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(54) **LOCKER WITH SOLID SURFACE PANELS HAVING EMBEDDED STRUCTURAL REINFORCING**

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CPC ***A47B 47/02*** (2013.01); ***A47B 87/008*** (2013.01)

(58) **Field of Classification Search**
CPC A47B 7/02; A47B 87/008; A47B 87/00
See application file for complete search history.

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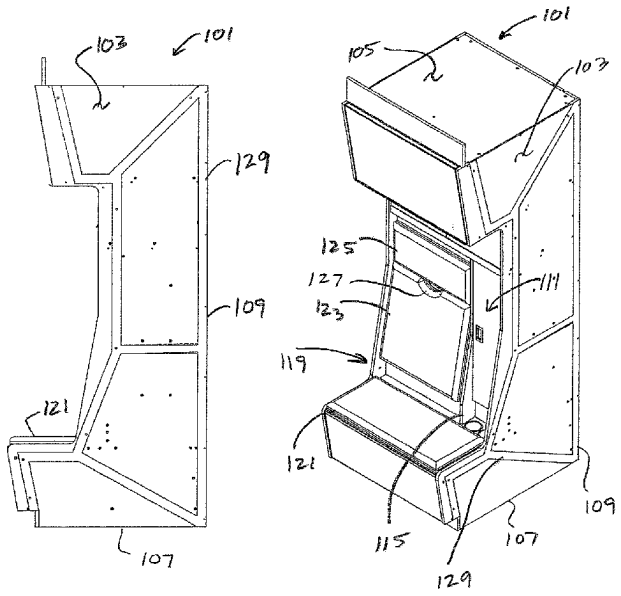
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(57) **ABSTRACT**

A locker has walls made of a solid surface material. The walls include dado cuts and holes in which a web structured reinforcing member is embedded. The reinforcing members provide structural integrity to the walls of the locker. The reinforcing members are flush with the surfaces of the walls of the locker, thereby allowing adjacent lockers to be snugly secured to each other.

14 Claims, 1 Drawing Sheet



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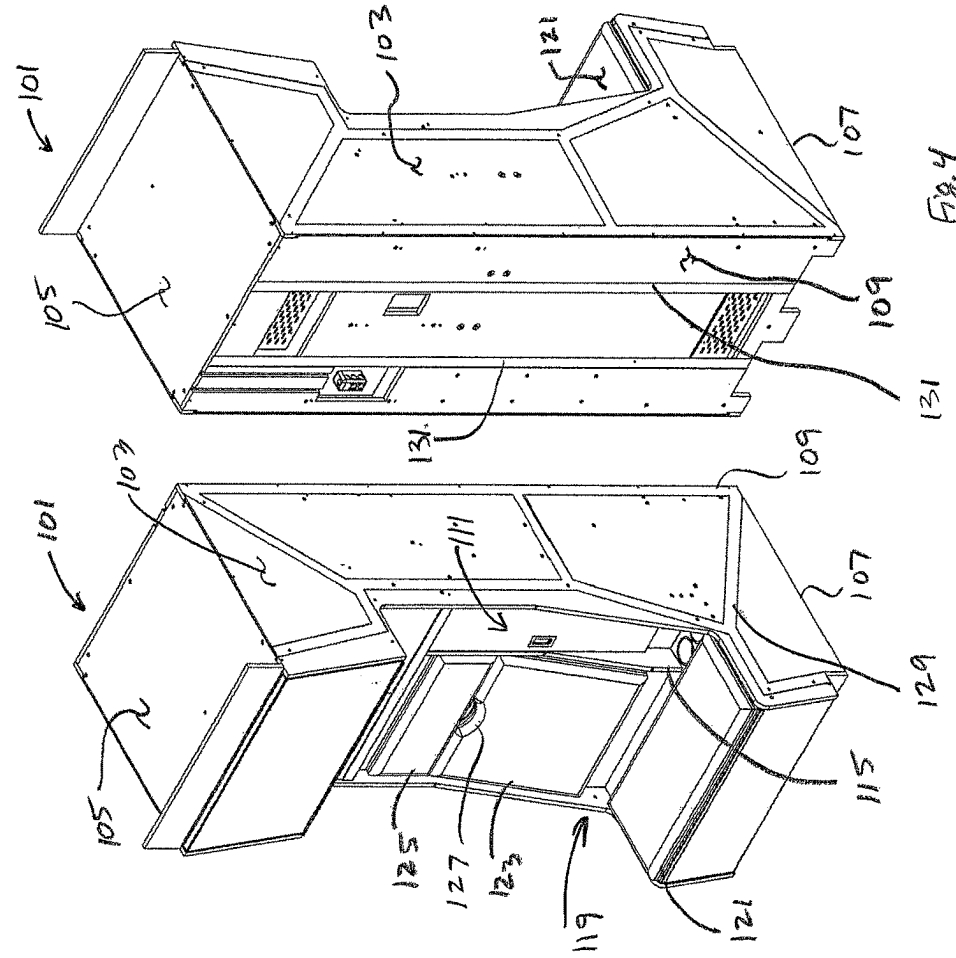


