

Feb. 8, 1966

S. E. BARRERA

3,233,251

POOL STRUCTURE

Filed Jan. 15, 1964

2 Sheets-Sheet 1

Fig-1

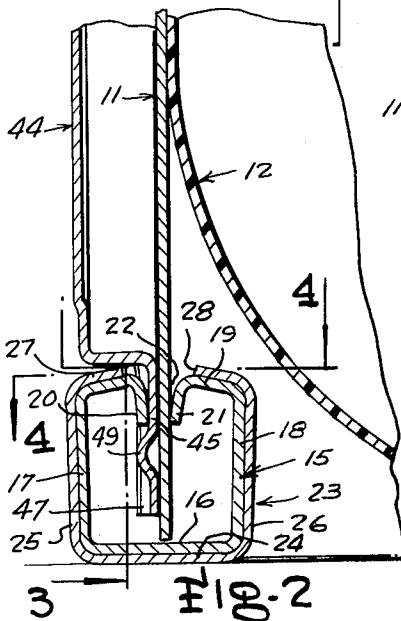
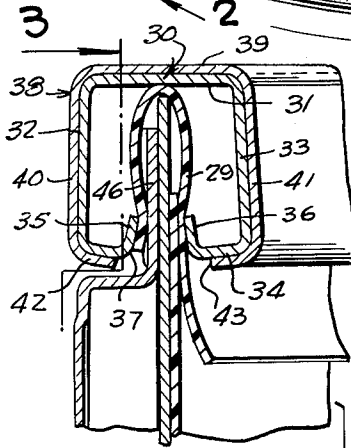
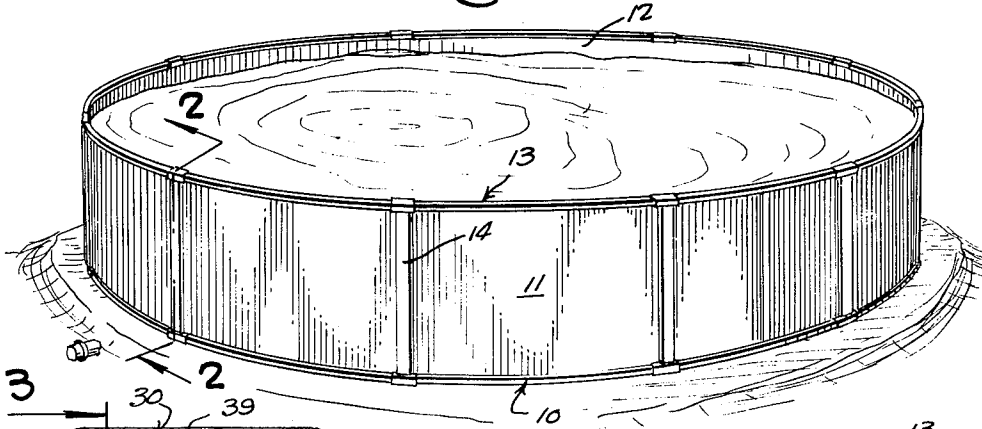


