US011051614B1

(12) **United States Patent**
Allen

(10) **Patent No.: US 11,051,614 B1**
(45) **Date of Patent: Jul. 6, 2021**

(54) **WASH/SANITATION RACK FOR ATHLETIC EQUIPMENT**

(71) Applicant: **Sam Allen**, Maypearl, TX (US)

(72) Inventor: **Sam Allen**, Maypearl, TX (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **16/793,730**

(22) Filed: **Feb. 18, 2020**

(51) **Int. Cl.**

A47B 81/00	(2006.01)
A47B 96/06	(2006.01)
A61L 2/04	(2006.01)
A47B 96/14	(2006.01)

(52) **U.S. Cl.**
CPC ***A47B 81/00*** (2013.01); ***A47B 96/06*** (2013.01); ***A47B 96/1441*** (2013.01); ***A61L 2/04*** (2013.01); *A47B 2220/0091* (2013.01)

(58) **Field of Classification Search**
CPC A47B 81/00; A47B 96/06; A47B 96/1441; A47B 2220/0091; A61L 2/04
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,588,529 A *	3/1952	Hume	B65H 49/16	242/139
4,102,276 A *	7/1978	Roveroni	A47F 5/116	108/156
D319,934 S *	9/1991	Terrell	D6/681.2	
6,119,875 A *	9/2000	Smith	A47F 5/112	211/195
6,675,978 B2 *	1/2004	Shea	A47F 5/0823	211/181.1
7,712,616 B2 *	5/2010	Barkdoll	A47F 5/0807	211/59.1
D653,462 S *	2/2012	Trexler	D6/323	
9,185,984 B2 *	11/2015	Henke	B32B 3/04	
9,955,782 B2 *	5/2018	Rue	B44D 3/00	
10,268,208 B1 *	4/2019	Hopwood et al.	B64F 1/007	
10,420,905 B2 *	9/2019	Jackson	A61M 16/0048	
10,561,242 B1 *	2/2020	Ignacio	A47B 57/04	
D878,831 S *	3/2020	Rortvedt	D6/676	
2002/0117460 A1 *	8/2002	Crosson	A47B 81/00	211/22
2016/0135594 A1 *	5/2016	Anderson	A47B 81/00	211/85.7
2017/0341923 A1 *	11/2017	DeWitt	A47B 81/00	
2017/0342640 A1 *	11/2017	Stewart	D06F 58/10	

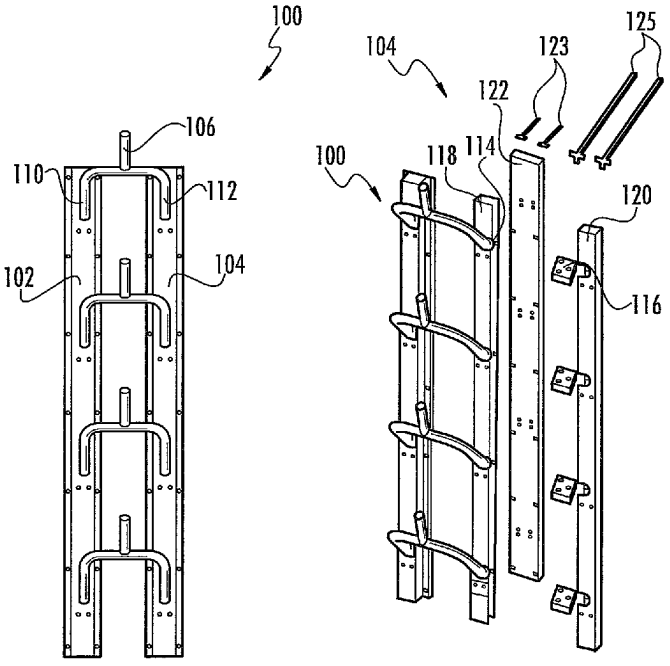
* cited by examiner

Primary Examiner — Ko H Chan
(74) *Attorney, Agent, or Firm* — James E. Walton

(57) **ABSTRACT**

A modular wash/sanitation rack including an inside channel, outside channel, gear rack mount, wall support, and gear support. A light-weight, structurally sound support assembly of the wash/sanitation rack includes one or more of the inside channel, the outside channel, the gear rack mount, and the wall support formed as a three-dimensional support from a flat pattern of a single sheet of material. The gear rack mount is connected to a flange of the gear support and is housed within an inside channel of the support assembly. The inside channel is housed within an outside channel. The outside channel is connected to the anchored wall support. The wash/sanitation rack is assembled as a secured or a moveable unit.