Fig. 4

Fig. 3

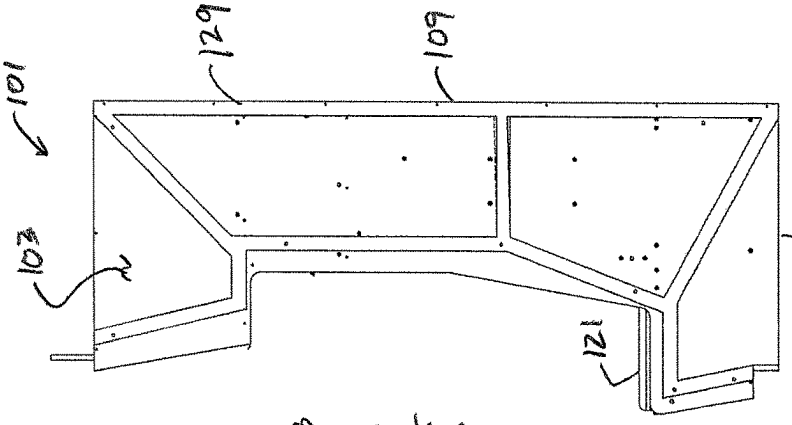


Fig. 2

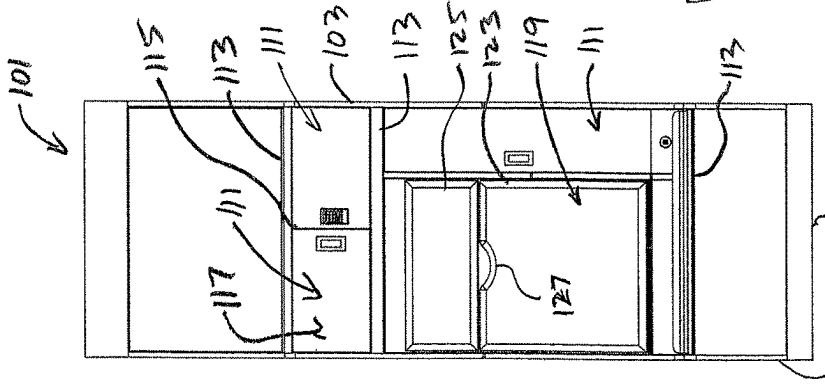


Fig. 1

LOCKER WITH SOLID SURFACE PANELS HAVING EMBEDDED STRUCTURAL REINFORCING

BACKGROUND

1. Field of the Invention

The present invention relates generally to improvements in lockers or storage cabinets used in athletic or sporting facilities, and more specifically to structural supports for such lockers.

2. Description of Related Art

The aesthetics and utility of lockers or storage cabinets in locker rooms of athletic and sporting facilities of sports teams and country clubs, for example, have become a measure of the quality and prestige of such organizations and an increasingly important aspect of recruiting new team or club members. Modern lockers are a far cry from the simple wood or metal cabinets of the past.

Modern lockers incorporate storage for specific items of equipment, such as helmets and shoes, and features promoting comfort and luxury. There is a constant need for improvement in both functional and aesthetic aspects of such lockers.

DESCRIPTION OF THE DRAWINGS

The novel features believed characteristic of the embodiments of the present application are set forth herein. However, the embodiments themselves, as well as a preferred mode of use, and further objectives and advantages thereof, will best be understood by reference to the following detailed description when read in conjunction with the accompanying drawings, wherein:

FIGS. **1** through **4** are various views of a locker with solid surface panels having embedded reinforcing members according to the present application.

While the assembly and method of the present application is susceptible to various modifications and alternative forms, specific embodiments thereof have been shown by way of example in the drawings and are herein described in detail. It should be understood, however, that the description herein of specific embodiments is not intended to limit the invention to the particular embodiment disclosed, but on the contrary, the intention is to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the present application as defined by the appended claims.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Illustrative embodiments of the locker seat assembly are provided below. It will of course be appreciated that in the development of any actual embodiment, numerous implementation-specific decisions will be made to achieve the developer's specific goals, such as compliance with assembly-related and business-related constraints, which will vary from one implementation to another. Moreover, it will be appreciated that such a development effort might be complex and time-consuming, but would nevertheless be a routine undertaking for those of ordinary skill in the art having the benefit of this disclosure.

