking clip 50 is above the plane of track 32. When so rotated, table top 10 is slid by the user in the opposite direction to expose compartments 24 and 25.

If it is desired to use mirror 41 of mirror assembly 40 in compartment 25, mirror 41 is slid along its track portion 42 toward the user until the C-shaped portion 43b of studs 43 is at the extreme ends of indent 42a in tracks 42. When so positioned, mirror 41 is upwardly rotated and track members 42 are leaned against the edge of table top 10 to support mirror 41 in an upright position with the mirrored surface exposed to the table top user.

When it is desired to close overbed table 1, mirror 41 is rotated downwardly into recess 25 so as to lay in the bottom thereof and table top 10 is slidably displaced toward the user until bite portion 53 of locking clip 50 strikes the far end of track 32 and the locking clip at the near side of the table top drops over near the end of the track to secure the table top in closed position.

It will be understood that various changes in the details, material, steps, and arrangements of parts which have been herein described and illustrated in order to explain the nature of the invention, may be made by those skilled in the art within the principle and the scope of the invention as expressed in the appended claims.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A reversible overbed table comprising:
a housing;
a top member positioned over said housing;
means slidably mounting said top member over said housing, said means allowing sliding of said top member back and forth over said housing, allowing said top member to extend outward from said housing and including a channel member, said channel member being rigidly mounted on said top member and downwardly protruding therefrom and a corresponding track member rigidly mounted on said housing and upwardly projecting therefrom, said channel member slidably engaging said track member so as to allow sliding of said top member back and forth over said housing and allowing said top member to extend outward therefrom; and
locking means attached to said mounting means for securing said table top in locked position over said housing to form said overbed table, said locking means when engaged preventing sliding of said top member along said housing and being releasable to allow slidable movement of said top member back and forth over said housing and said locking means including:
U-shaped locking clips pivotally mounted on and extending from each end of said channel members, said locking clips downwardly pivoting around the end of the corresponding track member and including a bite portion engageable with the end of said track member, when said channel member and track member are generally aligned with each other, each of said locking clips being capable of preventing slidable displacement of said top member along said housing on the side of the top member said bite portion of said locking clip is pivoted into the plane of said corresponding track member.

2. A reversible overbed table comprising:
a housing including at least one upwardly open recess;
a top member positioned over said housing;
means slidably mounting said top member over said housing, said means allowing sliding of said top member back and forth over said housing, allowing said top member to extend outward from said housing and including a channel member, said channel member being rigidly mounted on said top member

and downwardly protruding therefrom and a corresponding track member rigidly mounted on said housing and upwardly projecting therefrom, said channel member slidably engaging said track member so as to allow sliding of said top member back and forth over said housing and allowing said top member to extend outward therefrom;

locking means attached to said mounting means for securing said table top in locked position over said housing to form said overbed table, said locking means when engaged preventing sliding of said top member along said housing and being releasable to allow slidable movement of said top member back and forth over said housing and said locking means including: U-shaped locking clips pivotally mounted on and extending from each end of said channel members, said locking clips downwardly pivoting around the end of the corresponding track member and including a bite portion engageable with the end of said track member, when said channel member and track member are generally aligned with each other, each of said locking clips being capable of preventing slidable displacement of said top member along said housing on the side of the top member said bite portion of said locking clip is pivoted into the plane of said corresponding track member; and

a mirror assembly included in said recess, said mirror assembly being accessible by displacing said top member with respect to said housing in any desired direction along said mounting means and said mirror assembly including:

a mirror surface;

track members peripherally mounted on opposite side edges of said miror surface and including elongated indents therein and a pair of stud members, each stud member including a C-shaped portion and a mounting portion said stud members being mounted opposite to one another within the recess in said housing, each of said C-shaped portions of said studs being inserted in the indents in said track members so as to slidably mount said track members on said stud members and allowing horizontal displacement of said mirror in said recess along said track members and further allowing vertical rotation of said mirror surface along said stud members to expose said mirror surface.

3. The overbed table of claim **2** wherein said track member is flexible so as to allow ready disengagement of said mirror surface and said tracks from said stud members by deformation of said tracks.

