United States Patent [19]

Nielsen

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[54] **POOL TABLE CONSTRUCTION WITH SPLICER-CONNECTED PERIPHERAL PANEL MEMBERS**

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[52] **U.S. Cl.**.....**273/3 C,** 52/471, 52/584, 108/27

[51] **Int. Cl.**.....**A63d 15/00**

[58] **Field of Search**.....273/3 R, 3 C, 5 R, 273/5 A, 6, 7, 8, 9; 287/20.92 R, 20.92 C, 20.92 D, 20.92 E, 20.92 K, 20.92 J, 20.92 Y, 20.925, 189.35; 52/579, 584, 582, 586, 461, 466, 470, 471; 108/27, 29, 153, 154; 312/140.1, 140.3, 140.4

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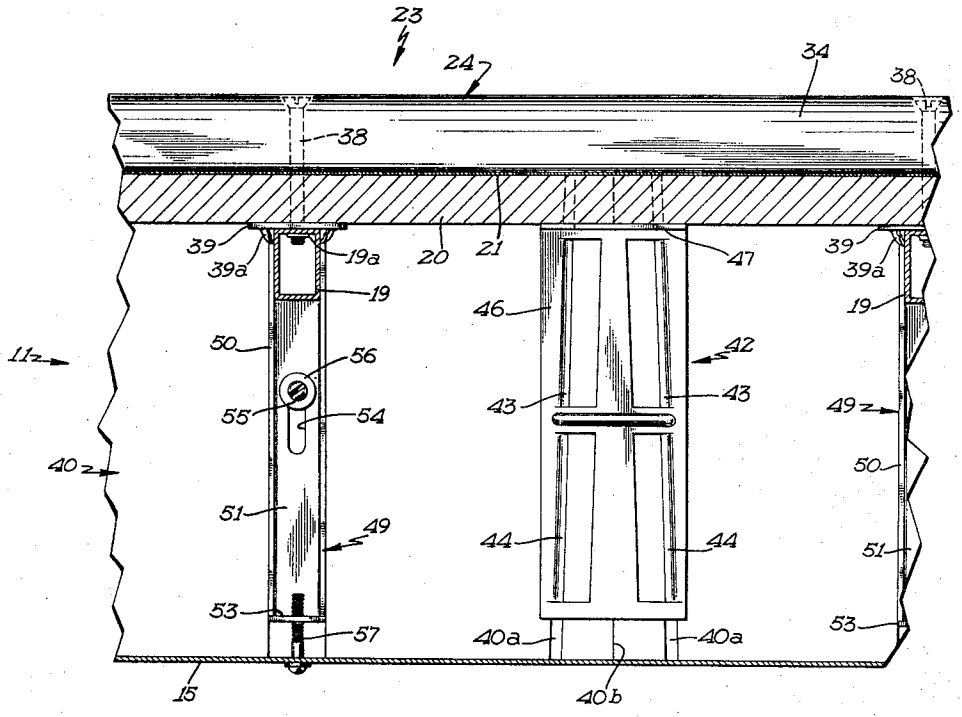
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[57] **ABSTRACT**

A pool table comprises a metallic frame having leg structures secured thereto, and supporting a rectangular bed, and a rail and bumper structure thereon. A plurality of vertical external panels are secured to the frame around the entire external periphery thereof. Similar splicing members are each applied to the end portions of adjacent panels and engage in converging slots in the inner surfaces of the panels to urge the panels into tight end-to-end abutting relation. These splicing members may be removed to facilitate maintenance of the pool table. Connecting members connect the panels to the frame and these connecting members may also be readily detached from the frame for purposes of maintenance.