Fig-2

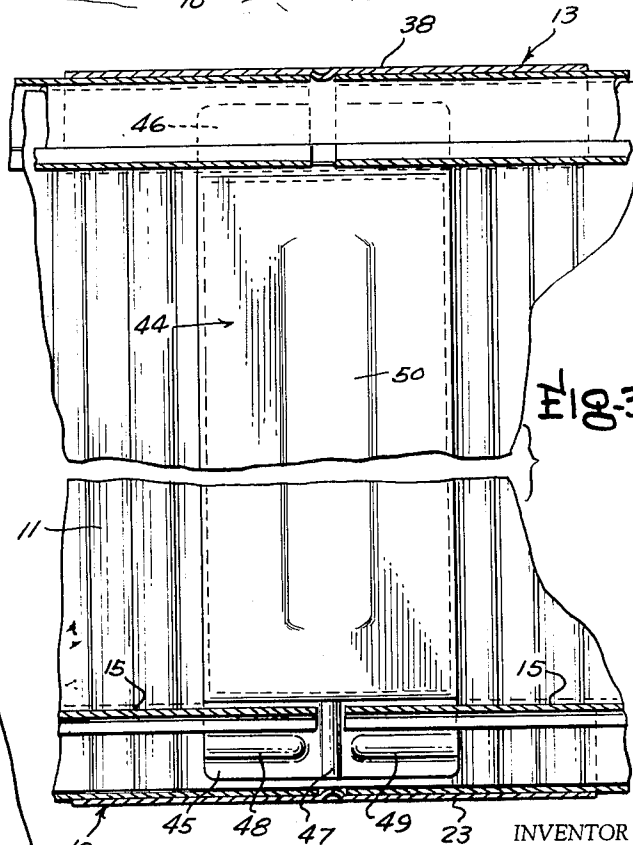


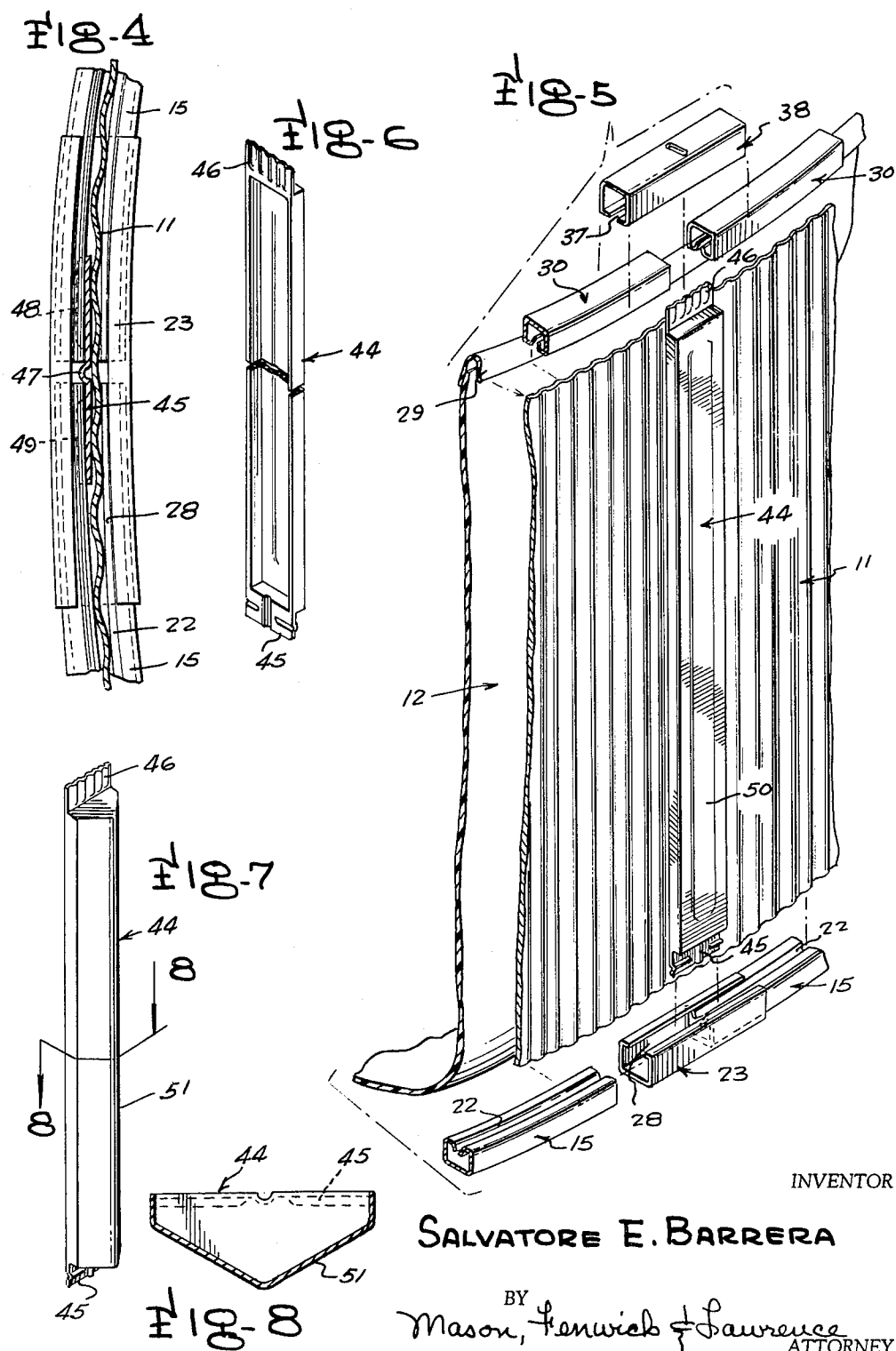
Fig-3

SALVATORE E. BARRERA

BY
Mason, Fenwick & Lawrence
ATTORNEY

3,233,251

2 Sheets-Sheet 2



1

3,233,251

POOL STRUCTURE

Salvatore E. Barrera, Mountaintop, Pa., assignor to Muskin Manufacturing Company, Inc., Wilkes-Barre, Pa., a corporation of Pennsylvania

Filed Jan. 15, 1964, Ser. No. 337,870

14 Claims. (Cl. 4-172)

This invention relates to a pool structure and more particularly to a pool structure adapted to be erected above ground.

In the prior art, there are various types of pool structures which are adapted to be erected from prefabricated parts normally purchased in packages or kits. Such structures, however, usually are complicated in construction which does not make them readily adaptable for erection by relatively unskilled persons. Furthermore, such structures have been found to include numerous parts which often require special tools for assembling.

Accordingly, the principal object of this invention is to provide a novel pool structure particularly adapted to be erected above ground.

Another object of the present invention is to provide a novel pool structure which is readily adapted to be erected by relatively unskilled persons.

A further object of this invention is to provide a novel pool structure having greater rigidity than comparable prior art pool structures.

A still further object of this invention is to provide a novel pool structure having relatively few component parts and which can be erected without the use of any tools.

A more specific object of the present invention is to provide a novel pool structure having improved means for interconnecting the upper and lower peripheral rail members of a pool frame which provides greater rigidity to the pool structure.

Another object of the present invention is to provide a novel pool structure having relatively few component parts which are relatively inexpensive to manufacture.

