

We Claim:

1. A joint assembly for releasably connecting an extension panel to a patient support panel mounted on a pedestal, the patient support panel defining a first plane, the extension panel defining a second plane, said joint assembly comprising a first body member and a second body, one of said first and second body members being arranged to be secured to the patient support panel and the other of said first and second body members being arranged to be secured to the extension panel, said first body member comprising an actuator subassembly and a frame including a projection, a first locking member and an overhang having an undersurface with a first recess therein, said second body member comprising a movable latch member and a frame including at least one tab member and a second locking member, said second body member with said extension secured thereto being configured to be brought into engagement with first body member so that said first and second planes extend at an obtuse angle with respect to each other, whereupon said second body member is configured to pivot with respect to said first body member during abutting engagement between said first locking member and said second locking member so that said first and second planes are parallel to each other when said first body member and said second body member are locked together, whereupon a portion of said at least one tab member is releasably received within said first recess and with said first and second locking members engaging each other to lock said first and second body members together to prevent downward movement of the extension panel with respect to the patient support panel, and with said latch of said second body member engaging said projection of said first body member to lock said first and second body members together and thereby prevent upward movement of the extension panel with respect to the patient support panel.

2. The joint assembly of Claim 1 wherein said joint assembly self aligns, self levels, is immediately stable and locks automatically by the weight and downward pressure on said second body member when said first and second body members are connected together.

3. The joint assembly of Claim 1 wherein said actuator subassembly comprises a manually movable button whose operational position visually indicates if the joint is locked or unlocked.

4. The joint assembly of Claim 1 wherein said actuator subassembly is arranged for moving said latch to release said latch from engagement with said projection, whereupon said second body member with said extension panel secured thereto can be tilted upward with respect

to said first body member to free said portion of said at least one tab member from said recess and to cause said first and second locking members to disengage from each other and thereby unlock said first and second body members from each other.

5 5. A joint assembly for releasably connecting an extension panel to a patient support panel mounted on a pedestal, the patient support panel defining a first plane, the extension panel defining a second plane, said joint assembly comprising a first body member and a second body member, one of said first and second body members being arranged to be secured to the patient support panel and the other of said first and second body members being arranged to be secured to the extension panel, said first body member comprising an actuator subassembly and a frame including a projection, a first locking member and an overhang having an undersurface with a first recess therein, said second body member comprising a movable latch and a frame including at least one tab member and a second locking member, said second body member with said extension panel secured thereto being configured to be brought into engagement with said first body member so that said first and second planes extend at an obtuse angle with respect to each other, whereupon said second body member is configured to pivot with respect to said first body member so that said first and second planes are parallel to each other, whereupon a portion of said at least one tab member is releasably received within said first recess and with said first and second locking members engaging each other to lock said first and second body members together to prevent downward movement of the extension panel with respect to the patient support panel, and with said latch of said second body member engaging said projection of said first body member to lock said first and second body members together and thereby prevent upward movement of the extension panel with respect to the patient support panel, wherein said first locking member comprises a boss and wherein said second locking member comprises a recess for releasable receipt of said boss.

25 6. The joint assembly of Claim 1 wherein said movable latch is arranged to be pivoted about an axis in a first rotational direction to releasably engage said projection of said first body member.

 7. The joint assembly of Claim 6 wherein said latch is normally biased by a spring in said first rotational direction.

30 8. A joint assembly for releasably connecting an extension panel to a patient support panel mounted on a pedestal, the patient support panel defining a first plane, the extension panel

defining a second plane, said joint assembly comprising a first body member and a second body member, one of said first and second body members being arranged to be secured to the patient support panel and the other of said first and second body members being arranged to be secured to the extension panel, said first body member comprising an actuator subassembly and a frame including a projection, a first locking member and an overhang having an undersurface with a first recess therein, said second body member comprising a movable latch and a frame including at least one tab member and a second locking member, said second body member with said extension panel secured thereto being configured to be brought into engagement with said first body member so that said first and second planes extend at an obtuse angle with respect to each other, whereupon said second body member is configured to pivot with respect to said first body member so that said first and second planes are parallel to each other, whereupon a portion of said at least one tab member is releasably received within said first recess and with said first and second locking members engaging each other to lock said first and second body members together to prevent downward movement of the extension panel with respect to the patient support panel, and with said latch of said second body member engaging said projection of said first body member to lock said first and second body members together and thereby prevent upward movement of the extension panel with respect to the patient support panel, wherein said movable latch is arranged to be pivoted about an axis in a first rotational direction to releasably engage said projection of said first body member, said latch is normally biased by a spring in said first rotational direction, and said actuator assembly comprises a lever having a free end arranged to be moved to an extended position engaging said latch to pivot said latch about said axis in a second rotational direction, opposite said first rotational direction, to release said latch from engagement with said projection of said first body member.