7 Claims, 10 Drawing Figures



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SHEET 1 OF 3

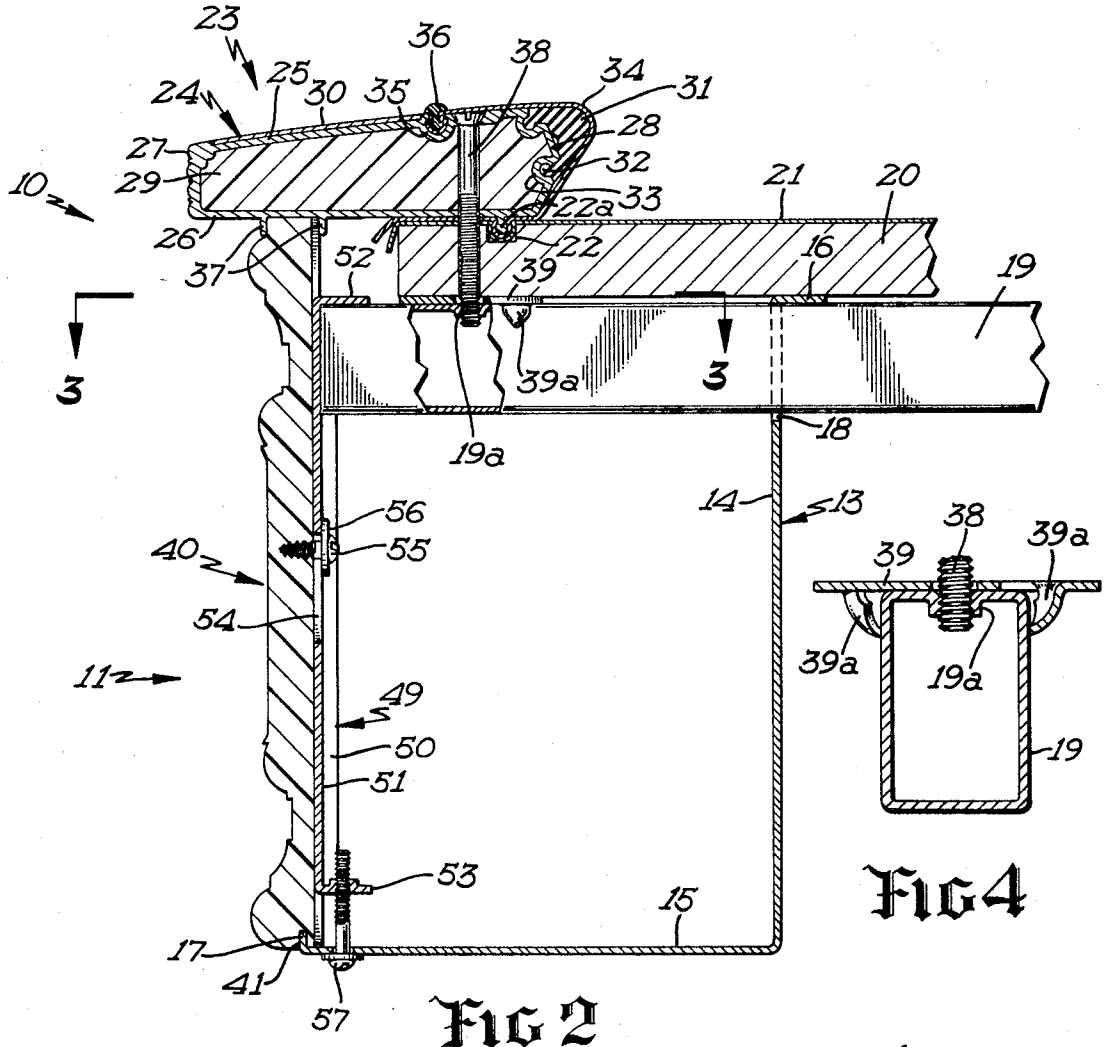


Fig 2

Fig 4