Referring now to FIGS. **1** through **4** in the drawings, the preferred embodiment of a locker **101** according to the present application is illustrated. The extent of locker **101** is generally defined by a pair of upstanding side walls **103**, a top member **105**, a bottom member **107**, and a back wall **109**. Each locker **101** may be installed adjacent to another similar or identical locker, with back walls **109** of each locker **101** facing either a wall structure or back wall **109** of an adjacent locker **101**, with the front portion of locker **101** facing the interior of the locker room, so as to allow access to locker **101**. Similarly, each locker **101** may be installed adjacent to another similar or identical locker, with one or both of side walls **103** of each locker **101** facing either a wall structure or the side wall **103** of an adjacent locker **101**, with the front portion of locker **101** facing the interior of the locker room, so as to allow access to locker **101**.

Between side walls **103** of each locker **101**, one or more compartments **111** are defined by shelves **113** or other horizontally extending surfaces or platforms. Multiple dividers **115** may be placed between side walls **103** to define compartments **111** and the like. As used herein, "side wall" or "divider" may refer to either "main" sidewalls **103** or other interior side walls and/or dividers arranged between the side walls **103**. Each compartment **111** may be sized and otherwise configured for storage of clothing or sporting equipment or other items, and may include a door **117**, which may be lockable.

Locker **101** preferably incorporates a seat assembly **119** according to an embodiment of the present application. Each seat assembly **119** generally includes a generally horizontal portion or bench **121** and a seatback assembly **123**, **125** according to the present application. Bench **121** and seatback **123**, **125** may be disposed and extend between main side walls **103** or other sidewalls and/or dividers defined between main side walls **103**. Bench **121** may extend at least partially forward of the front edges of side walls **103** and may be bordered by armrests or other structures raised above the sides of bench **121**.

As is depicted, seatback assembly **123**, **125** is preferably a two-piece assembly being formed by a back rest **123** and a head rest **125**. Back rest **123** extends above and to the rear of horizontal bench **121** and is generally vertical, including slightly inclined to the rear, to support the back of the person sitting on bench **121**. Head rest **125** is generally vertical. Back rest **123** and head rest **125** are each connected to side walls **103** of locker **101** by hinges at the upper and lower extents, respectively. Back rest **123** and head rest **125** are thus movable, independently of one another, about their respective hinges, between open and closed positions (the closed position being shown in the figures).

Bench **121** may be generally aligned with the front edges of side walls **103** between which bench **121** is disposed, or may project forward or be recessed. Bench **121**, seat back **123**, and head rest **125** are preferably padded and upholstered with an appropriate fabric, such as vinyl or leather, or a textile material.

Recesses **127** may be formed in the upper and/or lower edges of seat back **23** and/or head rest **125** to form an aperture to facilitate opening seat assembly **119**. Recesses may be of varying configuration, curved or square/rectilinear, and may be provided in only one of seat back **123** or head rest **125**, or not at all.

Side walls **103** and back wall **109** are preferably made of a material commonly known as "solid surface" material. Top member **105** and bottom member **107** may also be made of solid surface material, as well. Solid surface is a man-made material usually composed of polymer resins and the mineral filler alumina trihydrate (ATH), as well as pigments. Although solid surface material is quite versatile and desir-

able in many different applications, solid surface panels tend to be somewhat brittle, particularly in bending and when bolting two panels together. For example, if one were to use conventional solid surface materials and try to connect a side wall to a horizontal shelf, the structure would be very weak at point where the holes were drilled for the fasteners, due to the brittle nature of the solid surface material. This causes chipping, cracking, breaking, and stress concentrations when the fasteners are tightened, allowing the hardware to be ripped out or the threaded hole stripped out. As such, conventional solid surface panels materials have not been used as the material for building conventional lockers and locker panels, due to the high stress and rough treatment that lockers undergo in assembly and use.

However, according to the present application, side walls **103** and back wall **109** are formed from solid surface materials that have been modified by selectively placing dado cuts, holes, and other modifications to allow for custom tailored structural reinforcing members **129**, **131** to be embedded therein. Side wall reinforcing members **129** and back wall reinforcing members **131** are each preferably formed from a single piece of steel, or other metallic material; however, it will be appreciated that reinforcing members **129**, **131** may also be formed of multiple pieces. Reinforcing members **129**, **131** fit in dado cuts made into side walls **103** and back wall **109**, such that reinforcing members **129**, **131** are preferably flush with or recessed within the corresponding surfaces of side walls **103** and back walls **109**. This configuration ensures that adjacent lockers **101** fit snugly together and that reinforcing members **129**, **131** are not exposed.