18 Claims, 8 Drawing Sheets



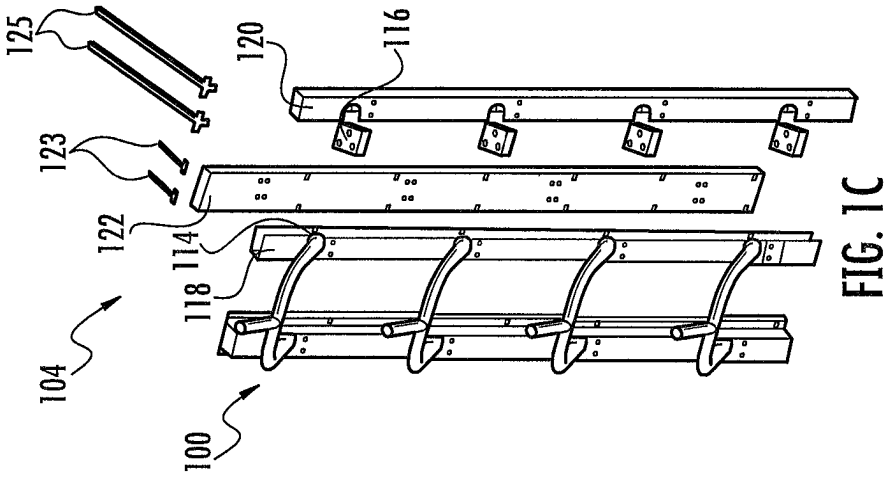


FIG. 1C

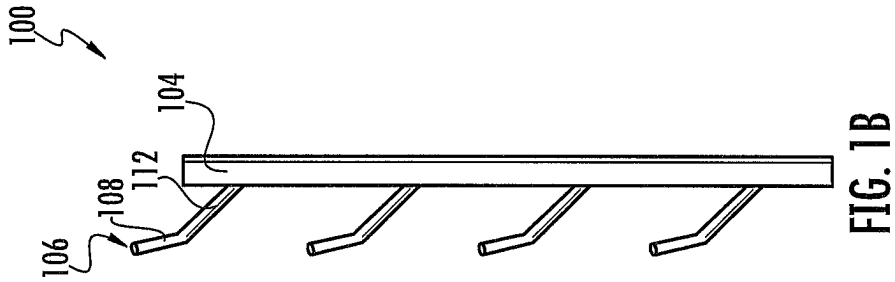


FIG. 1B

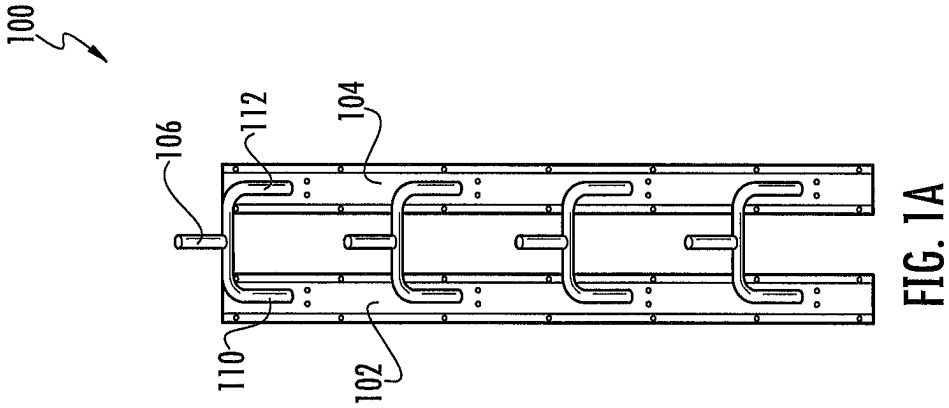


FIG. 1A

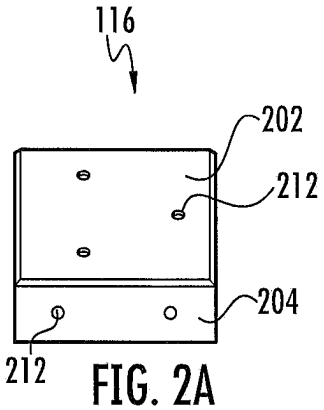


FIG. 2A

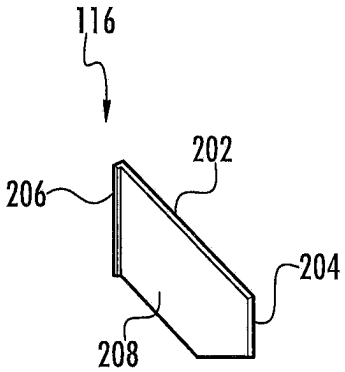


FIG. 2B

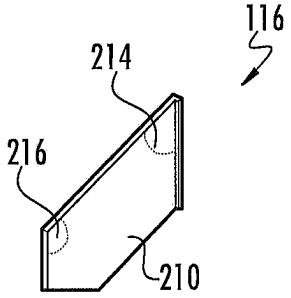


FIG. 2C

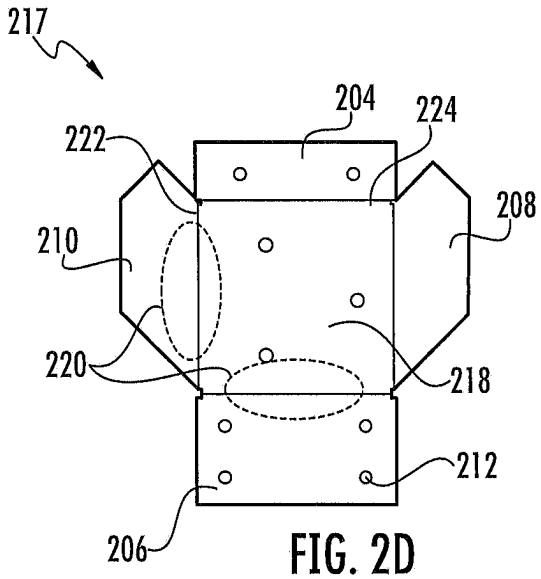


FIG. 2D

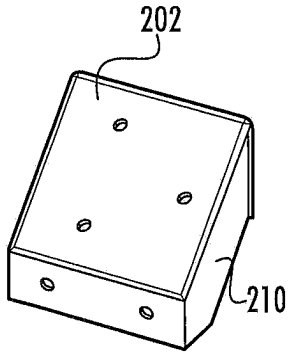


FIG. 2E

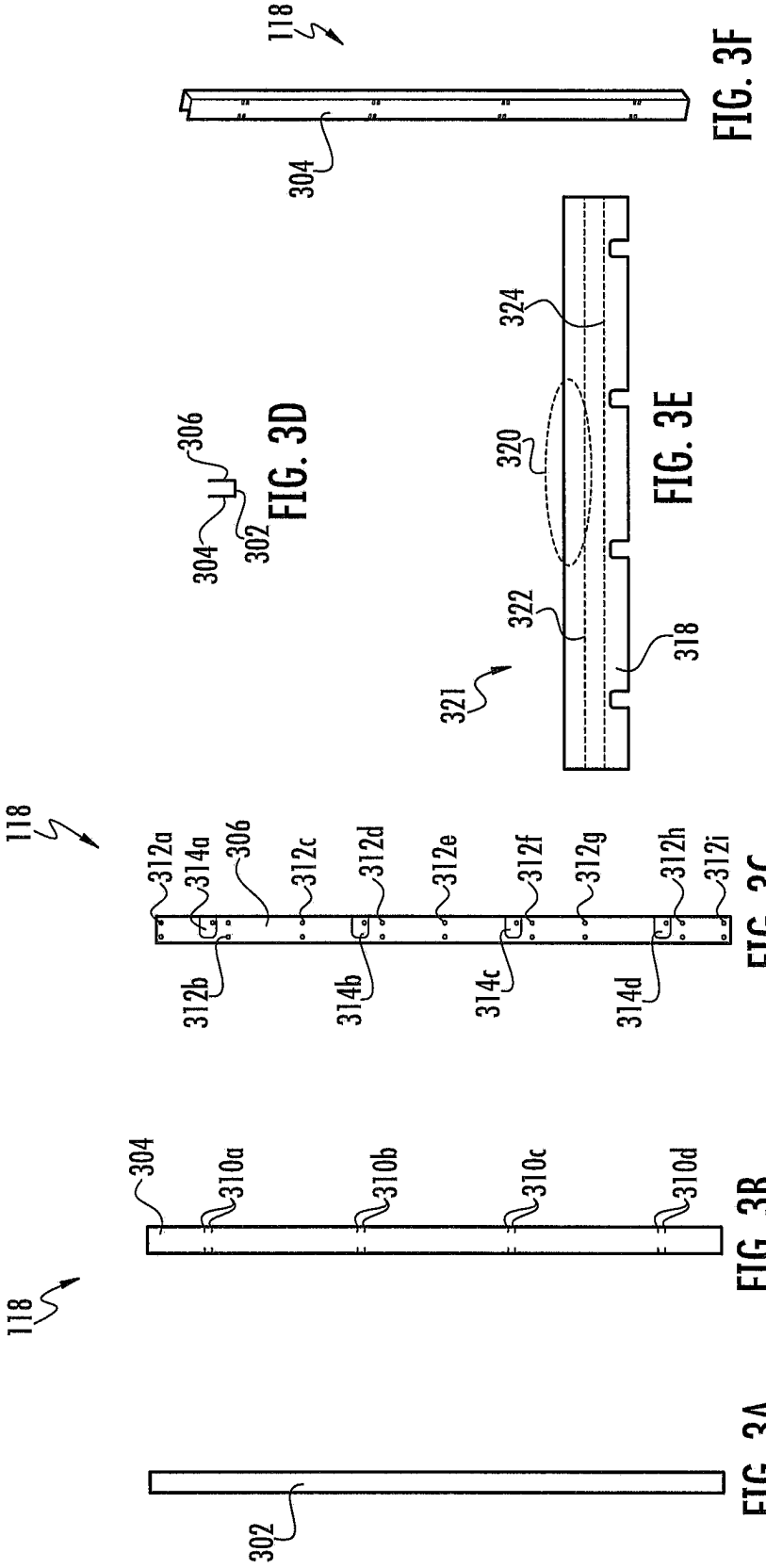


FIG. 3A

FIG. 3B

FIG. 3C

FIG. 3D

FIG. 3E

FIG. 3F