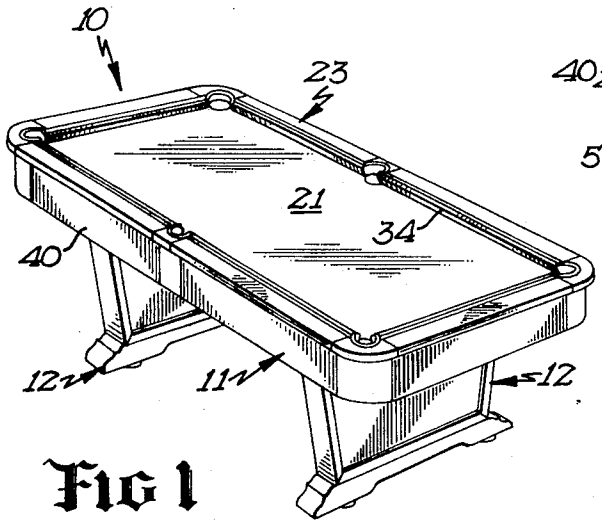


Fig 1

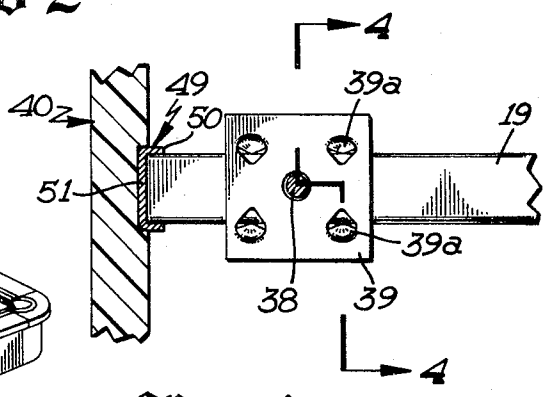


Fig 3

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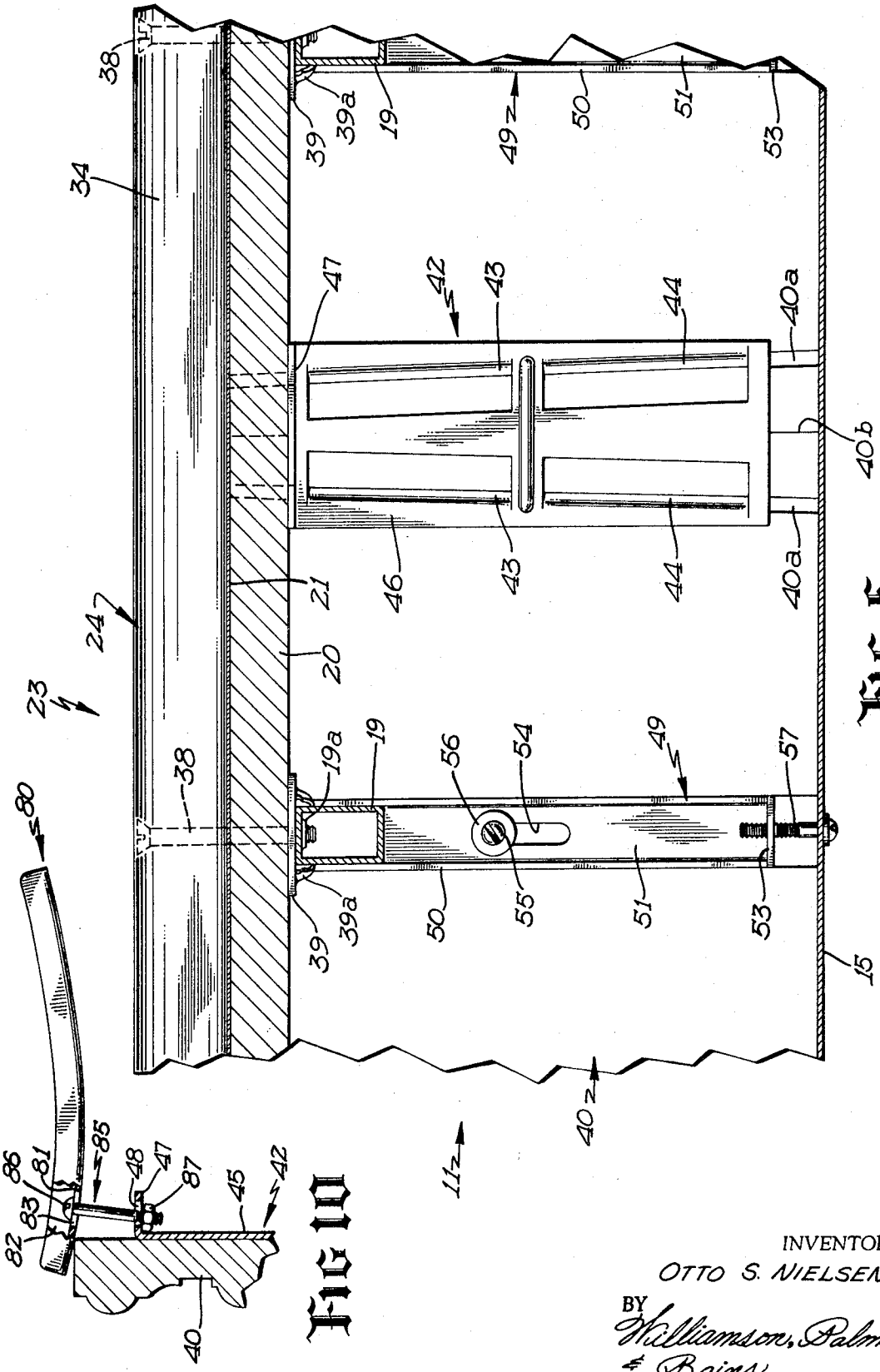