Other objects and advantages of the present invention will become more apparent to those persons skilled in the art from the following description when taken in conjunction with the accompanying drawings, wherein:

FIGURE 1 is a perspective view of an embodiment of the invention;

FIGURE 2 is an enlarged cross-sectional view taken along line 2-2 in FIGURE 1, having a portion thereof broken away;

FIGURE 3 is a reduced cross-sectional view taken along line 3-3 in FIGURE 2, having a portion thereof broken away;

FIGURE 4 is a reduced cross-sectional view taken along line 4-4 in FIGURE 3;

FIGURE 5 is a fragmentary view of the embodiment shown in FIGURE 1, illustrating various component parts in exploded relation;

FIGURE 6 is a perspective view of the improved means for interconnecting the peripheral upper and lower rail members of the invention, having a portion thereof broken away;

FIGURE 7 is a perspective view of a modified form of the interconnecting means illustrated in FIGURE 6; and

FIGURE 8 is an enlarged cross-sectional view taken along line 8-8 in FIGURE 7.

Briefly described, the present invention provides a novel pool structure generally comprising a lower rail member having a wall receiving slot along the length thereof, an endless wall having a bottom edge received within and seated in the slot of the lower rail member, a pool liner having a peripheral upper edge formed to

2

fit over the upper edge of the endless wall, an upper rail member having a slot along the length thereof for receiving the upper edge of the endless wall and means for interconnecting the upper and lower rail members. The interconnecting means for the upper and lower rail members is provided with a lower lip portion received within the slot of the lower rail member between the endless wall and a side wall of the slot in the lower member, and an upper lip portion received within the slot in the upper rail member 10, a liner 12 disposed within the endless slot in the upper rail member.