As is shown, reinforcing members **129**, **131** preferably form "web structures" that span large portions of side walls **103** and back wall **109**. This web structure distributes loads and stresses over a large portion of side walls **103** and back wall **109**. More importantly, the shape and configuration of the web structure may be custom tailored to fit specific shelf configurations for different lockers. For example, the web structure may be designed to trace over where certain fasteners will be used to secure shelves and provide additional structural support for other components, such as shelves **113** and seat assembly **119**. Adjacent lockers **101** may be secured together using fasteners passing through and/or coupled to reinforcing members **129**, **131**, thereby preventing cracking, breaking, and other damage. This unique hybrid solid surface material and steel reinforcing system results in a rigid, structurally sound locker, that is durable, has a long life, and is aesthetically pleasing.

Reinforcing members **129**, **131** may also include interconnecting components, such as tabs, slots, notches, etc. that allow one locker to be releasably connected to an adjacent locker, without having to use fasteners. It will be appreciated that special side panels and special back panels, preferably made of matching solid surface material may be used to cover any side walls **103** or back walls **109** having exposed reinforcing members **129**.

It is apparent that a system with significant advantages has been described and illustrated. The particular embodiments disclosed above are illustrative only, as the embodiments may be modified and practiced in different but equivalent manners apparent to those skilled in the art having the benefit of the teachings herein. It is therefore evident that the particular embodiments disclosed above may be altered or modified, and all such variations are considered within the scope and spirit of the application. Accordingly, the protection sought herein is as set forth in the description and claims. Although the present embodiments are shown above, they are not limited to just these embodiments, but are amenable to various changes and modifications without departing from the spirit thereof.

I claim:

1. A locker, comprising:
a pair of upstanding sidewalls; and
a backwall;
wherein at least one of the sidewalls comprises:
a solid surface material having at least one recess; and
an embedded web structure reinforcing member received within the at least one recess;
wherein the embedded web structure reinforcing member comprises a continuous structural strip spanning height, width, and diagonal dimensions of the at least one of the sidewalls defining void areas; and
wherein the embedded web structure reinforcing member is within an external surface of the solid surface material, such that an external surface of the embedded web structure reinforcing member is exposed for a connection to be made to the embedded web structure reinforcing member for connecting the locker to an adjacent locker.

2. The locker of claim **1**, wherein the embedded web structure reinforcing member comprises:
multiple pieces of metallic material.

3. The locker of claim **1**, wherein the embedded web structure reinforcing member comprises:
a single piece of metallic material.

4. The locker of claim **1**, wherein the external surface of the embedded web structure reinforcing member is flush with the external surface of the solid surface material.

5. The locker of claim **1**, wherein the embedded web structure reinforcing member is recessed within the solid surface material.

6. The locker of claim **1**, wherein the locker is releasably connected to an adjacent locker.

7. The locker of claim **6**, wherein the locker and adjacent locker are releasably connected using at least one fastener passing through the embedded web structure reinforcing member.

8. The locker of claim **6**, wherein the embedded web structure reinforcing member is not exposed between the lockers.

9. The locker of claim **1**, wherein the locker is releasably connected to multiple adjacent lockers.

10. The locker of claim **1**, wherein the backwall comprises:
a solid surface material; and
an embedded web structure reinforcing member;
wherein the embedded web structure reinforcing member is recessed within an external surface of the solid surface material, such that an external surface of the embedded web structure reinforcing member is exposed.

11. A method for constructing a locker, comprising:
providing a pair of upstanding side walls each being formed of one or more solid surface materials;
providing a back wall being formed of one or more solid surface materials;
connecting the sidewalls to the back wall;
modifying at least one of the side walls by adding at least one recess therein; and
embedding at least one web reinforcing member in the at least one recess;
wherein embedding the at least one web reinforcing member comprises embedding a continuous structural

strip that spans height, width, and diagonal dimensions of the at least one of the side walls defining void areas; and

wherein the at least one web reinforcing member is within an external surface of the solid surface material, such that an external surface of the embedded web structure reinforcing member is exposed for a connection to be made to the embedded web structure reinforcing member for connecting the locker to an adjacent locker.

12. The method according to claim **11**, further comprising:

connecting the locker to at least one adjacent locker.

13. A method for constructing a locker, comprising:

providing a pair of upstanding sidewalls each being formed of one or more solid surface materials;

providing a back wall being formed of one or more solid surface materials;

connecting the sidewalls to the back wall;

modifying at least one of the sidewalls or the back wall by adding at least one recess therein and attaching at least one web reinforcing member to the at least one recess of the at least one of the sidewalls or the back wall;

wherein the at least one web reinforcing member comprises a continuous structural strip that spans height, width, and diagonal dimensions of the at least one of the side walls or the back wall defining void areas; and

wherein the at least one web reinforcing member is within an external surface of the solid surface material, such that an external surface of the embedded web structure reinforcing member is exposed for a connection to be made to the embedded web structure reinforcing member for connecting the locker to an adjacent locker.

14. The method according to claim **13**, further comprising:

connecting the locker to at least one adjacent locker.

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