FIG 5

FIG 10

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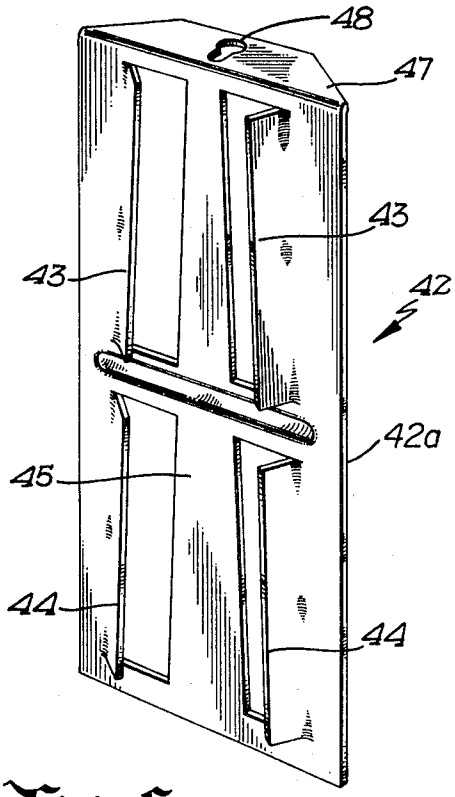


Fig 6

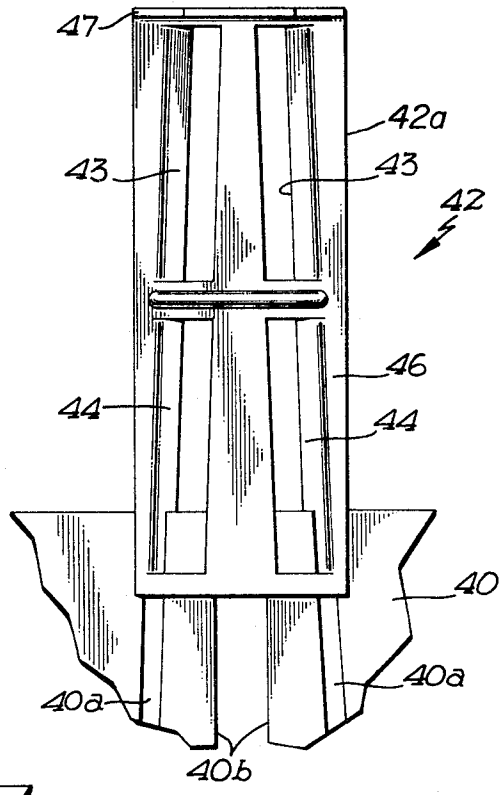


Fig 7

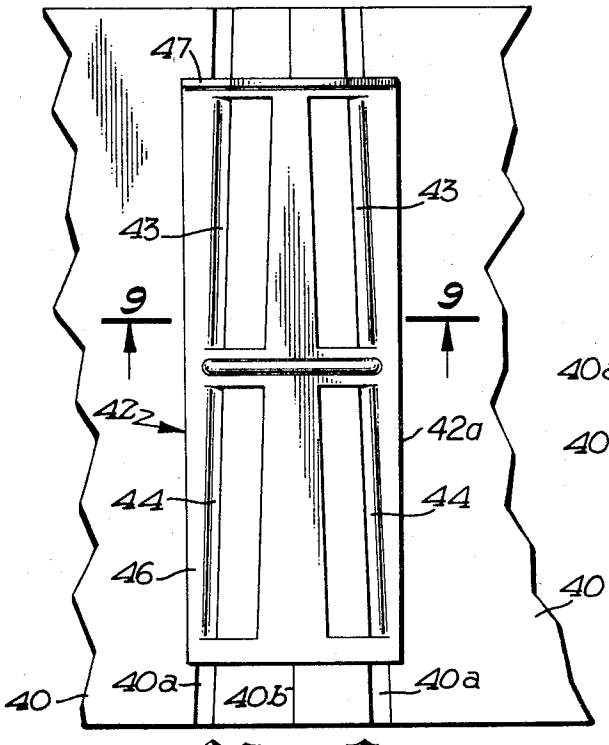


Fig 8

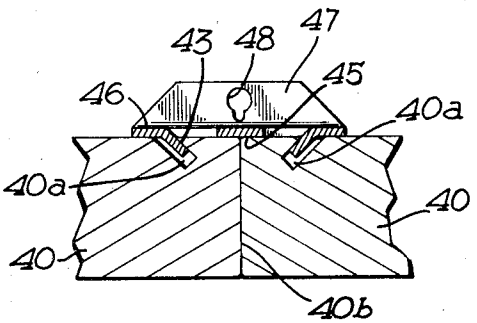


Fig 9

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POOL TABLE CONSTRUCTION WITH SPLICER-CONNECTED PERIPHERAL PANEL MEMBERS

SUMMARY OF THE INVENTION

An object of this invention is to provide a novel pool table in which the exterior vertical panels which extend around the exterior periphery of the frame are not only uniquely secured to the frame but are also uniquely connected together. This is accomplished through the use of splicing members which interconnect the panels together in end-to-end relation, and connecting members which connect the panels to the frame. This arrangement not only facilitates original assembly of the pool table, but maintenance of the pool table is also facilitated since these splicing members and connecting members may be readily removed.

Thus the manner in which the rail and bumper structure, the bed, the frame, and the panels are interconnected together not only facilitates original assembly as well as disassembly of the pool table, but provides an unusually strong structure. These and other objects and advantages of this invention will more fully appear from the following description made in connection with the accompanying drawings wherein like reference characters refer to the same or similar parts throughout the several views.

BRIEF DESCRIPTION OF THE FIGURES OF THE DRAWING

FIG. 1 is a perspective view of the novel pool table;

FIG. 2 is a cross-sectional view of a side portion of the pool table illustrating the manner in which the various components thereof are interconnected together;

FIG. 3 is a cross-sectional view taken approximately along line 3—3 and looking in the direction of the arrows;

FIG. 4 is a cross-sectional view taken approximately along line 4—4 of FIG. 3 and looking in the direction of the arrows;