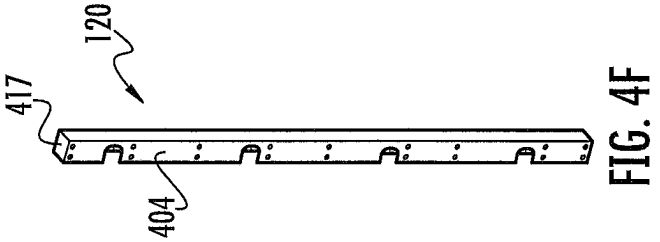


FIG. 4F



FIG. 4D

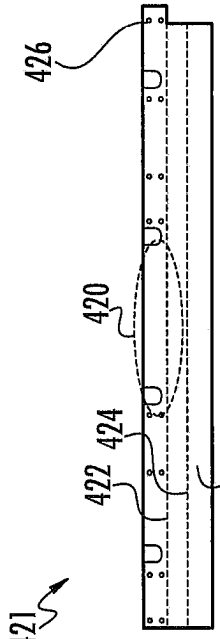


FIG. 4E

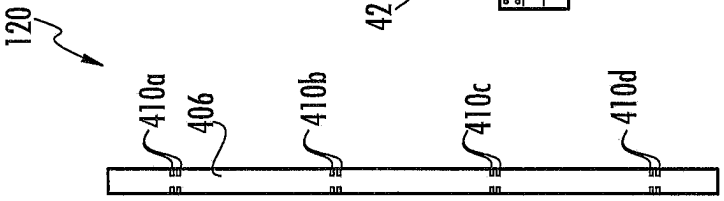


FIG. 4C

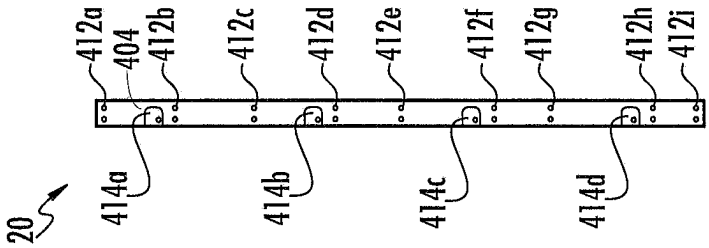


FIG. 4B

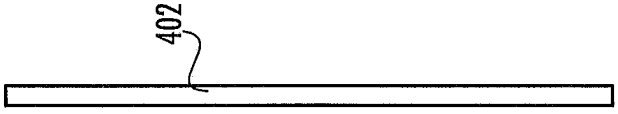
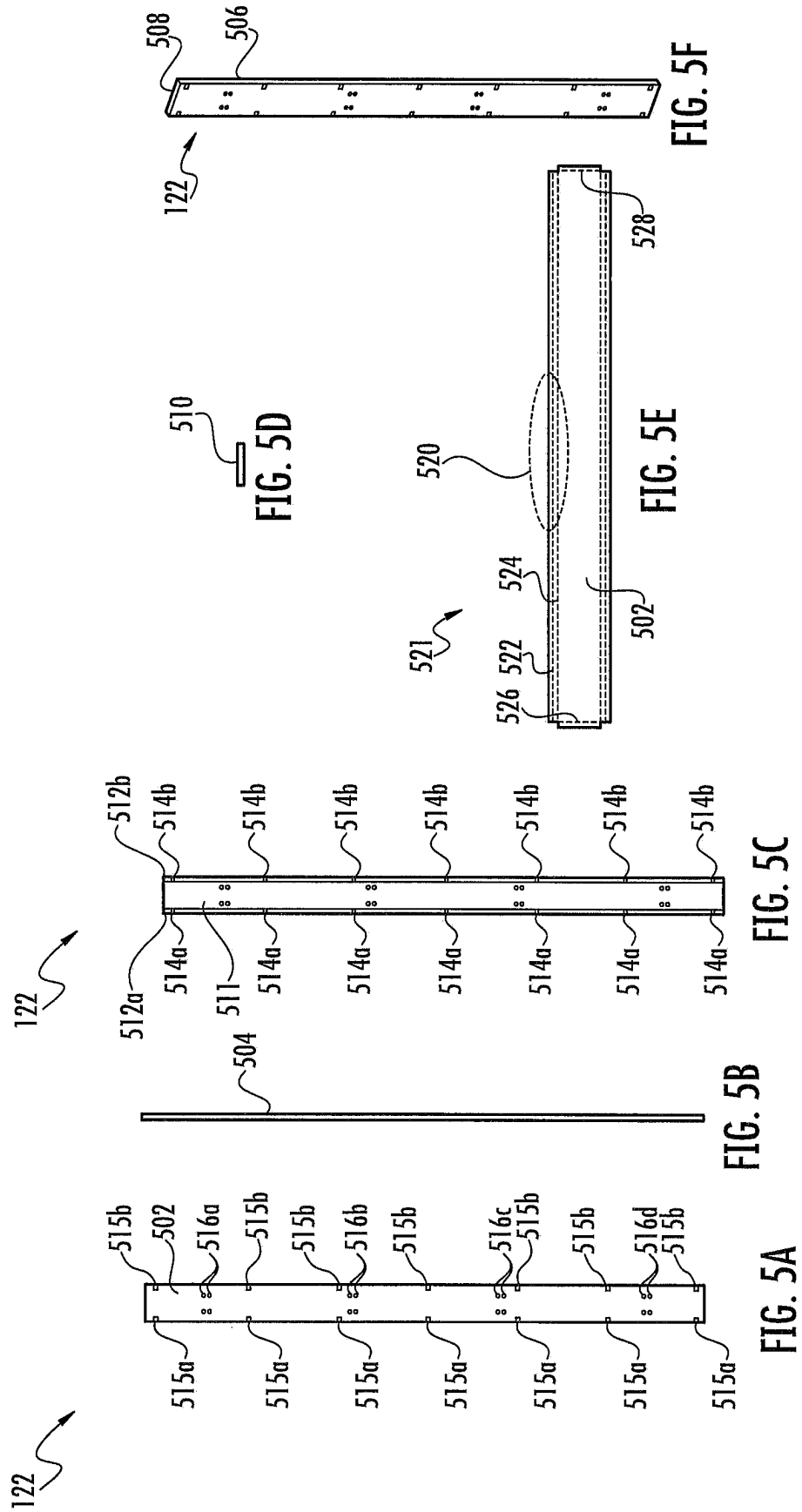


FIG. 4A


122
515b
502
516a
515b
515b
516b
515b
516c
515b
515b
516d
515b
515a
515a
515a
515a
515a
515a
515a
FIG. 5A
122
504
FIG. 5B
122
512a
512b
514a
514b
511
FIG. 5C
521
520
522
524
526
528
502
FIG. 5E
510
FIG. 5D
122
508
506
FIG. 5F