Referring to the drawings, there is shown an embodiment of the invention. FIGURE 1 illustrates a pool structure generally comprising a lower annular rail member 10, an endless wall 11 having the bottom edge thereof received within and seated in a slot provided in the lower rail member 10, a liner 12 disposed within the endless wall 11, having the upper peripheral edge thereof fitted over the upper edge of the endless wall, an annular rail member 13 seated on the peripheral edge of the liner 12 and the upper edge of the wall 11 and a plurality of upright members 14 interconnecting the upper and lower rail members. As best illustrated in FIGURES 3 and 4, the lower rail member 10 is composed of a plurality of arcuate sections 15 having a substantially channel-shaped configuration, including a bottom wall 16, spaced side walls 17 and 18 and an upper wall 19 having a pair of opposed intumed flanges 20 and 21 defining an arcuate slot 22. The arcuate sections 15 are connected by a plurality of connecting members 23, having a configuration similar to the arcuate section members 15, including a bottom wall 24, a pair of spaced walls 25 and 26 and a top wall 27 having an arcuate slot 28. As illustrated in FIGURE 4, the connecting members 23 are adapted to receive the ends of adjacent lower rail sections 15 to maintain the same in spaced end to end relation. The slot 28 in each connecting member is aligned with the slots 22 of adjacent lower rail sections to provide a continuous annular slot in the lower rail member 10.

The endless wall 11 is preferably of a corrugated construction and is adapted to be seated along its lower edge in the slot provided in the lower rail member. The endless wall 11 also is adapted to support the pool liner 11, having its peripheral outer edge 29 overlapping or fitted over the upper edge of the endless wall 11.

The upper rail member 13 also is composed of a plurality of arcuate sections 30, having a substantially channel-shaped configuration including a top wall 31, spaced side walls 32 and 33 and a bottom wall 34, having opposed intumed flanges 35 and 36 defining an arcuate slot 37. The upper rail sections 30 are adapted to be connected together in end to end relation by means of a plurality of arcuate connecting members 38. Each of the connecting members 38 are configured similarly to the upper rail sections 30, having an upper wall 39, spaced side walls 40 and 41, and a bottom wall 42 having an arcuate slot 43. The connecting members 38 receive the end portions of adjacent upper rail members 30 to provide the upper rail member 13, and the arcuate slot 43 in the bottom wall thereof is adapted to be aligned with the arcuate slots 37 in the bottom wall of the upper rail members 30 to provide a continuous annular slot for receiving the upper end of the endless wall 11 and the outer peripheral portion 29 of the pool liner which is fitted over the upper edge of the endless wall.

The upper and lower rail members are interconnected by means of a plurality of upright members 44. Each of the upright members 44 is substantially elongated and rectangular in cross-section, having a lower lip portion 45 which is received within the slot in the lower rail member between the endless wall 11 and intumed flanges 20 of adjacent lower rail members and an upper lip por-

tion 46, lying in the same plane as lower lip portion 45 which is received within the slot in the upper rail member 13 between the endless wall 11 and the flanges 35 of adjacent upper rail sections 30. The lower lip portion 45 of the upright member is provided with a rib 47 disposed longitudinally relative to the length of the upright member which is received between the intumed flanges 20 of spaced adjacent lower rail members 15. The lower lip portion 45 also is provided with transversely extending rib portions 48 and 49 which are forced downwardly past the intumed flanges 20 of adjacent lower rail members which restrict movement of the upright members along their lengths. It further will be appreciated that the rib 47 is engageable with the ends of adjacent lower rail members to restrict the movement of the upright members along the length of the lower rail member 10. The upper lip portion 46 is provided with a plurality of longitudinally extending ribs which also serve to restrict the lateral movement of the upright members.

The outer surface of each upright member 44 is provided with a longitudinally extending struck-out or rib portion 50 which also provides additional strength to the upright member. As illustrated in FIGURES 7 and 8, the outer wall of each upright member can be peaked along the length thereof as at 51, to provide further strength to the upright member.

To erect the above described embodiment of the invention, the lower rail member 10 is first assembled by interconnecting the lower rail sections 15 in spaced end to end relation with the connecting members 23. The endless wall 11 then is seated in the annular slot provided in the lower rail member. After the wall 11 is in position, the pool liner is placed within the wall 11 and the outer peripheral edge is fitted over the upper edge of the wall 11. After the pool liner is in place and the drain tube is connected the upright members are attached by inserting the lower lip portion of an upright member in the slot in the bottom rail member between each adjacent lower rail section, so that the rib 47 is received within the spacing between the adjacent lower rail sections, and the transverse ribs 48 and 49 are disposed below the lower edge of intumed flanges 20 of adjacent lower rail sections. The upper lip portion 46 of each upright member is also positioned beneath the overlapping edge of the pool liner.