FIG. 5 is a cross-sectional view taken approximately along line 5—5 of FIG. 2 and looking in the direction of the arrows;

FIG. 6 is a perspective view of a splicer member;

FIG. 7 is a side elevational view of a splicer member showing the initial position of the splicing member with respect to a pair of exterior panels as these panels are being joined together;

FIG. 8 is a view similar to FIG. 7 but illustrating the position of the panels and splicer member when the panels have been completely joined together;

FIG. 9 is a cross-sectional view taken approximately along line 9—9 of FIG. 8 and looking in the direction of the arrows; and

FIG. 10 is a fragmentary cross-sectional view of the pool table illustrating the manner in which the boot is used to remove the splicer member.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to the drawings and more specifically to FIGS. 1 and 2, it will be seen that one embodiment of the novel pool table, designated generally by the reference numeral 10 is there shown. This pool table 10 includes a frame 11 which is only partially shown in FIG. 2. The frame is connected to and supported by suitable leg structures 12.

The frame 11 is comprised of a pair of spaced apart similar longitudinal frame members 12 (only one of which is shown) which are interconnected together by end frame members (not shown). The longitudinal frame members 13 each include a vertical wall 14 which has a transverse lower wall 15 integrally formed therewith and projecting outwardly therefrom. An outturned flange 16 is integrally formed with the upper end edge of the vertical wall 14 and an upturned flange 17 is integrally formed with the outer edge of the lower wall 15.

The longitudinal frame members have a plurality of spaced apart openings 18 therein through which project opposite ends of elongate truss members 19. It will be noted that the truss members 19 are of rectangular cross-sectional configuration and opposite ends thereof project substantially beyond the opening the in the vertical wall of the longitudinal frame members.