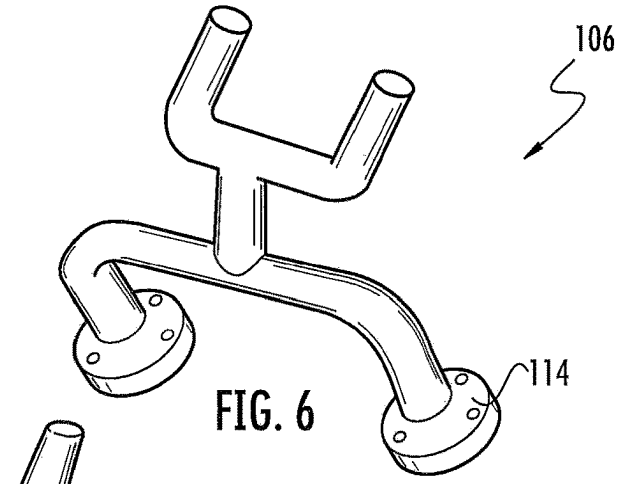


FIG. 6

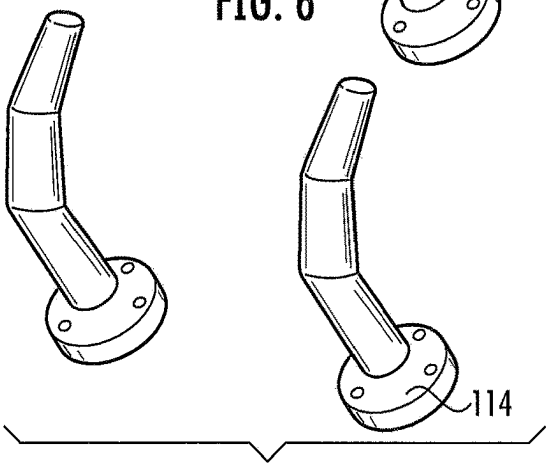


FIG. 7

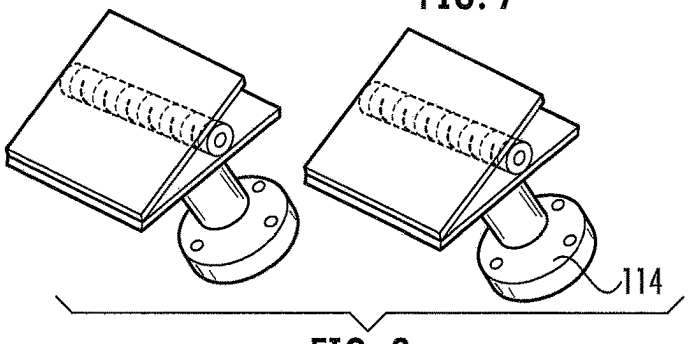


FIG. 8

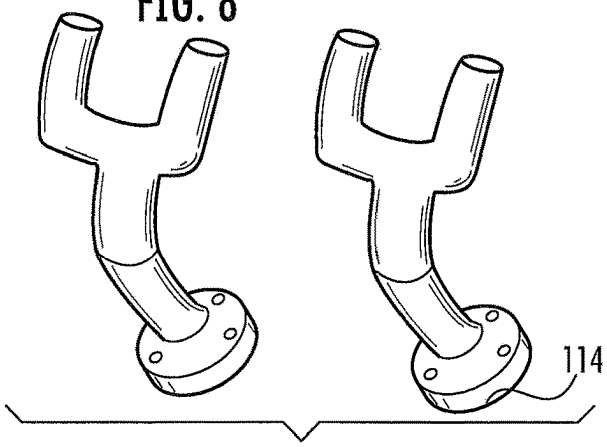


FIG. 9

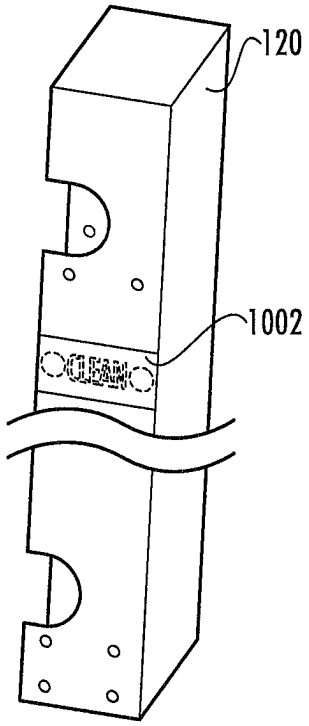


FIG. 10A

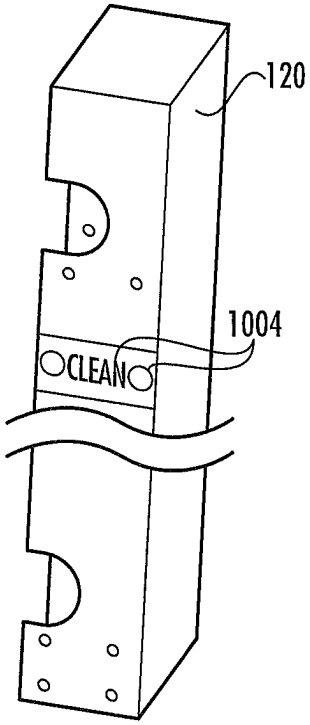


FIG. 10B

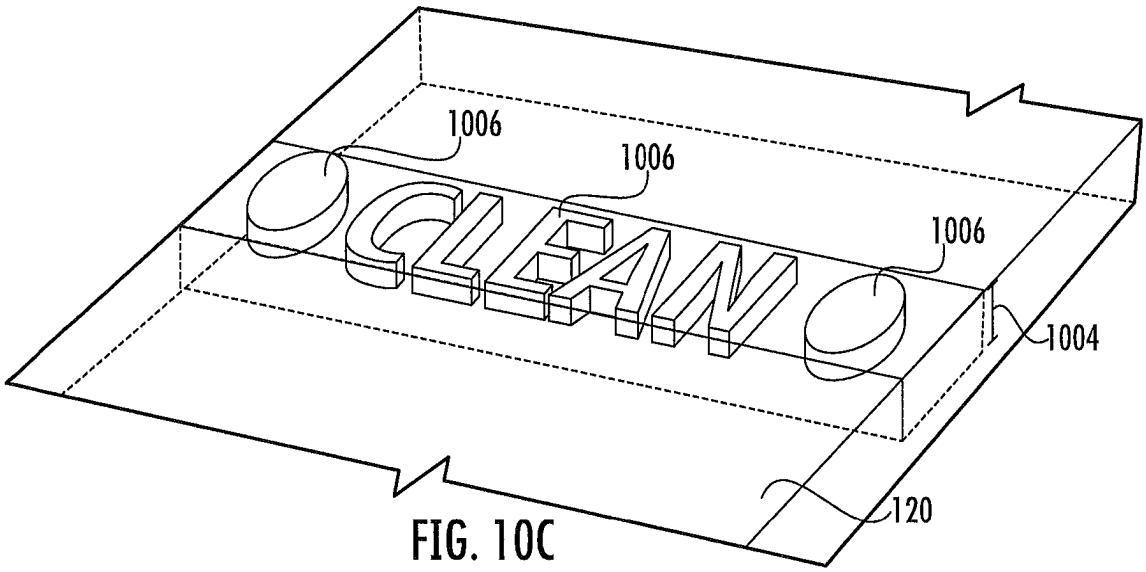


FIG. 10C

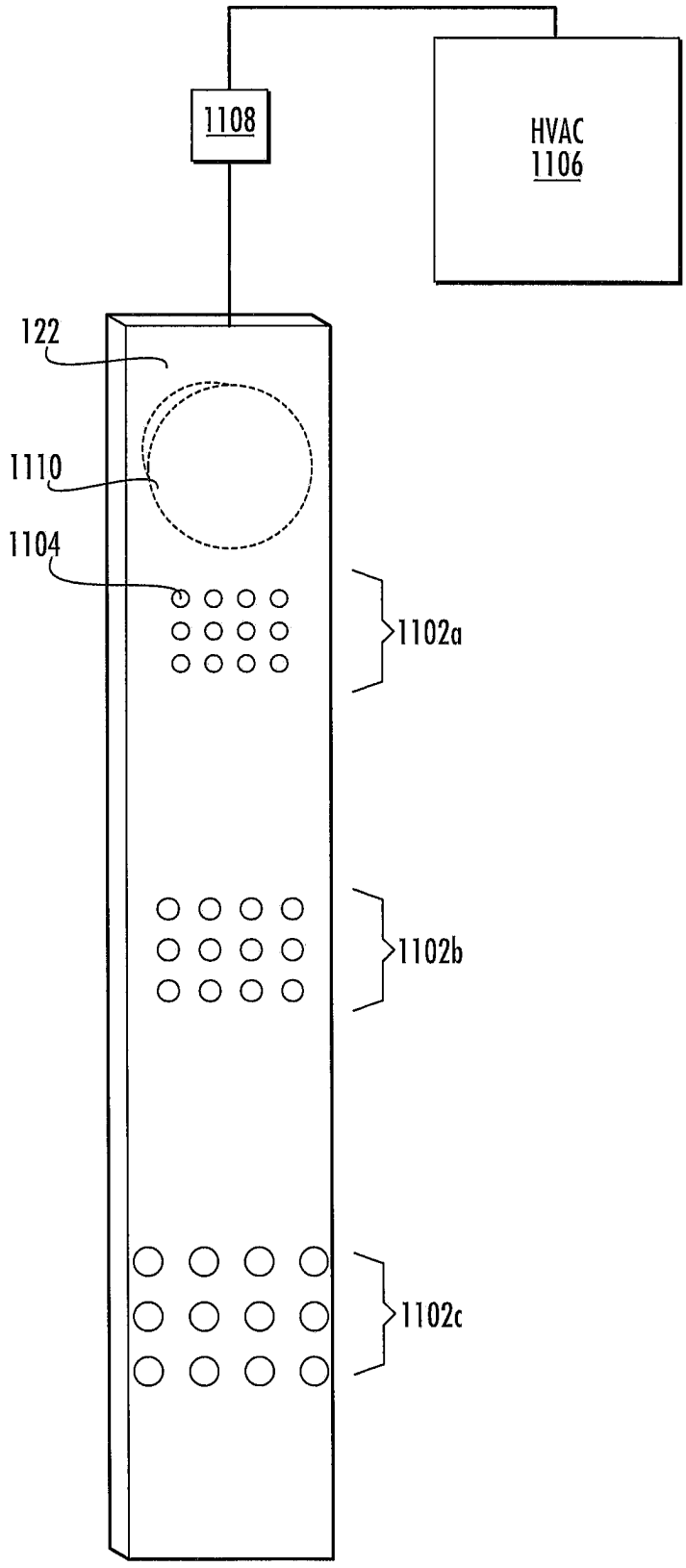


FIG. 11

WASH/SANITATION RACK FOR ATHLETIC EQUIPMENT

BACKGROUND

1. Field of the Invention

The present invention relates in general to the field of equipment racks for athletic gear.

2. Description of Related Art

Racks for athletic gear, school supplies, tools, guns, and for other removable items generally are unstable and made of corrosive materials. If posts, pegs, beams, or bearing members of these racks are stable, they are permanent fixtures, with little or no provision for removing them and customizing storage space. Frequently, these racks are heavy and bulky, requiring mounting prior to door installation, or requiring large equipment/machinery to move them. Fasteners, anchors, sharp corners, or mounting elements often protrude from these racks, presenting a potential hazard to body, equipment, or clothing. Thus, there exists significant room for improvement in the art for overcoming these and other shortcomings of equipment racks.

DESCRIPTION OF THE DRAWINGS

The novel features believed characteristic of the embodiments of the present application are set forth in the appended claims. 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:

FIG. **1**A is a front elevation view of an equipment rack according to the present application;

FIG. **1**B is a side elevation view of an equipment rack according to the present application;

FIG. **1**C is a perspective view of an equipment rack assembly according to the present application;

FIG. **2**A is a front elevation view of a gear rack mount according to the present application;

FIG. **2**B is a side elevation view of a gear rack mount according to the present application;

FIG. **2**C is a side elevation view of a gear rack mount according to the present application;

FIG. **2**D is a flat pattern view of a gear rack mount according to the present application;

FIG. **2**E is a perspective view of a gear rack mount according to the present application;

FIG. **3**A is a side elevation view of an inside channel according to the present application;

FIG. **3**B is a rear elevation view of an inside channel according to the present application;

FIG. **3**C is a front elevation view of an inside channel according to the present application;

FIG. **3**D is a top elevation view of an inside channel according to the present application;

FIG. **3**E is a flat pattern view of an inside channel according to the present application;

FIG. **3**F is a perspective view of an inside channel according to the present application;

FIG. **4**A is a side elevation view of an outside channel according to the present application;

FIG. **4**B is a front elevation view of an outside channel according to the present application;

FIG. **4**C is a rear elevation view of an outside channel according to the present application;

FIG. **4**D is a top elevation view of an outside channel according to the present application;

FIG. **4**E is a flat pattern view of an outside channel according to the present application;

FIG. **4**F is a perspective view of an outside channel according to the present application;

FIG. **5**A is a front elevation view of a wall support according to the present application;

FIG. **5**B is a side elevation view of a wall support according to the present application;

FIG. **5**C is a rear elevation view of a wall support according to the present application;

FIG. **5**D is a top elevation view of a wall support according to the present application;

FIG. **5**E is a flat pattern view of a wall support according to the present application;

FIG. **5**F is a perspective view of a wall support according to the present application;

FIGS. **6** through **9** are perspective views of embodiments of gear supports according to the present application;

FIGS. **10**A through **10**B are perspective partial views of a rack support having a heat/sanitation indicator according to the present application; and

FIG. **10**C is a perspective partial view of a facial surface of a wash/sanitation rack support with a heat/sanitation indicator according to the present application; and

FIG. **11** is an elevation plan view of a perforated wall support, air source, and air source connector according to the present application.