The upper rail member 13 is assembled by first placing an upper rail member 30 on the upper edge of the endless wall and pressing down so that the upper edge of the wall 11 is received within the slot in the section. A connector 38 is then slid in place over the end of the section. The remaining rails and connectors are assembled on the upper edge of the wall 11 in a similar manner to complete the upper rail member 13. Each of the upper rail sections 30 preferably is vertically aligned with the lower rail sections. In order to assure proper alignment of the upper rail sections, all of the sections and connectors are placed in position prior to pressing the assembled unit downwardly onto the upper edge of the wall 11.

The various component parts of the present invention can be constructed of any suitable materials and by any suitable means. It is preferred, however, that the various parts excluding the pool liner be constructed of sheet metal and fabricated by suitable stamping methods.

From the foregoing detailed description, it will be evident that there are a number of changes, adaptations and modifications of the present invention which come within the province of those skilled in the art. However, it is intended that all such variations not departing from the spirit of the invention be considered as within the scope thereof as limited solely by the appended claims.

What I claim is:

1. A pool structure comprising a lower rail member having a wall receiving slot along the length thereof, an endless wall having a bottom edge received within and

seated in the slot of said lower rail member, a pool liner having a peripheral upper edge formed to fit over the upper edge of said endless wall, an upper rail having a slot along the length thereof for receiving the upper edge of said liner and the upper edge of said endless wall and means for interconnecting the upper and lower rail members having a lower lip portion received within the slot of said lower rail member between said endless wall and a side wall of said slot in said lower rail member and an upper lip portion received within the slot in said upper rail member between said endless wall and a wall of the slot in said upper rail member.

2. A pool structure according to claim 1, wherein the lower lip portion of said interconnecting means is provided with means engageable with said lower rail member for locking the lower lip portion within the slot of said lower rail member.

3. A pool structure according to claim 1, wherein the lower lip portion of said interconnecting means is provided with means engageable with the lower rail member to prevent movement of the interconnecting means along the length of said lower rail member.

4. A pool structure according to claim 1, wherein the lower lip portion of said interconnecting means is provided with means engageable with said lower rail member for preventing movement of said interconnecting means along the length thereof.

5. A pool structure comprising a lower base member having a wall receiving slot along the length thereof, an endless wall having a bottom edge received within and seated in the slot of said lower rail member, a pool liner having a peripheral upper edge formed to fit over the upper edge of said endless wall, an upper rail member having a slot along the length thereof for receiving the upper edge of said liner and the upper edge of said endless wall, means for interconnecting the upper and lower rail members each including a lower lip portion received within the slot of said lower rail between the endless wall and a side wall of said slot in said lower rail member and an upper lip portion received within the slot in the upper rail member disposed between the endless wall and a wall of the slot in said upper rail member and the lower lip portion of said interconnecting means having means for preventing movement of said interconnecting means along the length of said lower rail member and means for preventing the movement of said interconnecting means along the length of said interconnecting means.

6. A pool structure comprising an annular lower rail member composed of a plurality of arcuate sections, each of said sections having an arcuate slot in the upper surface thereof extending along the length thereof, a plurality of connectors for connecting the ends of adjacent lower rail sections, an endless wall having a bottom edge received within and seated in the slot in the lower rail member, a pool liner having a peripheral upper edge formed to fit over the upper edge of said endless wall, an upper annular rail member composed of a plurality of arcuate sections, each of said upper rail sections having a wall receiving slot in the bottom surface thereof for receiving the upper edge of said liner and the upper edge of said endless wall, a plurality of connectors for connecting the ends of adjacent upper rail sections, and means for interconnecting the upper and lower rail members including a lower lip portion received within the slot of the lower rail member between the endless wall and a side wall of the slot in said lower rail member and an upper lip portion received within the slot in the upper rail member between the endless wall and a wall of the slot in the upper rail member.