It is pointed out that although the frame 11 is not shown in detail in the instant application, this frame is substantially identical to the frame disclosed in my co-pending application, Ser. No. 774,760, filed Nov. 12, 1968, and now U.S. Pat. No. 3,584,872. However, it will be noted that the truss members 19 are of rectangular cross-sectional configuration, while the truss members in my co-pending application are of generally V-shaped cross-sectional configuration.

A generally rectangular substantially flat bed 20 is mounted on the frame and the bed is provided with peripheral grooves 22 in the upper surface thereof adjacent the peripheral edges thereof. A fabric cover 21 is positioned upon the upper surface of the bed 20 and the marginal portions of the cover are urged into the peripheral grooves 22 of the bed 20.

The rail and bumper structure 23 includes a plurality of similar rail and bumper members 24, each being formed of a rigid material such as extruded aluminum and each including an upper wall 25, lower wall 26 and outer wall 27 and an inner wall 28. These rail members which are interconnected together are provided with a foamed plastic core 29 so that these rail members, while being of light-weight construction, present a monolithic, extremely strong structural shape.

An elongate non-metallic panel 30 is positioned upon the upper wall 25 of each rail and bumper member and this panel is primarily for decorative purposes. The inner wall 28 of each rail member has a bumper member 31 mounted thereon and this bumper member is preferably formed of a yieldable material such as rubber. In this regard, it will be noted that the bumper member 31 has a pair of male socket elements 32 which are in the form of elongate grooves located on the inner wall 28 of each rail member. Thus the bumper member engages the associated rail member with a snap coupling effect.

A fabric bumper cover 34 covers the bumper 31 and this bumper cover is formed of the same kind of fabric as the fabric cover 21 for the bed 20. The bumper cover is interposed between the lower wall 26 of each rail member and the upper surface of the bed 20. The bumper cover also extends over the bumper and rearwardly upon the upper wall of each rail and bumper member and is secured to an elongate groove 35 in the upper wall by elongate flexible anchor element 36. The bumper cover as well as the cover 21 is clamped in the

peripheral grooves 22 in the bed 20 by means of an elongate downwardly projecting groove engaging element or bead 22*a* integral with the lower wall 26 of each rail and bumper member. The coaction between beads 22*a* and the grooves 22 in the bed not only serve to clamp the cover 21 to the bed, but also anchor the rail and bumper structure to the bed.

Each rail and bumper member 24 has a pair of spaced apart positioning elements 37 affixed to the lower wall thereof and projecting downwardly therefrom. These positioning elements form a channel which engages the upper edge of one of a plurality of similar outer vertical panels 40. It will also be seen that the rail and bumper structure, as well as the bed 20 is rigidly secured to the frame 11 by means of a plurality of elongate bolts or threaded members 38 which project through openings in the rail and bumper members and the bed, and which threadedly engage in threaded apertures 19*a* in the truss members 19. Spacer members 39 are interposed between the lower wall or surface of the bed 20 and the upper surface of the truss members 19.

In this regard, reference is made to FIGS. 2, 3 and 4 therein it will be seen that the spacer members are of substantially flat configuration and correspond in their thickness dimension to the thickness dimension of the flange 16. Each of these spacer members has a plurality of downwardly struck teeth or claws 39*a* which engage opposite vertical surfaces of the associated truss member 19. The clamping threaded members 38 thus cooperate with the frame to very effectively clamp the rail and bumper structure, as well as the bed, to the frame. Thus replacement of the cover for the bed 20 may be readily accomplished by merely removing the clamping threaded members 38, replacing the cover and thereafter reapplying the clamping structure to the bed to clamp the cover 21 in taut condition in place.

Referring again to FIGS. 1 and 2, it will be seen that the vertical panels 40 extend around and completely conceal the entire periphery of the frame 11. These vertical panels are preferably formed of a non-metallic material and if desired may present the texture and general appearance of wood paneling. It will be noted that each panel 40 corresponds in length to each rail and bumper member 24 and each panel has an elongate downwardly facing groove 41 in the lower edge thereof. This groove receives and is positioned upon the upturned flange 17 on the associated longitudinal frame member 13. Thus each panel 40 extends between the lower surface of the rail and bumper structure and the upper surface of the lower wall 15 of the associated longitudinal frame member 13.