While the assembly 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 wash/sanitation rack for athletic gear are provided below. It will of course be appreciated that in the further development of any 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**A and **1**B in the drawings, a modular wash/sanitation rack **100** is illustrated. The modular wash/sanitation rack **100**, when attached to a wall, is a component of a steam, chemical, high-heat, water, and/or moisturizing wash station. In a preferred embodiment, the wash/sanitation rack **100** includes a left support assembly **102**, a right support assembly **104**, and a gear support **106**. The wash/sanitation rack **100** and its fasteners are made of non-corrosive materials, such as a chromium-nickel alloys, aluminum, tin, brass, copper, nickel, titanium, galvanized steel, and foldable polymer plastics. In a preferred embodi-

ment, the non-corrosive material is stainless steel 301, but other types of steel may be used, such as stainless steel 304.

In a preferred embodiment, the total height to width ratio of the wash/sanitation rack **100** is approximately 5-6. The total height to depth ratio, where depth is the amount the rack protrudes from wall, is approximately 7-8.

It is noted that the terms "left" and "right" are used to refer to respective support assemblies **102**, **104** and/or other components described below. Despite this distinctive use, the left and right component parts are generally formed in in a similar or identical manner, except that the parts are formed and/or assembled having an opposite orientation relative to one another.

In a preferred embodiment, the gear support **106** includes a single angled, rounded, centered support beam **108** connected by a left side support **110** and a right side support **112**, where the left side support **110** and right side support **112** are flanged, each flange having mounting holes for removable fasteners. In a preferred embodiment, the corners and angles of the gear support **106** are rounded. In other embodiments, the single-beam gear support **106** is interchangeable with different shaped gear supports (FIGS. **6-9**). For example, two divided/angled support beams may be attached instead of the depicted single-beam gear support **106**.

In a preferred embodiment, the gear support **106** is made from seamless tubing or pipe, bent in the desired shape. In other embodiments, the gear support is made using one or more welds and multiple bends. For example, a seam of the tubing/pipe may be welded and/or a flange may be welded at an end of the tubing/pipe.

In a preferred embodiment, the centered support beam **108** is connected to the left side support **110** and the right side support **112** at an angle to obtain a first slope. The left side support **110** and the right side support **112** are connected respectively to the left support assembly **102** and the right support assembly **104** at another angle to obtain a second slope. In a preferred embodiment, the second slope is greater than the first slope or the second angle is greater than the first angle. For example, the second slope is approximately 55-65% of the first slope. For instance, the angle of the centered support beam is approximately 48-50°, preferably having a slope of about 1.1 to 1.2, and the angle of the side supports **110**, **112** is approximately 62-64°, preferably having a slope of about 1.88 to 2.0.

Referring now also to FIG. **1**C in the drawings, the perspective view of the wash/sanitation rack **100** includes a partial assembly view of the right support assembly **104** as illustrated. When assembled, the right support assembly **104** includes a beam support flange **114** attached to a gear rack mount **116**. The gear rack mount **116** is connected to the inside channel **118**. The inside channel **118** is seated within and abuts the outside channel **120**. In a preferred embodiment, the front surface of the inside channel **118** connects, or is fastened together, with the front surface of the outside channel **120**. The wall support **122** is connected to at least to the rear surface of the outside channel. In a preferred embodiment, the wall support **122** is connected to each of the outside channel **120**, the inside channel **118**, and the gear rack mount **116** by way of coinciding mounting holes formed in respective surfaces of each of the wall support **122**, the outside channel **120**, the inside channel **118**, and the gear rack mount **116**. The wall support **122** is also connected to the wall by way of one or more wall anchors **123** and/or one or more posts **125**.