4. A mirror assembly for a reversible overbed table with a generally horizontal recess contained therein and accessible from the top thereof, said mirror assembly comprising:

a mirror having a planar mirror surface;

a pair of support members mounted with one member of said pair at each of opposite side edges of said mirror said members being aligned on an axis and cooperatively associated with said mirror for providing a sliding movement of said mirror on said members in a direction along said side edges; and

means associated with said mirror and said support members for providing pivotal movement of said mirror about said axis when said mirror is slid on said members to positions where said members are adjacent either of the ends of said edges whereby said mirror is slidable along said track means on said support members to either of said ends of said edges and is then rotatable about said axis to expose said mirrored surface for viewing from either of two desired opposite directions depending upon what direction said mirror is slid and rotated.

5. The mirror assembly of claim **4** wherein said support members include track means peripherally mounted on opposite side edges of said mirror and including indent portions therein; and

said means associated with said mirror and said support members includes a pair of stud members mounted opposite to one another within the recess and being inserted in the indent portion of said track means to allow sliding movement of the mirror on said track means and providing pivotal movement of said mirror.

6. The mirror assembly of claim **5** wherein said stud members include a C-shaped portion and a mounting portion, each of the C-shaped portion being inserted in the indent portions in said track means to provide sliding movement of said mirror on said track means and providing pivotal movement of said mirror, and each of the mounting portions being secured within the recess opposite to one another.

7. The mirror assembly of claim **6** wherein said track means includes at least one guide strip for guiding said mirror and preventing cocking thereof while said mirror is slid along said stud members, said guide strips being guided by a side edge of said housing.

8. A reversible overbed table comprising:

a housing;

a top member positioned over said housing;

means slidably mounting said top member over said housing, said means allowing sliding of said top member back and forth over said housing, allowing said top member to extend outward from said housing and including a channel member, said channel member being rigidly mounted on said top member and downwardly protruding therefrom and a corresponding track member rigidly mounted on said housing and upwardly projecting therefrom, said channel member slidably engaging said track member so as to allow sliding of said top member back and forth over said housing and allowing said top member to extend outward therefrom;

locking means attached to said mounting means for securing said table top in locked position over said housing to form said overbed table, said locking means when engaged preventing sliding of said top member along said housing and being releasable to allow slidable movement of said top member back and forth over said housing and said locking means including:

U-shaped locking clips pivotally mounted on and extending from each end of said channel members, said locking clips downwardly pivoting around the end of the corresponding track member and including a bite portion engageable with the end of said track member, when said channel member and track member are generally aligned with each other, each of said locking clips being capable of preventing slidable displacement of said top member along said housing on the side of the top member said bite portion of said locking clip is pivoted into the plane of said corresponding track member; and

a generally horizontal recess including a mirror assembly, said mirror assembly being accessible by displacing said top member with respect to said housing in any desired direction along said mounting means.

9. The overbed table of claim **8** wherein said mirror assembly includes:

a mirror having a planar mirror surface;

a pair of support members mounted with one member of said pair at each of opposite side edges of said mirrors said members being aligned on an axis and cooperatively associated with said mirror for providing a sliding movement of said mirror on said members in a direction along said side edges; and

means associated with said mirror and said support members for providing pivotal movement of said mirror about said axis when said mirror is slid on said members to positions where said members are adjacent either of the ends of said edges whereby said mirror is slidable along said track means on said support members to either of said ends of said edges and is then rotatable about said axis to expose said mirrored surface for viewing from either of two desired opposite directions depending upon what direction said mirror is slid and rotated.

10. The overbed table of claim **9** wherein said support members include track means peripherally mounted on opposite side edges of said mirror and including indent portions therein; and

said means associated with said mirror and said support members include a pair of stud members mounted opposite to one another within the recess and being inserted in the indent portion of said track means to allow sliding movement of the mirror on said track means and providing pivotal movement of said mirror.

11. The mirror assembly of claim **10** wherein said track means includes at least one guide strip for guiding said mirror and preventing cocking thereof while said mirror is slid along said stud members, said guide strip being guided by a side edge of said housing.

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