One of the unique features of the present invention is the use of splicer members to interconnect adjacent panels 40 in end-to-end abutting relation. These splicer members, designated generally by the reference numeral 42 may also be readily removed from the spliced panels to thereby permit the assembled panels to be disassembled and removed for maintenance purposes. Each splicer member 42 is of substantially flat generally elongate rectangular configuration and has a pair of laterally spaced apart longitudinally or vertically extending upper panel engaging elements 43 projecting outwardly therefrom and a pair of laterally spaced apart longitudinally or vertically extending lower panel engaging elements 44 projecting outwardly therefrom. Each splicer member presents a substantially flat inner surface 45 and a substantially flat outer surface 46 as best seen in FIGS. 5 through 9. It will be noted that one of the upper panel engaging elements 43 is disposed in the same vertical plane as one of the lower panel engaging elements 44. Referring again to FIGS. 6 to 9, it will be seen that the panel engaging elements 43 and 44 for each splicer member 42 are spaced inwardly from the longitudinal or vertical edges 42*a* thereof. It will also be noted that these panel engaging elements project inwardly towards each other, and, in the embodiment shown diverge downwardly away from each other and converge upwardly toward each other.

Each splicer member also has an outwardly projecting flange 47 at its upper end, the flange being provided with a key hole type opening 48 therein. The key hole type opening 48 of the flange permits the insertion of a removal tool to facilitate pulling of the splicer member in an upward direction when it is desirable to disassemble the panels. This tool 80 is of elongate channel-shaped configuration and includes a web portion 81 and flanges 82 integral therewith and projecting therefrom. The web portion has an elongate opening therein adjacent one end thereof. A bolt 85 projects through the opening and is provided with a head 86 and nut 87 which engages the threaded end portion of the bolt. The nut will be inserted in the keyhole opening in a splicer member and the tool will then functions as a lever to facilitate removal of each splicer member.

Each panel 40 has a pair of elongate transversely extending slots 40*a* therein, each slot being located in the inner surface thereof adjacent one end thereof. Referring to FIGS. 7 and 8, it will be noted that the slots 40*a* in a pair of adjacent ends of abutting panels also diverge away from each other in the manner of the panel engaging elements on each splicer member. With this arrangement, when the panel engaging elements on each splicer member are introduced into the slots 40*a* of a pair of panels, and each splicer member is thereafter urged downwardly from the position in FIG. 7 to the position in FIG. 8, the splicer member serves to very effectively splice the panels in a tight abutting end-to-end relation.

Means are also provided for mounting each panel on the frame, and to this end, each panel is provided with a plurality of connecting members 49. Each connecting member is of substantially channel-shaped configuration and each includes a pair of longitudinal flanges 50 which are interconnected by a web portion 51. It will be noted that the connecting members 49, when applied to the panels and frame, are oriented vertically. Each connecting member is provided with a top flange 52 integrally formed with the upper end thereof and projecting outwardly therefrom and is also provided with a bottom flange 53 integrally formed with the lower end thereof and projecting outwardly therefrom. Each connecting member also has an elongate longitudinally extending slot 54 in the web portion thereof intermediate the ends thereof. A screw 55 provided with a washer 56 extends through the slot and into the associated panels to secure each connecting member to a panel. The slot 54 permits vertical adjustment of the connecting member with respect to its associated panel member.

When each connecting member **49** is applied to a panel, and is thereafter mounted on the frame member **13**, it will be noted as best seen in FIG. **2**, that the top flange **52** is positioned against the upper surface of the truss members **19**. Each truss member **19** has a width dimension to very snugly fit between the flanges **50** of the associated connecting member. The bottom flange **53** has a threaded aperture therein which is engaged by a threaded bolt **57**. Thus, when each bolt **57** is tightened, this exerts a pulling action on the connecting member in a downward direction, which pull is transmitted to the frame through the flange **52** and the truss member **19**.

From the foregoing paragraphs, it will be seen that the manner in which the panels **40** are mounted on the frame, little, if any, of the structural load is transmitted to the panel members but these panel members may be readily removed for the purposes of maintenance with respect to the pool table. In this regard, a user may remove the threaded clamping members of bolts **38** to remove the rail and bumper structure from the pool table, and may thereafter remove the splicer members by shifting the same vertically upwardly. The connecting members may be disengaged from mounted relation with respect to the frame by loosening the bolts **57**. A small pulling tool is used to facilitate removal of the splicer members from clamped relation with respect to a pair of panels and the entire disassembly operation may be accomplished in a very short time.