In a preferred embodiment, after assembly of the wash/sanitation rack **100**, the wall support **122** is attached to wall anchors **123** to rigidly secure the wash/sanitation rack **100** to a wall (not shown). In a preferred embodiment, the wall to which the wash/sanitation rack **100** is attached is a wall associated with an anterior room of a locker room, such that gear can be removed and hung on the racks for washing and sanitation. For example, locker rooms for college and professional teams often incorporate decorative wood, electronics, fabrics, and other corrosive materials. However, anterior rooms and/or shower stations incorporate cinder block, cement, stainless steel, and other non-corrosive and water-resistant surfaces, where the wash/sanitation rack **100** may be attached. This attachment provides a station for washing and sanitizing gear, such as shoulder pads, helmets, tents, tires, metal bats, shovels, buckets, crosses (i.e., lacrosse sticks), etc. Because the wash/sanitation rack **100** is made from non-corrosive materials, and because wall anchors and fasteners are behind the wall support **122** or other supports, the washing and sanitizing occurs without risk of snags, tears, or rust-staining and coloration. In other embodiments, the fasteners used for assembly are flat-head fasteners and/or the mounting holes incorporate countersinks to minimize fastener exposure. However, flathead fasteners and countersinks are not required due to the overlapping assembly of the components of the wall support **122** and support assemblies **102**, **104**.

Referring now also to FIGS. **2**A through **2**C in the drawings, the gear rack mount **116** is illustrated. The gear rack mount **116** includes an angled top surface **202**, a front surface **204**, a rear surface **206**, an angled left side surface **208**, and an angled right side surface **210**. The angled top surface **202**, the front surface **204**, and the rear surface **206** each includes a set of mounting holes **212**. The angles of the angled side surface **208** and the angled right side surface **210** are supplementary angles. For example, the first angle **214** is a 45° angle, and the second angle **216** is a 135° angle. It is noted that other supplementary angle combinations are encompassed by the present application.

Referring now also to FIG. **2**D in the drawings, a flat pattern **217** of the gear rack mount **116** is illustrated. The flat pattern **217** is made from a single sheet of material and includes a bottom surface **218**, indicia **220**, such as bend/fold directions, a longitudinal bend line **222**, and a lateral bend line **224**. It is noted that flat pattern **217** ships and stores easier than pre-formed gear rack mounts. In other embodiments, a pre-formed gear rack mount, a solid 3D gear rack mount, or a gear rack mount welded from multiple pieces connected together in the form of gear rack mount **116** is also encompassed by the present application.

Referring now also to FIG. **2**E in the drawings, after folding or bending along bend lines, a three-dimensional gear rack mount **116** takes form. The 3D form is connected between a flange of the gear support **106** and the inside channel **118**.

Referring now also to FIGS. **3**A through **3**D in the drawings, the inside channel **118** is illustrated. The inside channel **118** includes a right side surface **302**, a rear surface **304**, and a front surface **306**. The rear surface **304** includes multiple sets **310** of mounting holes. For example, in a preferred embodiment, the rear surface **304** includes a first set **310***a*, a second set **310***b*, a third set **310***c*, and a fourth set **310***d*. In a preferred embodiment, the number of sets **310** corresponds to the number of gear supports **106** attached to the wash/sanitation rack **100**. In other embodiments, the number of sets **310** of holes corresponds to a number of gear rack mount placement options included on the inside channel. The front surface **306** includes multiple sets **312** of mounting holes for attachment with the front surface of the outside channel **120**. For example, the front surface of the

inside channel **118** includes nine sets of mounting holes, **312***a*, **312***b*, **312***c*, **312***d*, **312***e*, **312***f*, **312***g*, **312***h*, and **312***i*. It is noted that additional numbers of sets of mounting holes, placement options, and combinations thereof are encompassed by the present application.

In a preferred embodiment, the front surface **306** includes a set of cutouts **314**, or removed material portions, to slide around and abut a side support **110**, **112** of the gear support **106**. The number cutouts within the set of cutouts **314** corresponds to the number of gear supports **106** included with the assembly. In a preferred embodiment, there are at least four cutouts **314***a*, **314***b*, **314***c*, and **314***d* in the set of cutouts. In other embodiments, there is at least one cutout **314** to correspond to at least one gear support **106**.

Referring now also to FIG. **3**E in the drawings, a flat pattern **321** of the left side inside channel **118** is illustrated. The flat pattern **321** is made from a single sheet of material and includes an inside surface **318**, indicia **320**, such as bend/fold directions, a first longitudinal bend line **322**, and a second longitudinal bend line **324**.

Referring now also to FIG. **3**F in the drawings, after folding or bending along bend lines **322** and **324**, a three-dimensional inside channel **118** takes form. The 3D form is connected to a flange of the gear support **106** and is seated within the outside channel **120**.

Referring now also to FIGS. **4**A through **4**D in the drawings, the outside channel **120** is illustrated. The outside channel **120** includes a side surface **402**, a front surface **404**, a rear surface **406**, and a top surface **417**. The rear surface **406** includes multiple sets **410** of mounting holes. For example, in a preferred embodiment, the rear surface **406** includes a first set **410***a*, a second set **410***b*, a third set **410***c*, and a fourth set **410***d*. In a preferred embodiment, the number of sets **410** corresponds to the number of gear supports **106** attached to the wash/sanitation rack **100**. In other embodiments, the number of sets **410** of holes corresponds to a number of gear rack mount placement options. The front surface **404** of the outside channel **120** includes nine sets of mounting holes, **412***a*, **412***b*, **412***c*, **412***d*, **412***e*, **412***f*, **412***g*, **412***h*, and **412***i* for attachment or connection with the front surface of the inside channel **118**. It is noted that additional numbers of sets of mounting holes, placement options, and combinations thereof are encompassed by the present application. In other embodiments, the additional sets of holes that are not used for placing gear mount racks are used to more securely connect the inside channel with the outside channel **120** or with the wall support **122**.

In a preferred embodiment, the front surface **404** includes a set of cutouts **414**, or removed material portions, to slide around and abut a side support **110**, **112** of the gear support **106**. The number cutouts within the set of cutouts **414** corresponds to the number of gear supports **106** included with the assembly. In a preferred embodiment, there are at least four cutouts **414***a*, **414***b*, **414***c*, and **414***d* in the set of cutouts. In other embodiments, there is at least one cutout **414** to correspond to at least one gear support **106**.

Referring now also to FIG. **4**E in the drawings, a flat pattern **421** of the left side outside channel **120** is illustrated. The flat pattern **421** is made from a single sheet of material and includes an inside surface **418**, indicia **420**, such as bend/fold directions, a first longitudinal bend line **422**, a second longitudinal bend line **424**, and a lateral bend line **426**.

Referring now also to FIG. **4**F in the drawings, after folding or bending along bend lines **422**, **424**, and **426**, a three-dimensional outside channel **120** takes form. The 3D form is connected to, or houses, the inside channel **118** and is further connected to the wall support **122**.

Referring now also to FIGS. **5**A through **5**D in the drawings, the wall support **122** is illustrated. The wall support **122** includes a front surface **502**, a left side surface **504**, a right side surface **506**, a top surface **508**, a bottom surface **510**, and a rear surface **511**. The rear surface **511** includes at least a left side mounting channel **512***a* and a right side mounting channel **512***b*. Each mounting channel **512***a* and **512***b* includes a set **514** of mounting holes. For example, in a preferred embodiment, the rear surface **511** includes two mounting channels **512**, where the first mounting channel has a first set **514***a* of mounting holes, and the second mounting channel has a second set **514***b* of mounting holes. In a preferred embodiment, the number of holes in a set **514** corresponds to the number of wall anchors desired to attach the wash/sanitation rack **100** to a wall. The number of anchors may vary depending on the weight of gear, the type of wall, a thickness of the wash/sanitation rack **100**, a type of wall anchors used, or a combination of these and similar factors. In other embodiments, the number of holes in a set **514** corresponds to a number of gear supports **106** to be attached. For example, the greater the number of gear supports **106** attached, the greater the number of holes in the sets **514**. In at least one embodiment, the sets of holes **514** are used for posts **125** that extend out the back of the wash/sanitation rack **100**.