9. The joint assembly of Claim 8 wherein said actuator assembly comprises a pivotable button coupled to said lever and arranged when depressed at a first point on said button to pivot said button in a first rotational direction to move said lever to said extended position.

10. The joint assembly of Claim 9 whereupon said release of said projection from said hook enables said second body member with said extension panel secured thereto to be tilted upward with respect to said first body member to free said portion of said at least one tab member from said recess and to cause said first and second locking members to disengage from

each other, to thereby unlock said first and second body members from each other, whereupon said second body member with said extension panel secured thereto can be removed.

11. The joint assembly of Claim 10 wherein said button is normally biased by a spring to pivot said button in a second rotational direction, said second rotational direction being
5 opposite to said first rotational direction.

12. The joint assembly of Claim 11 wherein said free end of said lever includes a surface arranged to engage a correspondingly shaped surface of said projection when holding said lever in said extended position.

13. The joint assembly of Claim 12 wherein said latch bearing against said lever in said
10 extended position holds said surface of said lever in engagement with said correspondingly shaped surface of said projection against the bias provided on said button provided by said spring.

14. The joint assembly of Claim 12 wherein said latch is arranged to be moved to a position not bearing on said lever, whereupon said spring biasing said button causes said surface
15 of said lever to become disengaged from said correspondingly shaped surface of said projection, whereupon said lever moves to a retracted position.

15. A patient support table comprising said joint assembly, said patient support panel and said extension panel as set forth in Claim 1.

16. The patient support table of Claim 15 wherein the patient support table is a radiation
20 therapy treatment table.

17. The patient support table of Claim 16 wherein said patient support panel includes at least one component enabling said patient support panel to be secured to the pedestal.

18. The patient support table of Claim 16 wherein the patient support panel and the extension panel are each formed of a carbon composite.

19. The patient support panel of Claim 17 wherein said patient support panel and said
25 extension panel are each formed of a carbon composite.

20. The patient support table as set forth in Claim 16 wherein said actuator assembly comprises a manually movable button whose operational position visually indicates if the joint is locked or unlocked.

21. A joint assembly connector for releasably connecting an extension panel to a patient
30 support panel mounted on a pedestal, the patient support panel defining a first plane, the

extension panel defining a second plane, said joint assembly connector comprising one of a first body member and a second body member, one of said first and second body members being configured to be secured to the patient support panel and the other of said first and second body members being configured to be secured to said extension panel, said first body member comprising an actuator subassembly and a frame including a projection, a first locking member and an overhang having an undersurface with a first recess therein, said second body member comprising a movable latch and a frame including at least one tab member and a second locking member, said second body member with said extension panel secured thereto being configured to be brought into engagement with said first body member so that said first and second planes extend at an obtuse angle with respect to each other, whereupon said second body member is configured to pivot with respect to said first body member during abutting engagement between said first locking member and said second locking member so that said first and second planes are parallel to each other when said first body member and said second body member are locked together, whereupon a portion of said at least one tab member is releasably received within said first recess and with said first and second locking members engaging each other to lock said first and second body members together to prevent downward movement of the extension panel with respect to the patient support panel, and with said latch of said second body member engaging said projection of said first body member to lock said first and second body members together and thereby prevent upward movement of the extension panel with respect to the patient support panel.

22. The joint assembly connector of Claim 1 wherein said first body member is connected to the patient support panel and said second body member is connected to said extension panel.

23. The joint assembly connector of Claim 1 wherein said second body member is connected to the patient support panel and said first body member is connected to said extension panel.

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