Further, reassembly or initial assembly of the pool table may be quickly carried out through the use of the novel splicer members and connecting members. The rail and bumper members for the rail and bumper structure are interconnected to side connecting and corner connecting members by means of male and female coupling elements in the manner disclosed in my co-pending application, Ser. No. 70,628, filed Aug. 26, 1970.

Thus it will be seen from the foregoing description that I have provided a novel pool table which has unique means for mounting the side panel on the frame and for splicing the side panels together in tight end-to-end relation. It is further pointed out that utility for the splicing members also has application in splicing panel members and structures other than pool tables.

Thus it will be seen that I have provided a unique pool table which is not only of simple and inexpensive construction, but one which may be readily assembled or readily disassembled for maintenance and the like.

What is claimed is:

1. A pool table comprising

a metallic frame including a pair of longitudinal frame members each having a plurality of longitudinally spaced apart openings therein, a plurality of transversely extending spaced apart elongate hollow truss members each having opposite ends thereof extending through openings in said longitudinal frame member,

a substantially flat rectangular bed mounted on said frame,

a rail and bumper structure positioned upon said bed adjacent the marginal portions thereof,

means releasably clamping the bed and the rail and bumper structure on the frame,

a plurality of similar vertically oriented external panels mounted on said frame along the entire periphery thereof, each of said panels having a pair of generally vertically inclined slots therein each slot located adjacent one end of the associated panel, the slots on adjacent end portions of a pair of abutting end-to-end panels diverging generally in a vertical direction, and extending laterally towards each other,

a plurality of similar generally vertically oriented substantially flat elongate splicer members interconnecting said panels together in end-to-end abutting relation, each splicer member having vertical edges and having a pair of spaced apart vertically extending panel engaging elements integral therewith and projecting outwardly therefrom, and spaced inwardly from said vertical edges, said panel engaging elements on each splicer member diverging in a vertical direction away from each other, and extending laterally towards each other, the panel engaging elements on a splicer member, when positioned in a pair of slots in adjacent end portions of a pair of panels coacting with the slots to progressively urge the adjacent ends of the panels towards each other in tight abutting relation as the associated splicer member is moved vertically in a clamping direction, each pair of panels being readily separable when the associated splicer member is urged vertically in a release direction,

and a plurality of similar connecting members each being secured to each panel and to said frame.

2. The pool table as defined in claim **1** wherein said splicer members are of substantially flat rectangular configuration and said panel engaging elements are struck outwardly therefrom.

3. The pool table as defined in claim **1** wherein each of said splicer members has a tool engaging element integrally formed with the upper end thereof and projecting outwardly therefrom, said tool engaging element being adapted to be engaged by a tool for urging the same in a vertical release direction for disengaging each splicer member from the associated pair of panels.

4. The pool table as defined in claim **1** wherein said connecting members are of elongate construction and are vertically oriented when applied to a pool table, and each connecting member engages the lower surface of the rail and bumper structure, means connecting the lower end portions of each connecting member to the lower end portion of the frame, and means interconnecting the intermediate portion of each connecting member to the inner surface of a panel.

5. The pool table as defined in claim **4** and means on the upper end portion of each connecting member engaging the upper surface of an end portion of one of the truss members to progressively urge the end portion of the associated truss member and longitudinal frame member towards each other when the connecting members are applied to the frame.

6. The pool table as defined in claim **4** wherein each of said connecting members has an elongate vertically oriented slot therein and said means connecting each connecting member to each panel comprises a connecting element which projects through said slot.

7. The pool table as defined in claim **1** wherein said bed has a plurality of spaced apart vertically oriented

openings in the marginal portions thereof, said rail and bumper structure having a plurality of spaced apart vertically oriented openings therein, each being disposed in registering relation with an opening in the bed, a plurality of threaded securing members each extending through an opening in the bed and a registering opening in the rail and bumper structure and threadedly connected with one of the truss members to releasably clamp the bed and rail and bumper structure on the frame.

* * * * *