In a preferred embodiment, the front surface **502** includes one or more sets of access holes **515**. The number of sets of access holes **515** will correspond to the number of channels **512** formed in the back surface of the wall support **122**. In a preferred embodiment, the front surface **502** includes two sets of access holes **515***a* and **515***b*. In a preferred embodiment, a diameter of the access holes **515** is larger than a diameter of the mounting holes **514** in the channels **512** of the wall support **122**. The larger diameter allows tool access, such as a bit or screwdriver head, to the wall anchors **123** behind the wall support **122**. In other embodiments, the diameter of the access holes **515** is equivalent to the diameter of the mounting holes **514** in the channels **512**. In these embodiments, the wall anchors **123** or posts **125** are inserted through the front surface **502** and the channels **512**, with a head of the anchors **123** or posts **125** abutting the front surface **502** of the wall support **122**.

In a preferred embodiment, the front surface **502** includes multiple sets **516** of mounting holes. For example, in a preferred embodiment, the front surface **502** includes a first set **516***a*, a second set **516***b*, a third set **516***c*, and a fourth set **516***d*. In a preferred embodiment, the number of sets **516** corresponds to the number of gear supports **106** attached to the wash/sanitation rack **100**. In other embodiments, the number of sets **516** of holes corresponds to a number of gear rack mount placement options. Although the configuration of four gear supports **106** requires only four sets **516** of holes, additional sets of holes may be added for different placement options for gear rack mounts **116**, and thereby placement options for gear supports **106**. It is noted that additional sets **514** of holes (not shown) may also be formed in the rear surface **511**. It is further noted that additional numbers of sets of mounting holes, placement options, and combinations thereof are encompassed by the present application. In other embodiments, the additional sets of holes that are not used for placing gear mount racks are used to more securely connect the wall support **122** to the wall.

Referring now also to FIG. **5**E in the drawings, a flat pattern **521** of the wall support **122** is illustrated. The flat pattern **521** is made from a single sheet of material and

includes the front surface **502**, indicia **520**, such as bend/fold directions, a first longitudinal bend line **522**, a second longitudinal bend line **524**, a first lateral bend line **526**, and a second lateral bend line **528**.

Referring now also to FIG. **5**F in the drawings, after folding or bending along bend lines **522**, **524**, **526**, and **528**, a three-dimensional wall support **122** takes form. The 3D form is connected to the outside channel **120** and is further connected to the wall. In other embodiments, one or more fasteners extend from the wall support through each of the outside channel **120**, the inside channel **118**, the gear rack mount **116**, and finally to a flange of the gear support **106** to secure each component part together.

Referring now also to FIGS. **6** through **9** in the drawings, multiple interchangeable gear supports **106** are illustrated. The interchangeable gear supports **106** include multiple beams formed as a single fork shape, single separated beams, spring-biased clamps, and multiple beams formed as separate forks. It is noted that different combinations (shown and not shown) of interchangeable gear supports **106** are encompassed by the inventive concepts of the present application.

Referring now also to FIGS. **10**A and **10**B in the drawings, a heat or sanitation indicator **1002** is illustrated. The indicator **1002** is formed in a facial surface of a beam or a channel and is used to indicate when an appropriate temperature threshold is reached. When the appropriate temperature threshold has been reached and/or maintained for a desired amount of time, the gear that is being washed/sanitized is known to be substantially clean. For example, the heat/sanitation indicator **1002** is formed on the facial surface of the outside channel **120**, as depicted in FIG. **10**A. When the desired temperature is reached and/or maintained, a color-changing portion **1004** of the indicator changes color to indicate that the temperature threshold has been reached/maintained.

In a preferred embodiment, the heat/sanitation indicator **1002** is formed by cutting a depth **1004** into the facial surface of the outside channel **120** and filling the depth **1004** with a temperature color-changing material. It is noted that although the heat/sanitation indicator **1002** is depicted as formed on the facial surface of the outside channel **120**, any facial surface of a support of the wash/sanitation rack **100** may have a heat/sanitation indicator formed or placed thereon. It is further noted that although cutting is described as the method of forming the heat/sanitation indicator **1002**, other forms, such as etching, engraving, laser engraving, laser cutting, and combinations thereof may be used to form the indicator depressions.

In a preferred embodiment, the depth **1004** may be formed as one or more indicia and/or symbols **1006**. The depth **1004** is filled with a temperature-indicating substance, such as a solvent, and one or more suitable moieties or constituents, such as pigments, dyes, or colorants, and then sealed with a clear sealant. For example, a solvent may including ortho-bromonitrobenzene:ortho-chloronitrobenzene (75:25), and a suitable constituent may include pinacyanol iodide (at 0.035 wt. %). For a list of potential solvents and constituents, see U.S. Pat. No. 4,232,552, which is incorporated by reference in its entirety. In other embodiments, a waterproof or water resistant temperature indicator tape or adhesive strip, such as cellulose acetate, vinyl plastic, flexible butyl tape, or combinations thereof, is used in lieu of cutout and filled indicators.

In at least one embodiment, the depth **1004** extends through the entire width of the wall support forming a perforation. Multiple perforations may be placed along a surface of the wall support to provide air flow to the wash/sanitation rack **100**. In this embodiment, the wash/sanitation rack **100** is connected to a heating and/or cooling air source. For example, the air source may be internal, such as a blower or fan housed within a portion of the wall support. By way of another example, the air source may be external, such as with ductwork connecting the wash/sanitation rack **100** with an HVAC system **1106**. The shape, dimensions, and/or orientations of the perforations may vary depending on a desired function of the airflow. For example, perforations **1104** may be square, round, oval, symmetrical, non-symmetrical, indicia-shaped, protruding, or indented. By way of another example, the perforations **1104** may be smaller near the inlet connecting the wall support to the air source, and may be gradually larger further from the inlet associated with the air source, more evenly dispersing the air flow than if the perforations were all of the same dimension and size despite how they are located relative to the air source. By way of yet another example, the perforations may be smaller or have an outward bevel with perforations near any electrical equipment, such as a fan or blower, in order to prevent liquids from entering the perforations and interfering with the electrical operation of the fan or blower.

In a preferred embodiment, the wall support **122** is anchored by wall anchors **123** to a wall of an anterior room of a locker room. In other embodiments, once the gear support **106**, gear rack mount **116**, inside channel **118**, outside channel **120**, and wall support **122** are all securely connected together, the assembly forms a single unit with posts **125** protruding out the back of the assembly, which as a unit may be moved (i.e., without requiring disassembly of the individual parts) to different holes in a wall. For example, small-scale pegs or peg units of a peg board may be lifted in order to remove the weight on posts protruding out the back of the peg unit. This allows the user to remove the unit from the peg board or move the unit to a different set of holes on the peg board. A similar result occurs in embodiments where the rack assembly is secured together with posts **125** protruding out of the back of the assembly. The posts **125** are inserted into the same or different holes of the wall in order to re-mount the wash/sanitation rack **100**.

The hollows created by using 3D forms created by bending or folding flat patterns results a significant weight reduction in the assembled wash/sanitation rack **100**. The use of stainless steel, or other high-strength and non-corrosive materials, for sheet metal, flat patterns, and/or fasteners results a structurally sound, high-weight bearing, rust-resistant support for the rack. Incorporating thermometers or other temperature indicators into the support surfaces provides operators with an indication of when equipment is sanitized.

