X-RAY TABLE TOP HAVING A SAFETY SHIELD FOR A PATIENT'S TOES AND FINGERS

3 Claims, 4 Drawing Figs.

ABSTRACT: Described is an improvement in an X-ray table which has a patient supporting top panel assemblage having ends movable longitudinally past raised subsurfaces potentially obstructive to patient's fingers or toes which may extend downwardly from such top panel ends. Vertically sloping ramps are provided such raised subsurfaces and a pair of shields and rollers at their underside are hinged to ends of such top panel assemblage to move from normally suspended repose positions to subsurface-contour-following positions in general alignment with the top panel assemblage when the respective ends thereof moves inwardly of the end of the table.
X-RAY TABLE TOP HAVING A SAFETY SHIELD FOR A PATIENT'S TOES AND FINGERS

BACKGROUND OF THE INVENTION

1. Field of the Invention
Movable top panel assemblies.

2. Description of the Prior Art
In X-ray tables having patient supporting top panel assemblages that are movable longitudinally of the table body, it is sometimes convenient, if not necessary, that a cover panel means defining the subsurface beneath the movable top panel assemblage includes raised portions that tend to present a hazard to a patient's fingers and toes if extending downwardly at the ends of the top panel assemblage during a longitudinal movement thereof along the table.

SUMMARY

The present invention, overcomes such potential hazard by providing safety shields at opposite ends of the longitudinally movable top panel assemblage which extend at least substantially the full width of the X-ray table, are hinged to the ends of such assemblage so as to normally hang downwardly therefrom at opposite ends of the table in the normal position of the assemblage as centered on the table, and which, together with ramp means associated with raised subsurface regions and rollers on the shields, have their free ends raised and lowered according to the subsurface contour automatically as the ends of the top panel assemblage move along the table body.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a plan view of a movable top X-ray table embodying the invention;
FIG. 2 is a front elevation view of the table of FIG. 1;
FIG. 3 is an enlarged fragmentary view in elevation of a portion of the table of FIGS. 1 and 2 showing details of the invention; and
FIG. 4 is a bottom view of an exemplified safety shield suitable for employment in the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIGS. 1 and 2, the X-ray table 5 embodying the invention comprises a patient support top panel assemblage 6 which is movable longitudinally of the table body 7 in either direction from a centered position in which it is shown in the drawing. Beneath the top panel assemblage 6, in front-to-rear extension between guide-roller-mounting members 7 along the front and rear of the table, is a subsurface cover means or panel 8 above the table body 7 and which also may form a cover part of a cross-carryage 9 that permits front-to-back movement of the top panel assemblage 6 in well-known manner. With respect to longitudinal movement of the top panel assemblage 6 along the table body 7 or/and along the cross-carryage 9, the subsurface panel 8 becomes exposed progressively along its length from one end or the other, according to direction of top panel assemblage movement. When the subsurface panel 8 contains such as raised portions 12 in its regions uncovered by longitudinal movement of top panel assemblage 6, to provide for disposition of such as power drive components, for example, any severe vertical shoulders, such as right-angled wall 13 in FIG. 3, at junctures of the raised portions 12 with the remainder of the subsurface panel 8, which is preferably straight at least in the longitudinal direction, present potential obstructions to a patient's fingers or toes that might be extending downwardly around the end of the top panel assemblage during a return movement toward its longitudinally centered position on the table.

In accord with the present invention, any transversely extending raised portion 12 of a subsurface panel 8 is either constructed to have a tapered end wall or ramp in lieu of a blunt end wall such as wall 13 in FIG. 3, or is provided with an adjunctive sloping member or ramp 14 that provides on its upper surface a gradual transition between different panel portion surface levels, to partially alleviate the toe and finger obstructing capability of any such raised subsurface panel portions. In addition, the present invention includes safety shields 15 hinged to the ends of the patient support top panel assemblage 6, that normally occupy repose positions extending downwardly from such ends in the mid position of such top panel assemblage and which automatically raise to generally horizontal positions and vertically follow, at their free ends, the contour of the subsurface panel 8 via the ramp means 14 during movement of respective ends of the top panel assemblage 6, thereby automatically maintaining effective closure of the increased clearanceway 17 beneath the ends of the top panel assemblage 6 and the subsurface panel 8 when such ends are become disposed inwardly of the raised portions 12 of such panel, and, together with ramp means 14, assure that a patient's fingers or toes at the ends of such shields 15 will not meet any blunt obstruction upon being advanced along panel 8 by the free ends of the shields; as will be apparent from FIG. 3 in which different positions of the left-hand shield 15 are shown in dash outlines.

Referring to the several FIGS. in the drawings, and particularly to FIGS. 3 and 4, the safety shields 15 exemplified therein each comprises a thin rigid substantially-flat generally-rectangular rigid member 18 having a straight-edged flat end connected via a horizontally extending piano hinge 19 to a respective end of the patient support top panel assemblage 6 of the X-ray table. The width of the member 18 in its exemplified rigid form is made to be slightly less than the distance between the guide roller mounting members 7 extending along the table between raised subsurface panel portions 12 in the particular table configuration exemplified herein, but which in other table constructions might extend the full width of top panel assemblage. An edge region 20 of member 18 opposite to the edge attached to the hinge 19 is curved downwardly to provide a nesting place for a pair of subsurface-panel-conforming following rollers 21 while assuring that the edge of such region 20 will be maintained in close anticote-and-finger-admitting proximity to subsurface panel 8, including ramp means 14, during travel of the safety shields thereacross. The rollers 21 are mounted at the underside of member 18 for rotation about aligned axes paralleled to that of hinge 19. Rigid wheel supports 22 are suitably attached to the underside of member 18, and these support members have lower guide edges 24 that extend lengthwise of member 18 and are so proportioned thicknesswise of member 18 as to slidable engage the leading top end portions of subsurface panel 8 and cause upward swinging movement of the safety shields from their normally hanging repose positions shown in FIGS. 1 to 3 to wheel engaging generally horizontal regions of such panel 8, and in the hinges 19 follow longitudinal movement of the top panel assemblage 6 relative to such panel 8. Antifriction material (not shown) may be provided the guide edges 24 for a quieting effect during its sliding performance, if desired.

It is also of additional significance that the hinge means 19, exemplified as a piano hinge, are capable of permitting the safety shields 15 to swing greater than 90°, and renders the free ends of such shields incapable of developing resistance to any vertical deflection that may result while a patient's fingers are gripping such free ends, hence obviates imposition of any vertical wedging action on such fingers during top panel assemblage movement.

I claim:
1. An X-ray table comprising:
a table body;
a horizontal elongated rectangular patient support top panel assemblage supported by said table body for translational movement therealong;
subsurface panel means atop said table body normally disposed immediately beneath said top panel assemblage and having vertically offset regions with respect to the direction of relative translational movement of such top panel assemblage;
ramp means on said subsurface panel means sloping between adjacent ones of said vertically offset regions; safety shield means having one end pivotally connected to said top panel assemblage and extending widthwise along edge regions of such top panel movable past the vertically offset regions of the subsurface panel means; and said safety shield means being of a length greater than the maximum vertical clearance between said top panel assemblage and the lower of the aforesaid vertically offset regions, and having a free end opposite to its pivoted end

for translational movement along said subsurface panel means and vertical movement along said ramp means.

2. The X-ray table of claim 1, wherein the free end of said safety shield means has roller means associated therewith for facilitating its aforesaid translational and vertical movement.

3. The X-ray table of claim 1, wherein the relative translational movement of said top panel assemblage is in the direction of its length, and said safety shield means extends along end edges of such assemblage.