7. A pool structure according to claim 6, wherein the lower lip portion of said interconnecting means is provided with means engageable with said lower rail member for locking the lower lip portion within the slot of said lower rail member.

5

8. A pool structure according to claim 6, wherein the lower lip portion of said interconnecting means is provided with means engageable with the lower rail member to restrict movement of said interconnecting means along the length of said lower rail member.

9. A pool structure according to claim 6, wherein the lower lip portion of said interconnecting means is provided with means engageable with said lower rail member for restricting movement of said interconnecting means along the length thereof.

10. A pool structure comprising an annular lower rail member composed of a plurality of arcuate sections, each of said sections having a bottom wall, a pair of side walls and a top wall having opposed intumed flanges defining an arcuate slot in the top wall along the length thereof, a plurality of connectors configured similarly to said lower rail sections for connecting the ends of adjacent lower rail sections so that adjacent rail sections are disposed in spaced relation, an endless wall having a bottom edge received within and seated in the slot in said lower rail member, a pool liner having a peripheral upper edge formed to fit over the upper edge of said endless wall, an upper annular rail member composed of a plurality of arcuate sections, each of said upper rail sections having a top wall, spaced side walls and a bottom wall having opposed intumed flanges defining an arcuate slot in the bottom wall thereof for receiving the upper edge of said liner and the upper edge of said endless wall, a plurality of arcuate upper rail connectors configured similarly to said upper rail sections for connecting the ends of adjacent upper rail sections so that adjacent upper rail sections are disposed in spaced relation, a plurality of uprights interconnecting the upper and lower rail members, each of said upright members having a lower lip portion received within the slot in the lower rail member between said endless wall and at least one intumed flange of a lower rail section and an upper lip portion received within the slot in the upper rail member between said endless wall and at least one intumed flange of an upper rail section and each of said lower lip portions of said upright members having a rib extending along the length thereof disposed between adjacent lower rail sections.

11. A pool structure according to claim 10, wherein the lower lip portion of said upright members is provided with rib portions disposed normal to said first mentioned rib engageable with the bottom edges of the flange portions of adjacent lower rail sections for restricting movement of said upright members along the lengths thereof.

12. A pool structure according to claim 10, wherein

6

each upright member is substantially elongated and rectangular in cross-section having a reinforcing rib extending along the length thereof.

13. A pool structure according to claim 10, wherein each upright member is substantially elongated and has a peaked surface along the length thereof.

14. A pool structure comprising an annular lower rail member composed of a plurality of arcuate sections, each of said lower rail sections having a channel-shaped configuration including a bottom wall, a pair of side walls and a top wall having opposed intumed flanges defining an arcuate slot in the top wall along the length thereof, a plurality of connectors configured similarly to said lower rail sections for connecting the ends of said lower rail sections so that adjacent rail sections are disposed in spaced end to end relation, an endless wall having a bottom edge received within and seated in the slot in the lower rail member, a pool liner having a peripheral upper edge formed to fit over the upper edge of said endless wall, an upper annular rail member composed of a plurality of arcuate sections, each of said upper rail sections having a channel-shaped configuration including a top wall, spaced side walls and a bottom wall having opposed intumed flanges defining an arcuate slot in the bottom wall thereof for receiving the upper edge of said liner and the lower edge of said endless wall, a plurality of arcuate upper rail connectors configured similarly to said upper rail sections for connecting the ends of adjacent upper rail sections so that adjacent upper rail sections are disposed in spaced end to end relation, each of said upper rail members being vertically aligned with a lower rail section, a plurality of uprights interconnecting the upper and lower rail members, each of said upright members having a lower lip portion received within the slot in the lower rail member between said endless wall and intumed flanges of adjacent lower rail sections and an upper lip portion received within the slot of the upper rail member between said endless wall and intumed flanges of adjacent upper rail sections, each of said lower lip portions of said upright members having a first rib extending along the length thereof disposed between adjacent rail sections and a pair of ribs disposed normal to said first rib engageable with the lower edges of the intumed flanges of adjacent lower rail sections and the upper lip portion of each of said upright members having a plurality of ribs extending along the length thereof.

No references cited.

50 LAVERNE D. GEIGER, *Primary Examiner.*