Referring now also to FIG. **11** in the drawings, an embodiment of a wall support **122** having one or more groups **1102** of perforations **1104** is illustrated. A group **1102** may be associated with a position of a gear support **106**. For example, a first group **1102***a* is positioned relative, such as above, below, or in-line, with a first gear support **106**; a second group **1102***b* is positioned relative to a second gear support **106**; and a third group **1102***c* is positioned relative to a third gear support **106**. In a preferred embodiment, the wall support **122** is connected to an external air source **1106** by way of a connector **1108**. The connector **1108** includes an airway grommet, a right-angle duct, a curved duct, a gasket, a weld, or combinations thereof. In other embodiments, the wall support is connected to an internal air source **1110**, such as a centrifugal blower, a high-speed blower, or a regenerative impeller blower.

In a preferred embodiment, a size, shape, or dimension of the perforations **1104**, or groups of perforations **1102** vary depending on multiple factors, such as a location of the air source connector **1108** (bottom and/or top of wall support **122**), a configuration and number of the gear supports **106** attached to the wall support **122**, a type of air source used (internal and/or external), and an intended use of the wash/sanitation rack **100**.

It is noted that although FIG. **11** depicts perforations **1104** formed in wall support **122**, other supports or components of the wash/sanitation rack **100** may include perforations **1104**. For example, gear supports **106** may include one or more perforations **1104** or one or more groups **1102** of perforations. It is further noted, that embodiments that incorporate an air source may have sides, edges, and connectors sealed using welds, threads, gaskets, and other sealing means known in the art.

It is apparent that an assembly 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. 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.

What is claimed is:

1. A modular wash/sanitation rack assembly, comprising:
- a plurality of channels;
- a gear rack mount;
- a wall support; and
- a flanged gear support comprising:
  - an angled support beam; and
  - an angled side support connected to the angled support beam;
  - wherein a first slope of the angled support beam is greater than a second slope of the angled side support; and
- wherein at least one of the plurality of channels, the gear rack mount, and the wall support comprises a flat pattern folded into a three-dimensional (3D) form.

2. The wash/sanitation rack assembly of claim **1**, further comprising:
- bend lines on the flat pattern; and
- indicia formed or placed on the flat pattern to indicate how to fold or bend the flat pattern into the 3D form.

3. The wash/sanitation rack assembly of claim **1**, wherein the gear rack mount comprises an angled top surface, a front surface, a rear surface, a first angled side surface, a second angled side surface, and a plurality of mounting holes; and
- wherein the first angled side surface and the second angled side surface each include two supplementary angles.

4. The wash/sanitation rack assembly of claim **1**, wherein the plurality of channels comprises at least two wall support channels.

5. The wash/sanitation rack assembly of claim **4**, further comprising:
- an inside channel;
  - the inside channel having a first front surface and a first rear surface;
  - the first front surface including a first set of mounting holes and a first set of cutouts;
  - the first rear surface including a second set of mounting holes; and
- an outside channel;
  - the outside channel having a second front surface and a second rear surface;
  - the second front surface including a third set of mounting holes and a second set of cutouts; and
  - the second rear surface including a fourth set of mounting holes.

6. The wash/sanitation rack assembly of claim **5**, wherein the gear rack mount includes a third front surface, a third rear surface, a first plurality of mounting holes formed on the third front surface, and a second plurality of mounting holes formed on the third rear surface;
- wherein the gear rack mount is positioned within the inside channel with the first plurality of mounting holes aligned with the first set of mounting holes and with the second plurality of mounting holes aligned with the second set of mounting holes; and
- wherein the inside channel is positioned within the outside channel and with the second set of mounting holes aligned with the third set of mounting holes, such that the inside channel may be fastened to the outside channel by a fastener passing through an aligned seam between the second set of mounting holes and the third set of mounting holes; and
- wherein at least one hole of the fourth set of mounting holes is aligned with a fifth set of mounting holes formed in the wall support.

7. The wash/sanitation rack assembly of claim **1**, further comprising:
- a plurality of flanged gear supports;
- wherein a flange of the plurality of flanged gear supports includes a first set of mounting holes; and
- wherein the gear rack mount includes a second set of mounting holes corresponding to the first set of mounting holes to attach the flange to the gear rack mount.

8. The wash/sanitation rack assembly of claim **1**, wherein the wall support and the flanged gear support comprise a non-corrosive material;
- wherein the non-corrosive material is stainless steel; and
- wherein a facial surface of the wall support has a heat/sanitation temperature indicator formed or placed thereon.

9. A modular wash/sanitation rack, comprising:
- a support assembly comprising:
  - a flat pattern for an inside channel;
  - a flat pattern for an outside channel;
  - a flat pattern for a gear rack mount; and
  - a flat pattern for a wall support;
- a flanged gear support comprising:
  - an angled support beam; and
  - an angled side support;
- wherein a first slope of the angled support beam is greater than a second slope of the angled side support.

10. The wash/sanitation rack of claim **9**, further comprising:
- bend lines on each of the flat patterns; and
- indicia formed or placed on each of the flat patterns to indicate how to fold or bend each respective flat pattern along the bend lines.

11. The wash/sanitation rack of claim **9**, wherein the gear rack mount comprises an angled top surface, a front surface, a rear surface, a first angled side surface, a second angled side surface, and a plurality of mounting holes; and

wherein the first angled side surface and the second angled side surface each include two supplementary angles.

12. The wash/sanitation rack of claim **11**, wherein the gear rack mount is positioned within the inside channel; and

wherein at least one hole of the plurality of mounting holes aligns with a mounting hole in a front surface of the inside channel; and

wherein at least one hole of the plurality of holes aligns with a mounting hole in a rear surface of the inside channel.

13. The wash/sanitation rack of claim **9**, wherein the inside channel comprises a side surface, a rear surface, and a front surface;

wherein the rear surface includes a first set of mounting holes and the front surface includes a second set of mounting holes;

wherein at least one mounting hole of the gear rack mount aligns with the second set of mounting holes; and

wherein at least one mounting hole of the outside channel aligns with the first set of mounting holes.

14. The wash/sanitation rack of claim **9**, wherein the outside channel comprises a front surface, a side surface, a rear surface, a top surface, and a first set of mounting holes; and

wherein the inside channel is positioned within the outside channel, abutting the side surface of the outside channel and aligning the first set of mounting holes with a second set of mounting holes formed in the wall support.

15. The wash/sanitation rack of claim **9**, wherein the wall support comprises a front surface, a left side surface, a right side surface, a top surface, a bottom surface, and a rear surface;

wherein the rear surface includes a mounting channel having a first set of mounting holes positioned to align with or receive at least one of a wall anchor and a wall post;

wherein the front surface includes a second set of mounting holes positioned to align with at least one mounting hole of the outside channel; and

wherein the front surface includes a set of access holes that align with the first set of mounting holes of the rear surface.

16. The wash/sanitation rack of claim **9**, further comprising:

a plurality of flanged gear supports;

wherein a flange of the plurality of flanged gear supports includes a first set of mounting holes; and

wherein the gear rack mount includes a second set of mounting holes corresponding to the first set of mounting holes to attach the flange to the gear rack mount.

17. The wash/sanitation rack of claim **9**, further comprising:

an air source connected to the support assembly or the flanged gear support of the wash/sanitation rack; and

wherein a facial surface of the support assembly or the flanged gear support has a group of perforations formed or placed on or in the facial surface.

18. A method of wash/sanitation rack assembly, comprising:

providing a support assembly comprising:

an inside channel;

an outside channel;

a gear rack mount; and

a wall support;

providing a flanged gear support comprising:

an angled support beam;

wherein at least one of the inside channel, the outside channel, the gear rack mount, and the wall support are provided as a flat pattern having bend lines;

folding along the bend lines to form a respective 3D form of the at least one of the inside channel, the outside channel, the gear rack mount, and the wall support; and

securing the wall support to a wall with wall anchors or posts having the flanged gear support connected to the gear rack mount, the gear rack mount connected within the inside channel, the inside channel connected within the outside channel, and the outside channel connected to the wall support.

* * * * *